



**"From Awareness to Action: Evaluating SME Sustainability
Training in Türkiye Through a Transformative Learning Framework"**

Yakup İNALKAÇ
S5947200

Supervisor: Andrej Zwitter
Co-assessor: Emma C. Folmer

University of Groningen
Campus Fryslân
Ubbo Emmiuslaan 893
8917 JE Leeuwarden
+ 90 539 618 02 91
y.inalkac@student.rug.nl

Table of contents

ABSTRACT	3.DISCUSSIONS
1.INTRODUCTION	4.CONCLUSIONS
2.THEORY	REFERENCES
3.METHODS	APPENDIX A- Information Sheet
4.RESULTS/FINDINGS	APPENDIX B- Interview Guide
	APPENDIX C- Coding Table
	APPENDIX D- Ouotations
	APPENDIX E- Interview Transcripts
	APPENDIX F- Consent Form

Contents

ABSTRACT	4
1. INTRODUCTION.....	5
2. THEORY	7
3. METHODS.....	13
4. RESULTS/FINDINGS.....	18
5. DISCUSSIONS.....	27
6. CONCLUSIONS	30
REFERENCES	33
APPENDIX A- Information Sheet	36
APPENDIX B- Interview Guide.....	39
APPENDIX C- Coding Table	41
APPENDIX D- Quotations.....	42
APPENDIX E- Interview Transcripts	100
APPENDIX F- Consent Form	243

ABSTRACT

This research focuses on the sustainability transformation learning processes of SMEs in Türkiye. In this context, how ecosystem actors implement sustainability training is evaluated through the lens of Mezirow's Transformative Learning Theory (TLT). The study was conducted using a qualitative method, with semi-structured interviews with ten organizations from six different structures. The data obtained was analyzed with Atlas.ti software; in addition to the pre-defined codes corresponding to the ten stages in the Transformative Learning framework, new themes and codes created according to the information obtained from the field during the interviews were also included in the analysis. The findings showed that the initial theory based stages were implemented by most organizations, but the later, practice based stages (e.g. skills acquisition, role testing, integration) were either not implemented or conditionally implemented by organizations. The factors that influence the training process are the method of implementation, the participant profile, the simplicity of the language used in the trainings and the competence of the trainers. Both general economic uncertainty and SMEs' concerns about their own financial situation stand out as factors limiting the learning process; in addition, lack of coordination between institutions can negatively affect the transformation process. In line with the findings, five main policy recommendations have been developed: (1) expanding applied training, (2) strengthening model factories with sustainability content and expanding this structure, (3) establishing a national strategic framework that takes into account regional differences, (4) training and accreditation of trainers, (5) designing actions to encourage the active participation of business owners in the transformation process. This study contributes to the literature as the first study in Türkiye to show the level of implementation of sustainability training using Transformative Learning Theory (TLT).

1. INTRODUCTION

The global success of the sustainability transformation does not depend solely on large corporations. The transformation of small and medium-sized enterprises (SMEs) is also important in this regard. Yet in Türkiye, the vast majority of SMEs still lack access to an effective learning process that can guide them through this transformation. The effects of climate change are steadily increasing, making this human-induced issue an urgent concern on a global scale. De Jong (2023) states that continuing the carbon-intensive use in economic activities will increase the global temperature level by 3.3 to 5.7°C by the end of the century (Jong, 2023). This highlights the importance of the concept of sustainable entrepreneurship. Shepherd and Patzelt (2011) defined sustainable entrepreneurship as “focused on the preservation of nature, life support, and community in the pursuit of perceived opportunities to bring into existence future products, processes, and services for gain, where gain is broadly construed to include economic and non-economic gains to individuals, the economy, and society (Shepherd & Patzelt, 2011)”. Within this framework, the sustainability transformation of small and medium-sized enterprises (SMEs) has become even more important due to their numerical dominance and their economic and social weight.

In the Turkish context, SMEs are officially defined as “enterprises with fewer than 250 employees and either an annual net sales revenue or financial balance sheet not exceeding 500 million Turkish Liras” (KOSGEB, 2023). The need for a sustainability transition becomes clearer when both environmental indicators and the economic role of SMEs are considered. Türkiye’s greenhouse gas emissions increased by 55% between 2005 and 2018. This is the highest rate of increase among OECD countries. In 2018, the recycling rate was 12%, which is significantly below the OECD average of 26%. Türkiye’s economic structure also highlights the necessity of this transformation. In 2022, large enterprises carried out 57.9% of their exports to Europe. For SMEs, this figure was 49.3% in the same period. In this year, 2.4% of exports were made by micro enterprises, and 11.9% by small enterprises. 17.3% of exports were carried out by medium-sized enterprises. SMEs make up approximately 99% of all enterprises in Türkiye. Their share in total employment is 72.7%, and their share in added value is 50.6% (Ulas & Genc, 2024). However, despite their strong position in the economy, sustainability practices are not widespread and systematic. This reality indicates that SMEs in Türkiye need to engage in a learning process for sustainability transformation.

This research aims to analyze how institutions within Türkiye’s entrepreneurial ecosystem implement sustainability training for SMEs and to evaluate these practices through the lens of Mezirow’s Transformative Learning Theory (TLT). Considering that decision-makers in SMEs are predominantly adults, it has been assessed that such a transformation process requires changes in knowledge, attitude, and behavior. Transformative learning can be defined as “a deep, structural shift in basic premises of thought, feelings, and actions” (Transformative Learning Centre, as cited in Kitchenham, 2008). The

Transformative Learning Theory describes the process through which adults become aware of the factors that shape their lives, construct new meanings, and define new roles (Deveci, 2021). For this reason, TLT provides a meaningful theoretical foundation for evaluating sustainability training. The ten-phase model of Transformative Learning Theory offers a comprehensive pathway, ranging from raising awareness to adopting new roles, creating action plans, and integrating the entire process into practice (Kitchenham, 2008).

In line with this, a central research question has been formulated to guide the study: **“How do the entrepreneurial ecosystem actors in Türkiye implement SME sustainability training, and how can a Transformative Learning framework be used to identify gaps and possible policy intervention strategies?”**. Rather than answering this central question in a single step, the study approached it through four sub-questions. These sub-questions formed the foundation of the research design, allowing the main question to be addressed in a comprehensive way. These questions are presented below:

- How do institutions implement the learning process as a whole, and how is this process evaluated through the ten phases of Transformative Learning Theory (TLT)?
- What are the key factors influencing how institutions implement training activities?
- What are the other constraining factors that influence the learning process?
- How can SME sustainability trainings be improved based on the findings, and what types of policy recommendations can be proposed within this scope?

In this context, the theoretical part of the study examined sustainability efforts in SMEs in Türkiye, as well as the relationship between sustainability and transformative learning. The methodology section explained how the theoretical framework was integrated into the study, the qualitative data collection and analysis methods, the institutions that were interviewed, and details about the interviews. The findings section presented evaluations of the institutions based on the phases of Transformative Learning Theory (TLT), along with additional complementary findings. In the discussion section, the findings were interpreted and compared with the existing literature. The limitations of the study are also presented in this section. Finally, in the conclusion section, the research questions were answered and recommendations were provided. In addition, practical implications and suggestions for future research are also included in this section.

2. THEORY

This section addresses **three main topics**: the sustainability-related transformation processes of small and medium-sized enterprises (SMEs) in Türkiye, Mezirow's Transformative Learning Theory (TLT), and the relationship between this theory and sustainability.

In Türkiye, SMEs face several obstacles in achieving sustainability goals, such as challenges in institutionalization, limited access to qualified personnel, financial constraints, and insufficient government support. On the other hand, they also possess certain advantages, including flexibility in decision-making, adaptability to change, and strong internal cohesion often observed in family-owned businesses (Günerergin et al., 2012). In this study, It is also observed that Turkish SMEs tend to prioritize economic aspects of sustainability over social and environmental ones, largely due to the pressures of ongoing economic crises. Furthermore, the lack of qualified labor emerges as a common and critical barrier across regions. Addressing this gap through targeted training and education initiatives is considered essential for enabling effective sustainability strategies in SMEs (Günerergin et al., 2012). In the study comparing the sustainability practices of SMEs in Türkiye with those in 27 EU countries, data from 11,418 SMEs were analyzed. According to the findings of this study, developing countries face more financial barriers compared to developed countries. SMEs experience more challenges than large enterprises. The main obstacles to transformation are the lack of awareness, lack of experience, and concerns that such initiatives may reduce profitability. Another important finding of this comparative analysis is that the lack of awareness about how to integrate sustainability into existing business models and the reluctance of management are common challenges observed in both EU countries and Türkiye (Çoban Kumbali et al., 2022). In another study conducted to better understand the sustainability perceptions and practices of SMEs in Türkiye, semi-structured in-depth interviews were held with eight SME owners operating in Ankara. According to the findings, the adoption of sustainability at the enterprise level largely depends on factors such as the business owner's commitment to the process, the establishment of collaborations with experts and institutions, the development of project design capabilities, and the implementation of environmental management systems (Ulas & Genc, 2024).

There are several adult learning theories that focus on raising awareness. Paulo Freire's Theory of Conscientization views education as a tool to help people understand the injustices in their lives. According to this theory, people should take action to change such injustices. The relationship between teacher and student is not hierarchical; it is based on mutual learning. Jack Mezirow's Transformative Learning Theory, on the other hand, explains how people begin to question and develop new perspectives when they experience situations that do not align with their existing beliefs. In Laurent Daloz's Psychodevelopmental Theory, the teacher acts as a mentor, supporting the learner with trust and careful listening. Robert Boyd's Transformative Education Theory sees learning as a personal journey that helps

individuals grow and understand themselves better (Deveci, 2021). In this study, Transformative Learning Theory is used as the main framework because it helps explain how people can change their thinking and behavior during complex processes like learning about sustainability.

Mezirow and his colleagues, in their study on individuals returning to higher education after a long break, identified that the participants experienced a personal transformation. In this study, they defined ten phases that occur throughout this process.

- Phase 1 A disorienting dilemma
- Phase 2 A self-examination with feelings of guilt or shame
- Phase 3 A critical assessment of epistemic, sociocultural, or psychic assumptions
- Phase 4 Recognition that one's discontent and the process of transformation are shared and that others have negotiated a similar change
- Phase 5 Exploration of options for new roles, relationships, and actions
- Phase 6 Planning of a course of action
- Phase 7 Acquisition of knowledge and skills for implementing one's plans
- Phase 8 Provisional trying of new roles
- Phase 9 Building of competence and self-confidence in new roles and relationships
- Phase 10 A reintegration into one's life on the basis of conditions dictated by one's perspective (Kitchenham, 2008)

It can be assumed that SMEs, unlike their previous business models and priorities, may face a dilemma regarding sustainability, which could lead them to reflect on their current position, learn from the experiences of other companies, and initiate the process by preparing an action plan. When the above-mentioned phases are examined, it is evaluated that they can be adapted to the stages of sustainability transformation.

There are several studies that examine the relationship between sustainability and Transformative Learning Theory. In a study on sustainability education in higher education, Schumacher College, located in Devon, England, was discussed. The college was founded in 1990, and its motto is "Transformative Learning for Sustainable Living." According to research, the college has an exceptionally high incidence of transformative learning compared to other institutions. The study emphasizes that higher education should move beyond mainstream understandings and practices in order to generate new perspectives, new mindsets, and new behaviors. It highlights that transformative learning is at the heart of this process (Michel et al., 2020). Another study that examined whether learning can be a solution to the challenges faced by social-ecological systems analyzed 26 research papers conducted over a span of 20 years across four continents. The study explored the relationship between learning, action, and societal transformation,

using Transformative Learning Theory as the analytical framework. The findings revealed that learning plays an important role. However, they also showed that most actions remained at the individual level and had limited impact on a broader societal scale (Moyer & Sinclair, 2020). Studies that examine the relationship between learning and sustainability within the framework of Transformative Learning Theory (TLT) have generally focused on educational institutions or educators. In a study that conducted a meta-synthesis of 241 articles, 13 qualitative case studies were identified. Four criteria were used to narrow down the selection from 241 to 13 articles: the documents had to be journal articles, the journals had to be indexed in the Journal Citation Reports (JCR) with an impact factor above 1, the articles had to address both Transformative Learning and sustainability, and finally, each article had to be based on a qualitative case study (Viera Trevisan et al., 2022). **Table 1** below presents the selected articles and their topics as analyzed in this study (Viera Trevisan et al., 2022).

Table 1: Titles And Topics Of The 13 Articles Included In The Meta-Synthesis

Title	Author	Topic
The wheel of fortune as a novel support for constructive alignment and transformative sustainability learning in higher education	Noy et al.	A learning tool has been developed within the scope of sustainability education in higher education. Elements such as the development of sustainability competencies, systems thinking, and critical discourse have been identified as conditions of the learning process.
Disruption as opportunity for transformation? Insights from water supply contamination in Havelock North, New Zealand	Teen et al.	The Transformative Learning (TL) processes of small business owners were investigated in response to a drinking water contamination event in New Zealand. This study suggests that a disaster can affect the relationship between natural ecosystems and the individuals who depend on them, potentially creating an opportunity for transformation. The study also highlights that while returning to the previous state is a common initial reaction after such a shock, it is often no longer feasible, as some fundamental parameters may have already shifted.
Learning Processes in the Early Development of Sustainable Niches: The Case of Sustainable Fashion Entrepreneurs in Mexico	Aboytes and Barth	The sustainable fashion industry has been evaluated from the perspective of Transformative Learning (TL). It was found that

		the critical events experienced by entrepreneurs were linked to environmental and social disorienting dilemmas. These dilemmas played role in their decision to enter the sustainable fashion niche.
Transformative education: towards a relational, justice- oriented approach to sustainability	Walsh et al	Five modules of a course on eco-justice were compared with the ten phases of Transformative Learning (TL) in the context of sustainability. These modules are: to love, to see, to heal, to imagine, and to act. It was analyzed that the initial modules aim to question the current state and develop related competencies, while the later modules focus on envisioning new possibilities and implementing strategies for change.
Looking inward, outward, and forward: Exploring the process of transformative learning in teacher education for a sustainable future	Weinberg et al.	This study focused on a fifteen-week sustainability course. Participants were asked to watch videos before attending the class. The course started with general topics such as the exploitation of natural resources and gradually moved toward more specific issues like ecological footprint. Throughout this process, participants took on various roles, from engaging in critical inquiry to presenting a final project that involved transformation. Within this scope, they assumed new roles and developed competencies.
Enriching the intersection of service and transformative learning with Freirean ideas: The case of a critical experiential learning programme in Brazil	Dal Magro et al.	Two main types of change were identified as critical thinking and awareness of the complexity of sustainability. The study aligns with the idea of Transformative Learning, which suggests that transformation occurs when individuals realize that their current way of thinking is no longer valid and adopt a new perspective.
Making connections: a conference approach to developing transformative environmental and	Walshe and Tait	Education for Sustainability was evaluated as a means to help students develop the

sustainability education within initial teacher education		knowledge, skills, and values needed to address socio-ecological issues
Organizing reflection to address collective dilemmas: Engaging students and professors with sustainable development in higher education	Brunstein and King	The study focused on the university's transformation toward sustainability. It emphasized that collective dilemmas and engagement can enhance learning at a transformative level.
Navigating emergence and system reflexivity as key transformative capacities: experiences from a Global Fellowship program Learning for sustainability through CIDA's	Moore et al.	This study revealed that, through the implemented practices, participants began to recognize complex system dynamics that had previously gone unnoticed. The results show that a transformative environment helps participants practice the experience of uncertainty and transformation.
“Community-based pest management in Central American agriculture” project: a deliberative, experiential and iterative process	Sims	This study emphasized the importance of putting theoretical knowledge into practice.
Learning for Sustainability Among Faith-Based Organizations in Kenya	Moyer et al.	The study was conducted in religious organizations in Kenya. It emphasized the direct relationship between learning and experiences, emotions, values, and beliefs. It was stated that by providing opportunities for discussions on faith, values, and worldviews, organizations whether they are religious or not can enhance sustainability learning for their employees and participants. In this way, learning based on practice and skills can be deepened by integrating it with individuals' faith and spiritual life.
Transformative food systems education in a land-grant college of agriculture: the importance of learner-centered inquiries	Galt et al.	The study examined education at a university in terms of transformative learning (TL) efforts. In this context, elements such as teaching plans, competency definitions, and physical environments were developed and reflected on through a student-centered approach.

Learning for sustainability: Participatory resource management in Cambodian fishing villages	Marschke and Sinclair	This study emphasizes communication in the process of transformative learning. It is stated that the deliberately created spaces for participation encourage dialogue among participants.
--	--------------------------	---

Source: The article titles and topic summaries presented in the table were compiled using information from the meta-synthesis conducted by Trevisan et al. (2022), titled "Transformative Learning for Sustainability Practices in Management and Education for Sustainable Development: A Meta-Synthesis". The summaries were written based on the analysis of the 13 qualitative case studies included in that study. The full text is available at <https://doi.org/10.24857/rgsa.v16n2-003>.

These studies primarily focus on educational institutions. Research that centers specifically on SMEs remains quite limited. In Türkiye, Most of these studies focus on identifying challenges or making comparisons with EU countries. There are no existing studies that directly examine training or learning processes related to sustainability transformation within these businesses. This indicates a significant research gap.

3. METHODS

The main aim of this research is to examine how institutions within Türkiye's entrepreneurship ecosystem deliver sustainability training to SMEs, and to identify related gaps and potential policy interventions through the lens of Mezirow's Transformative Learning Theory (TLT). To this end, a systematic analysis was carried out using TLT's ten-phase model (Kitchenham, 2008).

A qualitative research method was adopted in this study. This was because the subject of inquiry involved not only the existence of training programs provided by institutions, but also multiple dimensions that required interpretation, such as how these trainings gained meaning in the context of sustainability, how they were designed by the institutions, and how they were perceived by SMEs. For example, an activity carried out by an institution might not have been a formal training, yet it might have supported learning indirectly through analysis tools, mentoring mechanisms, or grant procedures. Similarly, A training program may not serve a specific phase of TLT, but only general awareness raising in a different topic. Moreover, whether the training is face-to-face or online, the communication style of the trainer, the involvement of the business owner in the process, are all dynamics that can emerge through contextual interpretation. Therefore, assessing whether the stages of TLT were implemented or not was possible not only by asking "was it done?" but also by asking "how was it done, how was it experienced, what kind of results did it produce?". Therefore, a qualitative research method that is both theoretically grounded and open to field-specific findings was adopted.

In this study, semi-structured interviews were used as data collection tools. The interview guide was designed in three sections to serve the two main objectives of the research. In the first part, It was tried to obtain information about the general sustainability approaches of the organizations, their relations with SMEs and the training activities they conduct. In the second part, questions based on ten themes developed based on Jack Mezirow's Transformational Learning Theory (TLT) were included. However, this structure was redesigned to make it suitable for analyzing the transformation process experienced by SMEs in the context of sustainability. For example, the "Disorienting Dilemma" stage was related to whether the training content made businesses realize external pressures that necessitate transformation, such as the European Green Deal or the EU Carbon Border Adjustment Mechanism. "Self-Reflection" was paired with self-assessment tools that allow businesses to analyze their own sustainability situation. The "Shared Awareness" phase was shaped by group work, experience sharing sessions or joint analysis processes organized by the organizations. In this context, the TLT was used not only as a theoretical framework but also as a tool for designing interview questions and generating themes for analysis. The third section included open-ended questions aimed at understanding the factors influencing the training processes, as well as the issues considered important for policy development. In this way, the study aimed

to gather both theory-based and context-specific data. The full interview guide is provided in **Appendix B – Interview Guide**.

The fieldwork for this study was carried out through semi-structured interviews conducted via the Zoom platform between April 22 and May 12, 2025. Prior to the interviews, potential participants were contacted in February and March, and the Information Sheet explaining the content of the study, along with the Consent Form covering the ethical approval process, was sent electronically. Signed consent forms were obtained from all participants before the interviews. Signed consent forms were obtained from all participants before the interviews. The signed consent forms have been shared with the supervisors via email. To protect anonymity, a blank version of the form used has been included in the appendix. These documents are included in the appendices as **Appendix A – Information Sheet** and **Appendix F – Consent Form**. The interviews were conducted one-on-one. Audio recordings were taken with the consent of the participants. All audio files are securely stored. The shortest interview lasted 35 minutes, while the longest lasted 107 minutes. The interviews were conducted with representatives from six main institutional structures that organize sustainability training and are part of the entrepreneurial ecosystem. A total of ten different organizations were selected from these structures, and the participant profile was created with attention to diversity. Brief descriptions of these structures and their roles are presented below:

- KOSGEB was established in 1990 under Law No. 3624 and provided services and support exclusively to manufacturing SMEs until 2009. However, in response to increasing demand from SMEs in the service and trade sectors, its scope was expanded, and under Law No. 5891, it became the national institution responsible for all SMEs. Since 2017, it has intensified its support for enterprises in the industrial sector, particularly those engaged in technological fields and domestic production (KOSGEB, 2025). Ensuring sustainability in SMEs was stated as one of the priorities of the 2024–2028 Strategic Plan (KOSGEB, 2024).
- TÜBİTAK was founded in 1963. The institution conducts, funds, and manages research in the field of science and technology. Scientific and technological developments are promoted by the institution in line with national priorities. It operates in collaboration with universities, industry, and research institutes; manages research centers; and carries out direct research in strategic areas (TÜBİTAK, 2025).
- Technology Development Zones (TDZs) in Türkiye are institutional structures established to foster cooperation between universities, research institutions and the private sector. They support R&D activities. These zones were granted a legal basis by the enactment of Law No. 4691 in 2001. Their operations are overseen by the Ministry of Industry and Technology. As of April 2025, 106 TDZs have been established in Türkiye, 91 of which are currently active. A total of 11,620 firms

operate in these zones, 54.71% of which are engaged in computer programming and software (NKÜ Technology Development Zone, 2025).

- Development agencies are structures established to mobilize local development dynamics and make the best use of regional resources and potentials. There are 26 regional development agencies across the country. They strive to ensure the highest level of local participation in coordination with central institutions and organizations (Republic of Türkiye Ministry of Industry and Technology, 2025a). In the 2024-2028 period, green growth, entrepreneurship, R&D and innovation, and digitalization are defined among the thematic objectives (Republic of Türkiye Ministry of Industry and Technology, 2025b).
- Chambers of industry and commerce represent the private sector in Türkiye. The Union of Chambers and Commodity Exchanges of Türkiye (TOBB) was established under Law No. 5174 and serves as the umbrella organization of these chambers. There are a total of 365 chambers and exchanges across 81 provinces in Türkiye. Chambers of industry and commerce are tasked with providing professional information to their members and facilitating access to this information. They are also responsible for developing and guiding vocational and technical education (ODS Consulting, 2025).
- Model Factories are established under the coordination of the Ministry of Industry and Technology to provide training and consultancy services in the fields of lean production and digital transformation for manufacturing SMEs. This public investment project, carried out under the "SME Productivity Training Center Project", is based on a Presidential Decree. The establishment and dissemination of Model Factories is carried out in cooperation with the United Nations Development Programme (UNDP), with some centers financed by the German Development Bank (KfW) (Kayseri Model Factory, 2025).

This institutional diversity was important to understand how sustainability trainings differ. **Table 2** below presents the dates, duration, institutional information and participant roles of the conducted interviews.

Table 2: Overview of Interviews

Interview Date	Duration	Organization Type	Participant Role	Organization ID (used in Findings)
22.04.2025	51 minutes	Technology Development Zone	Technology Transfer Office Coordinator	Organization 1
22.04.2025	35 minutes	Chamber of Industry	Project Director	Organization 2

25.04.2025	64 minutes	KOSGEB (Headquarters)	Sustainability Manager	Organization 3
30.04.2025	66 minutes	Model Factory	General Manager	Organization 4
02.05.2025	46 minutes	Technology Development Zone	University– Industry Collaboration Unit Coordinator	Organization 5
02.05.2025	42 minutes	Development Agency	Interviewee 1 and Interviewee 2: Agency Experts	Organization 6
02.05.2025	107 minutes	KOSGEB (Regional Office)	EU Project Coordinator	Organization 7
09.05.2025	59 minutes	KOSGEB (Regional Office)	Director	Organization 8
12.05.2025	63 minutes	Chamber of Industry	Environmental Engineer	Organization 9
12.05.2025	45 minutes	TÜBİTAK	Senior Expert	Organization 10

Interviews were conducted with 10 different organizations from six main types of institutional structures (KOSGEB, Technology Development Zones, development agencies, chambers of industry, TUBITAK, model factories) operating in different regions of Türkiye. However, in line with the principle of anonymity, the names of the organizations were not disclosed. For instance, it was not indicated which of the 26 development agencies or which chamber of industry was involved. In the findings section, the organizations are labeled as “Organization 1”, “Organization 2”, based on the order in which the interviews were conducted. This classification allowed for systematic analysis while maintaining participant anonymity. In the transcripts, **the symbol "X"** has been used in places where mentioning names, organization names, city or region names, or university names could compromise anonymity. In some cases, when multiple such identifiers appear within the same sentence or response, symbols like X1, X2 have been used. The transcripts of all interviews are presented in **Appendix E – Interview Transcripts**. The original Turkish transcripts, in which **the "X" symbol** was not used, as well as their English translations, have been separately shared with the supervisors via email.

The interviews were conducted in Turkish. The initial draft Turkish transcripts were obtained using the GoodTape software. Then, all audio recordings were listened and the transcripts were manually corrected.

Thus, the Turkish transcripts were finalized. The finalized Turkish transcripts were translated into English using an online program. The translations were checked during the referencing process. Particular attention was paid to the quotations corresponding to the themes and the in-text references. The qualitative data obtained in this study were systematically analyzed using Atlas.ti 25 software. The data analysis process was designed to identify both predefined themes based on Mezirow's Transformative Learning Theory (TLT) and new themes that emerged from the data. In this process, predefined thematic codes were developed based on the ten core phases of TLT (e.g., Disorienting Dilemma, Self-Reflection, Assumption Review, etc.). These codes matched the structure of the interview guide and were used to show which stages of learning were covered by the training programs. During the coding process, participant responses pointed not only to the theoretical themes, but also to new content related to the delivery method of the training (online or face-to-face), trainer-related factors, support mechanisms, and institutional coordination. Therefore, new codes derived from the data were integrated into the coding framework to capture content beyond the TLT model. The coding process and related thematic structure are detailed in **Appendix C – Coding Table**, and selected participant quotations are presented in **Appendix D – Quotations**.

In this research, the method was designed in a way that the theoretical framework (TLT), the data collection process (semi-structured interviews), and the analysis steps supported and complemented each other. By including the stages of TLT in the interview guide and analyzing the data with both predefined and new codes from the data, the study was able to answer the research question clearly and in depth. During this process, the use of artificial intelligence tools was strictly limited to tasks such as brainstorming ideas, suggesting sources, and language editing, in line with the guidelines of the Sustainable Entrepreneurship Project course book.

4. RESULTS/FINDINGS

This section presents the findings obtained from the interviews, analyzed using Mezirow's Transformative Learning Theory (TLT). Data collected from ten different organizations were examined separately for each of the ten TLT phases. In addition, the analysis also includes findings that are not directly part of the TLT framework but were frequently encountered in practice.

Table 3 below shows the position of each organization within this framework. Four different symbols and color codes are used.

- A green ✓ symbol indicates that the phase was implemented.
- “Partially met” in yellow indicates that the phase was implemented in a limited way.
- “Depending on...” in blue indicates that implementation depended on certain conditions.
- A red x symbol indicates that the phase was not implemented.

The statements in parentheses explain the reasoning or method behind each evaluation. **Table 3** has made it easier to compare both the TLT phases and the organizations. **Table 3** is presented below.

Table 3 : Overview of TLT Phase Implementation by Organizations

	Organization 1	Organization 2	Organization 3	Organization 4	Organization 5	Organization 6	Organization 7	Organization 8	Organization 9	Organization 10
1.Disorienting Dilemma	√	√	√	√	√	Partially met (Delivered only through specific awareness programs)	x (limited budget is directed toward other methods rather than general awareness)	√	√	x (mentoring and awareness activities are voluntary and delegated to accredited partner organizations; not required for project eligibility)
2.Self Reflection	√ (via questionnaires)	√ (via questionnaires- SWOT analyses or industry comparisons)	x	√ (pre-analysis study)	√ (analysis tool)	Partially met (limited to technical support or grant applications)	√ (basic or advanced assessment depending on the company's maturity)	√ (via using support mechanism as a tool)	Partially met (limited to enterprises participating in specific funded projects)	Partially met (self-assessment is required within the funded program and conducted by accredited partners as a project entry criterion)
3.Assumption Review	x	√ (Through Examples)	Depending on the participation of the business management	√	x	x	x	Depending on the character and initiative level of the business owner	Depending on the company's awareness about sustainability requirements	x (reflection and critical questioning are not a mandatory component; delegated to partners and may vary by implementation)
4.Shared Awareness	√ (via sector meetings)	x	x	√ (via benchmark meetings)	x	Partially met (based on feedback clustering, not peer interaction)	√ (prioritization of firms with similar profiles or sectoral background)	√ (created by engaging influential companies first)	√ (via panels and experience- sharing by sector leaders and peer companies)	√ (via SME clustering in awareness events to facilitate peer exchange)

5.Exploring Options	x	x	x	√	Partially met (tailored guidance is offered, but mostly centered around grant/project opportunities)	x	Depending on the company's willingness to engage	x	x	x (multiple solution paths are not encouraged; each project must focus on one core issue)
6.Action Planning	√ (via action plans)	Partially met (Limited to energy efficiency)	Partially met (via using support mechanism as a tool)	√ (via Gantt Chart)	√ (via action plans)	Partially met (via using support mechanism as a tool)	Partially met (Limited to project budget)	Partially met (via using support mechanism as a tool)	Partially met (via directing companies to develop roadmaps for support eligibility)	Partially met (action plans are a required part of the funded program and jointly developed with accredited partners)
7.Skill Acquisition	x	Partially met (via vocational certification & energy efficiency expertise)	x	Partially met (Certificates are not accredited but recognized in practice)	x	x	x	x	Partially met (Current trainings offer participation certificates; accredited program underway)	x
8.Role Testing	√	x	x	Depending on the size of the enterprise	x	x	x	x	x (pilot applications are conducted by an affiliated but structurally separate unit)	x

9.Confidence Building	Depending on the participation of the business management	x	Depending on simplifying the language and terminology	√ (via a local platform and project festival promoting lean practices)	Depending on trust built through project outcomes and feedback, rather than structured institutional efforts	x	x	Depending on the participation of the company	Depending on whether the company takes initiative as a front-runner	Depending on SMEs' increased confidence through repeated engagement, not institutional design
10.Integration	x	x (Although the integration process is monitored by conducting impact analysis, no related services are provided.)	Depending on the level of contribution received by the SME	Partially met (Achieved in some cases, but not scalable due to limited human resource capacity within the supporting organization)	x (only feedback monitoring, no structured integration approach)	x	Depending on internal motivation and readiness of the company	x (Although the integration process is monitored by conducting impact analysis, no related services are provided.)	x	x (monitoring focuses on commercialization outcomes rather than the integration of sustainability learning into business processes)

The Disorienting Dilemma phase was addressed by 8 out of 10 organizations, either fully (7) or partially (1). Most aimed to raise awareness by emphasizing the expected impact of international regulations such as the European Green Deal. For example, Organization 3 stated that *“we make sure to underline that practices such as the European Green Deal [...] will affect businesses commercially and financially in the near future”*. In contrast, Organization 7 did not focus on general awareness due to limited resources, explaining *“we are developing our own methods to use our limited budget more effectively. Maybe it's not like awareness, but we sometimes try to go a step further”*. Organization 10 delegated awareness activities to partner institutions. Overall, this phase was commonly used as a starting point for sustainability training.

The Self Reflection phase was implemented in 9 out of 10 organizations, either fully (6) or partially (3). This phase aims to support SMEs in assessing their current sustainability performance using internal evaluation tools. For example, Organization 1 described their approach by stating, *“You can think of it like a SWOT analysis,”* referring to the questionnaire-based assessments. Similarly, Organization 4 explained that they carry out structured diagnostics, noting, *“We evaluate them in 22 different parameters [...] We call this a pre-analysis study.”* In contrast, Organization 3 explicitly mentioned the absence of a systematic practice in this area, stating, *“Honestly, I cannot say that we have such a systematic practice in our own organization.”* The remaining organizations conducted this phase either through grant-related procedures or as part of external technical support program.

The Assumption Review phase was explicitly addressed in 2 out of 10 organizations, while in 3 others, its implementation depended on mostly the participation or awareness level of the business owner. This phase aims to encourage reflection on existing habits and support critical thinking. Organization 4 shared that SMEs often respond pessimistically to initial assessments, but they try to encourage reflection and motivation by saying, *“we advise them not to be pessimistic... Right now we are saying: All 130 of our projects have achieved the following successes. Please be comfortable.”* Overall, this phase was not systematically embedded in most training programs and was often limited by the engagement level of the participating SME representatives.

The Shared Awareness phase was directly implemented by 6 out of 10 organizations and partially implemented by 1. This phase aims to help SMEs recognize that they are not alone in facing sustainability-related challenges and to foster peer learning through mutual interaction. Organization 1 stated, *“Yes. In fact, we carry this out at the provincial level together with the provincial directorate of industry,”* indicating that they organize structured sector-based meetings. Similarly, Organization 4 explained their use of benchmarking and group discussions, noting, *“we organize benchmark meetings and sharing.”* In contrast, Organization 3 pointed out that low participant engagement hinders such methods, stating, *“Because the number of participants or the interest of the target audience is not very high in total anyway,*

we try to act regardless of the sector or the scale difference within SMEs in order to proceed in the most effective way while conducting an operation.” Organization 5 acknowledged the potential value of this method but admitted, *“we have not been doing this in the form of ‘Yes, let’s bring companies [...] and let them hold a meeting among themselves.’”* In general, while some organizations implement this phase through panels or sector meetings, others do not adopt such practices.

Exploring Options phase was explicitly implemented by only 1 out of 10 organizations, while 1 organization applied it partially. In another case, implementation depended on the company's willingness to engage. This phase aims to present SMEs with alternative approaches, business models, or solution pathways in the context of sustainability. Organization 4 explained that they tailor their guidance based on preliminary needs assessments, stating, *“We discover this at first with a preliminary analysis. We say: ‘You have areas for improvement in the following areas. This is how we should proceed’ and we can go with different instruments.”* Organization 5 mentioned that their approach is shaped by the specific needs of each company and noted, *“we can offer versatile support to the company by making preliminary evaluations.”* In Organization 7, participation in this phase depends largely on the firm’s initiative, as expressed in, *“my first criterion is the company’s desire before its internal structure.”* This phase was not implemented in the remaining 7 organizations.

The Action Planning phase was explicitly implemented by 3 out of 10 organizations, while the remaining 7 applied it partially. This phase not only involves providing SMEs with an action plan but also explaining how it should be implemented, which steps to follow, and which institutions to contact when necessary. Organization 1 clearly described this scope, stating, *“We not only provide an action plan but also explain how it should be implemented, who they may need to contact if necessary, and which stages to follow for progress.”* Organization 4 emphasized time planning tools and noted, *“There is a very clear Gantt Chart. There, the tasks for us and the tasks for the other company are quite defined.”* Similarly, Organization 5 mentioned their collaborative process with companies, stating, *“we create an ‘action plan’ together.”* Other organizations provide indirect support for action planning by using support mechanisms as tools. Organization 2, however, limits this process specifically to energy efficiency.

The Skill Acquisition phase was partially implemented in only 3 out of 10 organizations, while the remaining 7 did not engage in this phase at all. The aim of this phase is to ensure that SMEs gain the technical knowledge and capabilities needed to carry out sustainability-related transformations. Organization 2 stated that they provide vocational qualification certificates, adding that *“our organization gives vocational qualification certificates”* and suggesting that such efforts contribute indirectly to sustainability. Organization 4 emphasized that model factories are now perceived as authorities in their field, noting, *“the public has slowly started to accept that a certificate from there is valuable,”* even though the certificates are not formally accredited. Organization 9 explained that while they currently

offer only participation certificates, *“we are preparing a long-term training program where they can receive a certificate approved by TSE.”* The remaining organizations do not offer formal programs focused on skills development.

The Role Testing phase was explicitly implemented in only 1 organization, while in another it was applied depending on the size of the enterprise. In the remaining 8 organizations, this phase was not implemented at all. Organization 1 stated that they implement this phase, emphasizing that *“Therefore, a trial period takes place first,”* highlighting that transformation does not begin solely based on a roadmap but requires a period of practical experimentation. Organization 4 noted that in certain cases, selecting a pilot area is necessary, stating, *“But if it is a multi-process, I don't know, 3-4 hangars and each hangar is almost like a separate factory, then it is necessary to choose a pilot region,”* indicating that implementation depends on internal complexity. The other organizations do not carry out such pilot applications.

The Confidence Building phase was directly implemented by only 1 organization, while in 6 others, its emergence was conditional upon factors such as management participation, simplified language use, feedback from project outcomes, or the engagement of pioneer businesses. Organization 4, by establishing a systematic support process at the local level, stated *“We have now started an award process through this Lean Ambassadors Platform... This is not a competition, this is a festival”* to emphasize that they aim to foster confidence, and concluded by saying *“Therefore, self-confidence develops.”* Organization 3 emphasized the role of simplified language in making concepts more approachable, noting, *“Although concepts such as circular economy may seem distant at first, when explained through examples, the reaction ‘I hadn't thought of it like that’ comes very often.”* Similarly, Organization 5 highlighted the role of tangible outcomes in fostering trust, explaining, *“Concrete outputs, even if they are negative, have an impact.”*

Integration phase was partially implemented in only 1 organization, while in 2 others it emerged under specific conditions. Organization 4 indicated that some firms had successfully achieved integration of sustainability and lean practices but acknowledged that this could not be generalized: *“we have companies that have achieved sustainability in terms of integration and lean techniques. Of course it is not enough.”* In the case of Organization 3, integration depended largely on the level of contribution received by the SME, while in Organization 7 it was linked to the internal motivation of the company. In the remaining 7 organizations, no structured activity related to the Integration phase was identified.

In addition to the TLT-based analysis, the interviews revealed several other themes that were not directly related to the ten phases but significantly influenced the sustainability trainings.

A key finding was the variation in **training delivery methods and participant profiles**. Institutions often offered their trainings in both face-to-face and online formats. As stated by Organization 2: *"The trainings are given both face-to-face and through online platforms."* The choice between these formats appeared to depend on logistical factors or the technical complexity of the topic. Additionally, **the profile of the participant** was found to affect the training's impact. Organization 1 noted: *"The people who attend the trainings are usually engineers working in the company or management representatives. [...] If management is committed, the process leans towards 'we can do this.'"*

Economic concerns were also frequently mentioned as limiting factors. As Organization 8 explained: *"Our businesses are trying to postpone some expenditures due to the economic structure in Türkiye. What do they say? 'I don't want to spend money on anything that is not acute.'"* In this context, the motivation to engage in sustainability efforts often resulted from **external drivers**. According to Organization 2: *"Either there will be pressure from outside [...] or secondly, there has to be an incentive, like public support."* These two elements, external market pressure and financial incentives, were widely seen as essential triggers for transformation. However, several participants underlined that SMEs are not a homogeneous group, and their readiness for such transformation can vary. As Organization 9 noted: *"The income of a small enterprise and a medium-sized enterprise can be very different, the way of working can be very different. Now, when we say 'SME', we put them all in the same category. But in fact, sometimes the gap between them is very wide."*

Another finding was the need for **accessible and simplified language** in communicating with SMEs. Organization 9 expressed this clearly: *"Everything is so new, so complicated. If we don't understand it, how can the people over there understand it? So we empathize with them and say, 'How can we simplify and make it easier?'"* This concern is also linked to the **role of the trainer**. Participants emphasized that clear delivery enhanced training effectiveness. Organization 7 pointed out: *"The trainer is absolutely important. Trainers who go into too much numerical detail and legislation get lost after a while."* Similarly, Organization 9 remarked: *"There are presentations that we can understand very clearly: 'What a great presentation she gave!'"*

Institutional fragmentation also emerged as a significant challenge. Organization 2 observed: *"Currently, practices are quite scattered and vary across institutions."* Organization 6 highlighted structural issues, noting: *"There are problems in terms of legislation. There are problems in terms of reluctance."* Organization 8 further emphasized this disconnect: *"It feels like each ministry is putting on its own show in the midst of private affairs. There is no coordination."* From the beneficiaries' point of view, this lack of coherence creates confusion, as described by Organization 10: *"There are so many institutions and organizations producing programs. Some of them are very similar to each other, and some of them are a continuation of one another. [...] Which organizations can benefit?"*

Finally, one participant emphasized a deeper aspect of the learning process by highlighting **its connection to personal values**. Organization 3 stated, “*In other words, the issue we call awareness is not something that is taught afterwards like technical knowledge; it should be shaped together with the moral values of the individual.*”

5. DISCUSSIONS

This study fills an important gap in the literature by evaluating the sustainability trainings for SMEs in Türkiye within the framework of Mezirow's Transformational Learning Theory (TLT).

It was observed that the learning process extended beyond formal training and included elements such as SWOT analyses, assessment tools, action plans, grant and support programs, surveys, field visits, and on-site company visits. **The cross-case analysis of the ten phases of Mezirow's Transformative Learning Theory (TLT)** revealed notable differences in implementation across organizations. Early-stage phases such as Disorienting Dilemma and Self-Reflection were among the most commonly addressed: the former was implemented by 7 organizations and partially by 1, while the latter was implemented by 6 and partially by 3. In contrast, later-stage phases such as Skill Acquisition, Role Testing, and Integration were the least addressed. Among all phases, Action Planning was the most frequently marked as "Partially met," with 7 organizations providing limited or indirect planning support. Meanwhile, Confidence Building was the most frequently labeled as "Depending on...," with conditional implementation observed in 6 organizations. Organization 4 demonstrated the most comprehensive implementation, addressing 9 of the 10 phases either fully or partially. In contrast, Organization 6 and Organization 10 each received 6 "x" marks, indicating no structured implementation in more than half of the phases assessed. These findings show that the first stages of TLT in particular are intensively practiced at the organizational level; however, services after stage 6 (Action Planning, Skill Acquisition, Role Testing, Confidence Building, Integration), which include practice-oriented practices, are mostly absent or implemented conditionally. According to the meta-synthesis conducted by Trevisan et al. (2022), the studies by Sims and Moore et al. emphasized the importance of practical applications in understanding complex system Dynamics (Viera Trevisan et al., 2022). Especially considering that Türkiye has the highest GHG increase and one of the lowest recycling rates among OECD countries, the lack of such practice-based steps becomes even more striking (Ulas & Genc, 2024). One of the most important difference of the study from the studies in the literature is its perspective on the "Disorienting Dilemma" stage. According to the meta-synthesis conducted by Trevisan et al. (2022), the study by Teen et al. addressed this stage through the emotional changes experienced by small businesses in New Zealand in response to a drinking water contamination event, and examined whether such crises can be an opportunity for transformation (Viera Trevisan et al., 2022). This study, on the other hand, does not consider this stage as a crisis-based transformation process, but rather as awareness-raising training and information services. This approach was preferred on the assumption that the transformational learning process can be planned with specific strategies. However, the fact that the responses to these two types of approaches, crisis-based and education-based, may differ from one another should not be ignored.

The findings revealed that the **format of the training, the participant profile, the language used, and the qualifications of the trainer are important elements**. Most institutions offer their trainings both face-to-face and online. The preferred method varies depending on logistical conditions and the content of the training. Online options can be provided for participation from distant locations, while face-to-face trainings may be preferred for certain technical topics. The participant profile is also a critical factor in terms of the impact of the training. The participation of the business owner is considered important for ensuring commitment to the process. For example, organization 1 stated that *"but even more important than funding is the visionary leadership of the managers"*. On the other hand, when employees attend the training, it was noted that this process may be perceived by them as an additional workload. Ulaş and Genç (2024) also emphasized the commitment of the business owner to the process as one of the factors on which the adaptation of sustainability depends (Ulaş & Genç, 2024). In addition, the importance of using simple and accessible language to communicate effectively with SMEs was expressed by most participants. This finding is also related to the role of the trainer. Participants mentioned the importance of trainers who deliver clear and understandable presentations. It was also emphasized that awareness cannot be treated as technical knowledge alone, but must be developed together with the moral values of the individual. For example, Organization 3 stated that *"I believe that moral foundations will support behaviors related to sustainability. Therefore, I think that education should not only be reduced to technical knowledge, but also to establish a value-based structure. Let this be my personal note."* According to the meta-synthesis conducted by Trevisan et al. (2022), the study by Moyer et al. examined the relationship between learning and values, beliefs, and experiences in faith-based organizations in Kenya, and stated that organizations, whether religious or non-religious, can enhance sustainability learning by creating space for discussions on beliefs, values, and worldviews (Viera Trevisan et al., 2022). Similarly, Organization 1 *"Once they embody this behavior, those around them are also affected. In this way, like the roots of a tree, a single idea can reach every level of society."* These findings indicate that the learning process can trigger not only individual but also social transformations.

The study investigated the **other constraining factors that influence the learning process**. The most prominent finding is the financial situation of the country or the SME. It was noted that an uncertain economic environment may lead SMEs to avoid non-urgent expenditures and may hinder long-term transformation. External factors such as regulatory pressures or grant opportunities can play a role in enabling such transformation. These findings are also consistent with studies in Türkiye. Günerergin et al. (2012) reported that financial constraints are one of the barriers to sustainability transformation in SMEs (Günerergin et al., 2012). Çoban Kumbalı et al. (2022) identified the concern that sustainability initiatives will reduce profitability as one of the main barriers to transformation (Çoban Kumbalı et al., 2022). However, SMEs do not have a homogeneous structure. SMEs of different sizes and characteristics

in different regions have varying needs for this transformation. Many institutions mentioned a lack of coordination at the institutional level. This situation may cause confusion among the beneficiary SMEs.

The theoretical contribution of the research is that Mezirow's ten-stage learning process has been systematically used for the first time in the evaluation of sustainability trainings for SMEs in Türkiye. In the literature, this theory has generally been addressed in the context of sustainability learning in higher education institutions (Viera Trevisan et al., 2022). This study, on the other hand, examined its application in the field and from the perspective of SMEs.

The study has **some limitations**. The research is based only on interviews with implementing organizations to determine the level of implementation. The views of SMEs, the beneficiaries of the trainings, were not considered. In addition, the research was conducted in the context of Türkiye and no regional differences or international comparisons were made.

6. CONCLUSIONS

This study analyzed how actors within Türkiye's entrepreneurial ecosystem implement sustainability training for SMEs, and how these practices reveal specific gaps and areas for improvement when evaluated through the lens of Mezirow's Transformative Learning Theory (TLT). TLT was adopted as the guiding theoretical framework. Qualitative field data was collected from ten different organizations representing six distinct institutional structures. The main research question that guided this study is as follows: **"How do the entrepreneurial ecosystem actors in Türkiye implement SME sustainability training, and how can a Transformative Learning framework be used to identify gaps and possible policy intervention strategies?"**

Within the scope of the first sub-question, This research examined how institutions implement the learning process as a whole, and how this process is evaluated through the ten phases of TLT. It was observed that institutions implemented mostly the theory-based phases of TLT, such as awareness, more intensively. Practice-based phases such as skill acquisition, role testing, and integration were mostly not implemented. **To address the second sub-question,** The study identified the key factors influencing how institutions implement training activities. Trainings are conducted both face-to-face and online. This situation may vary depending on logistical conditions and the subject of the training. The participant profile is important. This is perceived as the business owner's commitment to the process. The trainer's ability to explain and the simplicity of the language used are also considered important issues in the trainings. . It was also emphasized that awareness cannot be treated as technical knowledge alone, but must be developed together with the moral values of the individual. **For third sub-research question,** The study investigated the other constraining factors that influence the learning process. The findings show that both macroeconomic factors and the financial insufficiency of SMEs are constraining factors. Therefore, financial incentive mechanisms have gained importance. The lack of coordination between institutions may also cause confusion for beneficiaries.

As for the fourth sub-research question, The study focused on how SME sustainability trainings can be improved based on the findings and what types of policy recommendations can be proposed within this scope. Theoretical trainings , particularly related to raising awareness were found to be considerably more prevalent than practice-oriented applications. Organization 7 expressed this situation with the following statement: *"In X, sometimes you receive information on the Green Deal from many institutions.....They can give big seminars on the same topic in the same week."* **Placing more emphasis on practice-based components** when developing policies or methods is considered a potentially effective strategy to address this gap. **The second recommendation** concerns model factories. Among the institutions analyzed, they were the only ones implementing all phases of Transformative Learning Theory (TLT). Another institution, Organization 3, commented on this by saying, *"I would like to*

emphasize again that there is a similar practice in model factories. They run a program called 'Learn-Return'. As the name suggests, the current situation of the enterprises is determined after the training. Afterwards, a process is carried out together with consultancy services to transform at least one aspect of the production process. This is one of the most valuable examples I know of in Türkiye." However, only one of the 22 modules implemented by this institution focuses on green transformation. Regarding this issue, the institution stated, *"We evaluate them in 22 different parameters, 20 of which are components related to lean techniques, one related to digital, one related to green transformation."* The transformation achieved by these structures in SMEs is also noteworthy from a financial perspective. The institution added, *"In these projects, daily production increases ranging from 20% to 350% were achieved."* Therefore, it is considered that expanding the reach of model factories and integrating sustainability-related topics more extensively into their operations could be highly effective. **The third recommendation** involves improving coordination in the services offered and designing them with flexibility according to regional and SME-specific characteristics. Many institutions noted that the services currently appear fragmented and that this creates confusion among beneficiaries. It was also emphasized that regional differences and varying SME characteristics lead to different needs. For this reason, it was considered that a general strategic framework could be established at the national level, which could then be adapted and implemented at the local level according to the characteristics of SMEs in each region. Organization 1 supported this recommendation by stating, *"I believe strategies should be regional. Of course, we should have a general overarching strategy within a common framework regarding sustainability. But when we think about Türkiye, we encompass such great differences regionally."* **The fourth recommendation** relates to trainers. Many institutions highlighted the importance of this aspect during their activities. Therefore, promoting the training of trainers approach and even implementing accreditation systems for trainers is considered a potentially effective action. **The fifth and final recommendation** is to implement an action plan that encourages business owners to take ownership of the transformation process. It is believed that doing so could remove the first and most significant barrier to change.

As this study evaluates sustainability trainings implemented across Türkiye, it presents **a variety of practical implications for different stakeholders** based on its findings and recommendations. Firstly, the study focuses on a ten-phase transformation model. Institutions can position themselves according to one or more of these phases or apply all ten steps progressively to guide the entire transformation process. In this sense, it provides a systematic implementation framework for training providers. Additionally, the study demonstrates that the learning process can be supported not only through module-based trainings but also through tools such as SWOT analyses, self-assessment forms, surveys, and field visits. This highlights which complementary tools can enhance the effectiveness of training programs. The findings also indicate that the use of clear and accessible language is an important factor in establishing effective communication with SMEs. This is a point trainers should consider in their instructional approaches. From

the perspective of SMEs, the study reveals that the business owners' sense of ownership is a key factor influencing the success of sustainability transformation. Regarding policymakers, the results point to the need for stronger institutional coordination and the development of flexible training frameworks that can respond to regional differences.

Finally, Based on the findings of this research, **several suggestions for future research** can be developed. First, a similar study focusing on the views of SMEs could be conducted. This would be useful to identify the needs and opinions of the demand side. The same methodological approach could be applied in different countries or regions. This would allow the impact of cultural and structural differences to be analyzed and contribute to comparative analysis. In addition, transformational learning processes related to sustainability should not be limited to adult learning or higher education level, but should also be implemented at early education levels such as primary and secondary education.

REFERENCES

- Çoban Kumbalı, H., İncekara, M., & Sarıkaya, M. (2022). KOBİ’lerde çevresel ve sosyal sürdürülebilirlik: Avrupa Birliği ülkeleri ve Türkiye karşılaştırması [Environmental and social sustainability in SMEs: A comparison between the European Union countries and Türkiye]. *Kafkas Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 13(26), 789–823. <https://doi.org/10.36543/kauibfd.2022.033>
- Deveci, T. (2021). *Yetişkin eğitimi teorileri* [Adult education theories]. <https://www.sead.com.tr/wp-content/uploads/2021/08/T.Deveci-Yetiskin-Egitim-Teorileri.pdf>
- Günerergin, M., Penbek, Ş., & Zaptçioğlu, D. (2012). Exploring the Problems and Advantages of Turkish SMEs for Sustainability. *Procedia - Social and Behavioral Sciences*, 58, 244-251. <https://doi.org/10.1016/j.sbspro.2012.09.998>
- Jong, G. D. (2023). 1 Introduction. İçinde G. De Jong, N. Faber, E. Folmer, T. Long, & B. Ünal (Ed.), *De Gruyter Handbook of Sustainable Entrepreneurship Research* (ss. 1-22). De Gruyter. <https://doi.org/10.1515/9783110756159-001>
- Kayseri Model Factory. (2025). *Türkiye’de model fabrikalar* [Model factories in Türkiye]. <http://kayserimodelfabrika.com/turkiye-de-model-fabrikalar47>
- Kitchenham, A. (2008). The Evolution of John Mezirow’s Transformative Learning Theory. *Journal of Transformative Education*, 6(2), 104-123. <https://doi.org/10.1177/1541344608322678>
- KOSGEB. (2023). *Küçük ve Orta Büyüklükteki İşletmeler Yönetmeliği* [Regulation on small and medium-sized enterprises]. <https://webdosya.kosgeb.gov.tr/Content/Upload/Dosya/Mevzuat/2023/K%C3%BC%C3%A7%C3%BCK ve Orta B%C3%BCy%C3%BCKl%C3%BCKteki %C4%B0%C5%9Fletmeler Y%C3%B6netmeli%C4%9Fi.pdf>
- KOSGEB. (2024). *KOSGEB Stratejik Planı 2024–2028* [KOSGEB Strategic Plan 2024–2028]. [https://webdosya.kosgeb.gov.tr/Content/Upload/Dosya/Tablo%20ve%20Raporlar/KOSGEBN%20Stratejik%20Plan/KOSGEB Stratejik Plan%C4%B1 \(2024-2028\).pdf](https://webdosya.kosgeb.gov.tr/Content/Upload/Dosya/Tablo%20ve%20Raporlar/KOSGEBN%20Stratejik%20Plan/KOSGEB Stratejik Plan%C4%B1 (2024-2028).pdf)
- KOSGEB. (2025). *Tarihçe* [History]. <https://www.kosgeb.gov.tr/site/tr/genel/detay/7903/tarihce>

- Michel, J. O., Holland, L. M., Brunnquell, C., & Sterling, S. (2020). The Ideal Outcome of Education for Sustainability: Transformative Sustainability Learning. *New Directions for Teaching and Learning*, 2020(161), 177-188. <https://doi.org/10.1002/tl.20380>
- T.C. Sanayi ve Teknoloji Bakanlığı [Ministry of Industry and Technology]. (2025a). *Biz kimiz?* [Who we are]. <https://ka.gov.tr/sayfalar/biz-kimiz--20>
- T.C. Sanayi ve Teknoloji Bakanlığı [Ministry of Industry and Technology]. (2025b). *Bölgesel kalkınma ve ülkemizde bölgesel kalkınma politikalarının gelişim süreci* [Regional development and the development process of regional development policies in Türkiye]. <https://ka.gov.tr/sayfalar/bolgesel-kalkinma-ve-ulkemizde-bolgesel-kalkinma-politikalarinin-gelisim-sureci--22>
- Moyer, J. M., & Sinclair, A. J. (2020). Learning for Sustainability: Considering Pathways to Transformation. *Adult Education Quarterly*, 70(4), 340-359. <https://doi.org/10.1177/0741713620912219>
- NKÜ Teknoloji Geliştirme Bölgesi [NKÜ Technology Development Zone]. (2025). *Türkiye’de teknoparklar* [Technoparks in Türkiye]. <https://nkuteknopark.com.tr/turkiyede-teknoparklar/>
- ODS Danışmanlık [ODS Consulting]. (2025). *Sanayi ve ticaret odaları nedir, ne iş yapar?* [What is the chamber of industry and commerce, what does it do?]. <https://odsdanismanlik.com/tr/makaleler/sanayi-ve-ticaret-odalari-nedir-ne-is-yapar/>
- Shepherd, D. A., & Patzelt, H. (2011). The New Field of Sustainable Entrepreneurship: Studying Entrepreneurial Action Linking “What is to be Sustained” with “What is to be Developed”. *Entrepreneurship Theory and Practice*, 35(1), 137-163. <https://doi.org/10.1111/j.1540-6520.2010.00426.x>
- TÜBİTAK. (2025). *About us*. <https://tubitak.gov.tr/en/institutional/about-us>
- Ulaş, D., & Genç, C. (2024). KOBİ’lerde sürdürülebilirlik ve dijital dönüşüm farkındalığı [Sustainability and digital transformation awareness in SMEs]. *12. KOBİ’ler ve Verimlilik Kongresi*, İstanbul. <https://isl.iku.edu.tr/sites/isl/files/inline->

[files/12.%20KOB%C4%B0%E2%80%99LER%20VE%20VER%C4%B0ML%C4%B0L%C4%B0K%20KONGRES%C4%B0.pdf](#)

Viera Trevisan, L., Mello, S. F. D., Pedrozo, E. Á., & Silva, T. N. D. (2022). Transformative Learning for Sustainability Practices in Management and Education for Sustainable Development: A Meta-Synthesis. *Revista de Gestão Social e Ambiental*, 16(2), e02945.
<https://doi.org/10.24857/rgsa.v16n2-003>

APPENDIX A-Information Sheet

"From Awareness to Action: Evaluating SME Sustainability Training in Türkiye Through a Transformative Learning Framework"

Dear Participant,

Thank you for your interest in participating in this research. This letter explains what the research entails and how the research will be conducted. Please take time to read the following information carefully. If any information is not clear kindly ask questions using the contact details of the researchers provided at the end of this letter.

WHAT THIS STUDY IS ABOUT?

This research explores how entrepreneurial ecosystem actors in Türkiye implement SME sustainability training programs and how a transformative learning framework can help identify gaps and policy intervention strategies. The study aims to assess the effectiveness, coordination, and accessibility of SME sustainability training while proposing policy recommendations for improvement.

A total of 10 to 12 participants will be invited to take part in this study. Participants have been selected based on their direct involvement in SME sustainability training, policy development, or business support services. Their perspectives are essential in understanding how sustainability training is delivered and where improvements may be needed.

This research is conducted as part of my academic work at the University of Groningen's Sustainable Entrepreneurship program. It is not sponsored or funded by any external organization.

WHAT DOES PARTICIPATION INVOLVE?

Participation in this study involves taking part in a semi-structured interview, which will be conducted either online or in person, depending on the participant's preference and availability. The interview will last approximately 45 to 60 minutes.

During the interview, participants will be asked about their role in SME sustainability training, the design and implementation of training programs, and any challenges or gaps they have observed. Additionally, they will be invited to share their perspectives on potential policy interventions to enhance SME sustainability education.

The interview will be recorded for transcription and analysis purposes, but all data will be handled confidentially. If necessary, participants may be contacted via email for minor follow-up questions or clarifications, but no further time commitment is expected beyond the initial interview.

DO YOU HAVE TO PARTICIPATE?

Participation in this study is entirely voluntary. There is no obligation to take part, and choosing not to participate will have no consequences.

Participants can withdraw from the study at any time, without providing a reason. They are also free to skip any questions they do not wish to answer. Withdrawing from the study or choosing not to answer specific questions will not affect them in any way.

ARE THERE ANY RISKS IN PARTICIPATING?

There are no risks associated with participating in this study. The interview will focus on professional experiences and perspectives related to SME sustainability training, and no sensitive personal data will be collected. Participants are free to withdraw at any time or skip any questions they do not wish to answer.

ARE THERE ANY BENEFITS IN PARTICIPATING?

There are no direct benefits to participating in this study. However, the research may contribute to a better understanding of SME sustainability training in Türkiye and help identify policy improvements. The findings may be useful for future research and for organizations involved in sustainability training and policy development.

HOW WILL INFORMATION YOU PROVIDE BE RECORDED, STORED AND PROTECTED?

All information provided during the interview will be kept strictly confidential. The interview will be recorded for transcription purposes, but all data will be anonymized, meaning that no names or identifying details will be included in the final research report.

Data will be securely stored in accordance with the General Data Protection Regulation (GDPR) and the data management policies of the University of Groningen. Only the researcher and academic supervisors involved in the study will have access to the data.

The data will be used solely for the purpose of this research. After the study is completed, all identifiable information will be deleted, and anonymized data may be retained for academic purposes, such as future research or publications.

WHAT WILL HAPPEN TO THE RESULTS OF THE STUDY?

The results of this study will be used for a research dissertation as part of the Sustainable Entrepreneurship program at the University of Groningen. The findings may also be presented at academic conferences or published in research journals.

ETHICAL APPROVAL

The researcher will adhere to all relevant ethical guidelines, including confidentiality, informed consent, and the responsible handling of data in accordance with the General Data Protection Regulation (GDPR) and university policies.

INFORMED CONSENT FORM

Participants will be asked to sign an informed consent form before the interview begins. Signing this form indicates their intention to participate in the study.

Participation remains entirely voluntary, and participants have the right to withdraw at any time without providing a reason. They may also choose not to answer specific questions without any consequences.

WHO SHOULD YOU CONTACT FOR FURTHER INFORMATION?

For any questions or further information about this study, please contact:

Yakup İnalkaç

Sustainable Entrepreneurship Program

University of Groningen – Campus Fryslân

Ubbo Emmiuslaan 893, 8917 JE Leeuwarden

Phone: +90 539 618 02 91

Email: y.inalkac@student.rug.nl. Yakup İnalkaç is the primary contact person for this study.

APPENDIX B- Interview Guide

Thesis Title: From Awareness to Action: Evaluating SME Sustainability Training in Türkiye Through a Transformative Learning Framework

Introductory Text: Hello, this interview is part of my master's thesis research conducted at the University of Groningen. My aim is to understand how sustainability training programs for SMEs are implemented in Türkiye and to evaluate this process through the lens of Transformative Learning Theory (TLT). The interview will take approximately 45 to 60 minutes. All information you provide will be kept anonymous and used solely for academic purposes. May I record the interview?

INTRODUCTORY QUESTIONS

1. Could you briefly introduce yourself and your organization?
2. What is your organization's relationship with SMEs?
3. If your organization provides sustainability training for SMEs, who are the target participants, how is the training delivered, and what tools are used?

TLT-BASED MAIN QUESTIONS

4. **Disorienting Dilemma:** Do you offer content that creates awareness and shows that sustainability is an unavoidable area of transformation for businesses? For example, do you include warnings such as "The European Green Deal may directly affect your business"?
5. **Self-Reflection:** Is there a structure that encourages participants to reflect on their own business by asking, "Where do we stand on these issues? What are we doing wrong?"
6. **Assumption Review:** Does the training include sections that help participants question their current habits or business practices? For example, are there prompts like "Why do we automatically choose plastic packaging?" that encourage critical thinking?
7. **Shared Awareness:** Do you create an environment where participants can interact with other businesses facing similar challenges and feel that they are not alone? Do you use group work, case studies, or shared experience formats?
8. **Exploring Options:** Do you present alternative roles, sustainable practices, business models, or ways of engaging with sustainability during the training?
9. **Action Planning:** Are participants encouraged to develop a concrete sustainability action plan for their own business by the end of the training?
10. **Skill Acquisition:** Does the training provide technical knowledge and skills related to sustainability practices, such as energy efficiency, waste management, or sustainability reporting?

11. **Role Testing:** Are there applied sections where participants are encouraged to test what they've learned? For example, are there assignments like "Try a three-week pilot application"?
12. **Confidence Building:** Do participants gain enough confidence to implement what they've learned in their own business? Are there inspiring real-life examples that make them feel "we can do this too"?
13. **Integration:** After the training, do you monitor or encourage the long-term integration of sustainability into participants' business processes? For example, do you follow up with businesses that develop reporting habits after the training?

POLICY-RELATED QUESTIONS

14. Do you collaborate systematically with other institutions (such as development agencies, chambers, or universities) in the delivery of your training?
15. In your opinion, is there a need for a national strategy for sustainability training for SMEs?
16. Do you have mechanisms in place for monitoring, evaluating, or reporting the impact of your training?

CLOSING QUESTIONS

17. In your opinion, which area of SME sustainability training is most in need of improvement?
18. If you could make a recommendation to policymakers, what would you advise them to prioritize?

APPENDIX C- Coding Table

APPENDIX C- Coding Table	
THEME	CODE
Transformative Learning Steps	○ 1.Disorienting Dilemma
	○ 2.Self Reflection
	○ 3.Assumption Review
	○ 4.Shared Awareness
	○ 5.Exploring Options
	○ 6.Action Planning
	○ 7.Skill Acquisition
	○ 8.Role Testing
	○ 9.Confidence Building
	○ 10.Integration
Important Aspects	○ Collaboration
	○ Coordination
	○ Financial situation of the country
	○ Financial situation of the SME
	○ Funding
	○ level of contribution received by the SME
	○ Participation
	○ simplifying the language and terminology
	○ The role of the instructor
	○ Value Creation
	○ Vision of Business Management
Strategy	○ National
	○ Regional
	○ not necessary
Method of Training	○ Online
	○ Onsite

APPENDIX D- Quotations

ID	Quotation Content	Codes	Reference
1:1	The training processes or meetings are conducted online. This is because in these efforts, we don't just rely on experts from the X region. We work with individuals at the national and international level who can effectively manage this work, raise awareness, and provide expert advice tailored to the needs of SMEs.	Online	15 - 15
1:2	We build the content and scope in such a way that they can first recognize why this is necessary for them.	1.Disorienting Dilemma	17 - 17
1:3	After conducting an awareness session with the SMEs who reach out to us or whom we identify, we ask them to fill out a questionnaire. This is actually the Sustainability Capacity Assessment Tool available on the websites of our university and the technopark. Once they complete the questionnaire, it gives us a "check-up" of their business in terms of sustainability. This check-up allows both us and the business to build a roadmap. We can identify their strengths, weaknesses, areas where they have no activity, and areas where they are already strong. You can think of it like a SWOT analysis.	2.Self Reflection	19 - 19
1:4	Funding is definitely important in such cases	Funding	29 - 29
1:5	but even more important than funding is the visionary leadership of the managers	Vision of Business Management	29 - 29

1:6	Regardless of whether it is onsite or online, they realize they are suffering from the same issue and feel the need to communicate with each other. They talk to each other during the session or the training,	4.Shared Awareness	33 - 33
1:7	Yes. In fact, we carry this out at the provincial level together with the provincial directorate of industry.	4.Shared Awareness	35 - 35
1:8	We not only provide an action plan but also explain how it should be implemented, who they may need to contact if necessary, and which stages to follow for progress.	6.Action Planning	40 - 40
1:9	We don't have a certification program aimed at building specific skills.	7.Skill Acquisition	54 - 54
1:10	We cannot change this production or organizational structure suddenly just based on the roadmap. The business would not accept that either. Therefore, a trial period takes place first.	8.Role Testing	60 - 60
1:11	The people who attend the trainings are usually engineers working in the company or management representatives. So again, management is involved. If management is committed, the process leans towards "we can do this." But when it is just the engineer participating, there are more question marks. Employees often wonder, "Is this going to create extra workload for me?" Which is understandable. There is a natural hesitation there	9.Confidence Building Vision of Business Management	62 - 62
1:12	the person attending the training might think, "My salary won't increase, but my workload will."	Vision of Business Management	64 - 64

1:13	Frankly, we have only been continuing this work for about a year. We are progressing through conducting the surveys, then creating the roadmaps, and moving forward with the mentoring activities based on these roadmaps.	10.Integration	69 - 69
1:14	We strive to collaborate with all stakeholders in our region, and even stakeholders across Türkiye. We make efforts to learn from the innovations we observe in others and to share our own innovations with them. As I mentioned before, we work together with the development agency, the provincial directorate of industry, the industrial zones in our region, chambers of commerce, and chambers of commerce and industry.	Collabration	76 - 76
1:15	we are not partners with the X Chamber of Commerce and Industry in the European Union project. They are not part of our consortium. However, we provide joint trainings. Why do we do this? Because the Chamber of Commerce and Industry can reach SMEs that we, as a university, cannot access, with just a phone call. We use the resources we have, and they use the resources they have.	Collabration	78 - 78
1:16	I believe strategies should be regional. Of course, we should have a general overarching strategy within a common framework regarding sustainability. But when we think about Türkiye, we encompass such great differences regionally. In different regions, different sectors have come to the forefront. We must first recognize this distinction.	Regional	80 - 80

1:17	<p>Could the carbon footprint of the fifth-ranked city be the same as that of the tenth-ranked city? Could the water footprint be the same? No, it could not. Therefore, we cannot all fit into the same basket. The general strategic framework can be suitable and necessary for sustainability work overall. You have to reduce your carbon footprint. If you cannot reduce it, you should conduct equivalent work in another area. Similarly, you must reduce your water footprint. If you cannot reduce it, you must implement an equivalent solution. In terms of training, if we are thinking of it this way, awareness training across Türkiye should be at the same level. Once awareness has reached the same level, the next steps must be adapted to each enterprise's capacity, to each region's capacity, to each region's production capabilities, and to sustainability needs such as carbon footprint, water footprint, and efficiency efforts.</p>	Regional	82 - 82
1:18	<p>Within this structure, universities must absolutely be included. KOSGEB must absolutely be included. Chambers of Commerce and Industry must absolutely be included. Provincial Directorates of Industry must absolutely be included. And in my opinion, most importantly, NGOs must be included.</p>	Participation	82 - 82

1:19	When we explain these concepts to employees in businesses and establish a culture around them, what happens? They take these ideas home. Imagine a household with three or four members. By reaching one individual, we indirectly reach the other three or four people. Then the child in the household takes these ideas to school, to their social environment, and gradually, a cultural transformation begins. Once they embody this behavior, those around them are also affected. In this way, like the roots of a tree, a single idea can reach every level of society.	Value Creation	86 - 86
2:1	The trainings are given both face-to-face and through online platforms	Online Onsite	13 - 13
2:2	we include topics such as the European Green Deal, carbon footprint, sustainable supply chain in our trainings. For the last two or three years, we have been telling companies that this transformation is necessary.	1.Disorienting Dilemma	15 - 15
2:3	during the trainings, companies can analyze their own situation. We use tools like questionnaires, SWOT analyses or industry comparisons.	2.Self Reflection	17 - 17
2:4	During the trainings, questions are asked about why traditional methods are preferred and how they have become unsustainable. Energy consumption habits, such as the plastic usage habits you gave, are also included in our trainings as other questioning examples.	3.Assumption Review	21 - 21

2:5	In these trainings, panels and events, in order for companies to learn from each other and feel that they are not alone, some case studies are actually given to companies and these joint group works are created in this way. Here, we realize that companies establish an interaction among themselves. However, we do not have a specific study on this.	4.Shared Awareness	23 - 23
2:6	Our guidance is project-based, such as changing your business models and using sustainability to integrate this sector with this business model.	5.Exploring Options	27 - 27
2:7	we focus on certain issues within sustainability. So energy efficiency is the priority in these. And when it is energy efficient, we give feedback on these plans. And after the energy efficiency measurements of the companies are made through our own subsidiary, an action plan is prepared for them.	6.Action Planning	29 - 29
2:8	our organization gives vocational qualification certificates. Here, of course, we have more applications for training intermediate staff. But this should be considered as an element that supports sustainability. On the other hand, we already have energy efficiency experts.	7.Skill Acquisition	40 - 40
2:9	it's actually project-based, because if the government gives an incentive for it, they need to pilot it after they have already received training	8.Role Testing	44 - 44

2:10	I think on the financing side, it is sometimes difficult to encourage companies to do these things because they are very affected by macroeconomic fluctuations. Because more people focus on themselves through cash flow. And they want more incentives to manage this side.	Funding	46 - 46
2:11	Interviewer: Yes, I mean, can we say like this? Either there will be pressure from outside, they have to make this kind of transformation for export, otherwise they will not be able to export. Or secondly, there has to be an incentive, like public support. You say that these two situations are actually triggering factors. Interviewee Exactly. Yes, that's exactly how it happens.	Funding	49 - 50
2:12	We conduct impact analysis with our organization after the events. As a result of the impact analysis, some of the companies of course try to integrate them into their business	10.Integration	52 - 52
2:13	So we work in cooperation with universities, development agencies, environmental consultancy firms, consultancy firms, educational institutions, some international organizations. And projects and training programs are carried out together with such stakeholders.	Collabration	54 - 54

2:14	Now we have cooperation protocols with local institutions. X1 University, X2 University. You know we are the X Chamber of Industry, but in X, the Chamber of Industry and the Chamber of Commerce are separate institutions. And we actually have a partnership with the chamber of commerce there. So we cooperation protocols with local institutions. In other words, we have cooperation protocols and we carry out a work together with them and other institutions in a certain systematic way, because we have a past experience. For example, we can organize fair visit organizations together. We can also organize training organizations. We can also organize big events together, we can also organize training organizations at such events.	Collabration	60 - 60
2:15	With a national framework strategy, the quality and prevalence of these trainings can be increased. So a national level training strategy on sustainability has not actually been published.	National	62 - 62
2:16	But as you know, there is a program published by this ministry, the Ministry of Trade, in accordance with the European Green Deal, and the Ministry of Environment is also working on it. But I think this needs to be adapted regionally. Because you know, the environmental factors are different, the natural factors are different in each region. And therefore, we think it would be more appropriate to prepare a program in accordance with this reality.	Regional	62 - 62

2:17	Currently, practices are quite scattered and vary across institutions	Coordination	62 - 62
2:18	I think it would be more productive if the trainings were more interactive and conducted through case studies, so that the participant can interact with the trainer.	Onsite Participation	68 - 68
3:1	Sometimes we organize trainings. In order to reach SMEs in 81 provinces, we usually try to do it online.	Online	7 - 7
3:2	Sometimes by using local actors, sometimes by trying to bring actors in X or international actors to the local level, we have carried out these activities in physical capabilities.	Onsite	15 - 15
3:3	we usually try to offer some training and awareness content by hiding behind the attractiveness of the support when we explain our trainings or awareness raising activities through a support.	Funding	15 - 15
3:4	Because it is very valuable information, especially for SMEs, to be able to draw the participant into the subject, to indicate how this process will affect them financially in the future. So yes, we make sure to underline that practices such as the European Green Deal, the Border Carbon Regulatory Mechanism will affect businesses commercially and financially in the near future. The awareness part of the trainings starts precisely in this framework. Starting from the basic documents such as the EU Green Deal and Kyoto Protocol, we provide a framework on how we got to where we are today and what awaits us in the future.	1.Disorienting Dilemma	17 - 17

3:5	This transformation or the necessity of regulations first started in certain sectors, especially in carbon-intensive and large sectors. In these sectors, there are generally not many SMEs, or even none in some sectors. SMEs do not yet see these practices and regulations as an issue that concerns them. At this point, we are trying to emphasize that this situation will affect them in the future. Some exporting SMEs have already started to deal with these issues. The companies to which they sell or supply demand certain data and information from them, or this information becomes mandatory within the framework of regulations. However, for SMEs that do not yet feel this necessity, we try to convince them that it will affect them in the near future.	1.Disorienting Dilemma	21 - 21
3:6	Honestly, I cannot say that we have such a systematic practice in our own organization.	2.Self Reflection	23 - 23
3:7	In large, more corporate enterprises, it may be enough to convince only the technical team on issues such as technical transformation. But in SMEs, the people who need to be convinced are the business owners or top managers. Therefore, when these people do not participate in the training, even if there are conclusions drawn from the training, there may be difficulties in putting them into practice.	3.Assumption Review	25 - 25
3:8	in order to create this change, perhaps the direct participation of the business owner or a decision maker from the management in the training could increase the effectiveness.	3.Assumption Review	26 - 26

3:9	Actually, we don't use this method in general, let me state that. Because the number of participants or the interest of the target audience is not very high in total anyway, we try to act regardless of the sector or the scale difference within SMEs in order to proceed in the most effective way while conducting an operation.	4.Shared Awareness	29 - 29
3:10	As I said, this process is still at a very early stage for SMEs in Türkiye. But in the future, as you mentioned, I foresee that this situation will be different, both through regulations and financial instruments. At the moment, Türkiye is not yet at that level in terms of implementing such advanced models.	5.Exploring Options	33 - 33
3:11	I would like to point this out: Although we are not doing it in a structural or fictional way, we have done such things through the support mechanism I just told you about, that is, by using support as a tool. For example, for the past one and a half to two years, there was the Green Industry Support Program that we ran with World Bank funding. From the design stage of this program, we have made a lot of effort to create a structure according to the needs of SMEs that they can easily benefit from.	6.Action Planning Funding	37 - 37
3:12	In these events, as I mentioned before, we first explained the terminology and background, then we told businesses that they need to make this transformation and the regulations that await them. Afterwards, we shared examples of businesses that wrote projects, started projects and achieved success, and enabled them to create their own action plans.	6.Action Planning	37 - 37

3:13	No, we do not have such a practice at the moment.	7.Skill Acquisition	43 - 43
3:14	To be honest, there is no such practice in our training system, there never has been.	8.Role Testing	49 - 49
3:15	There is such a perception: Businesses find such concepts, such as green transformation, green consensus, digital transformation, too sophisticated. "These things are not for us", "These are very advanced topics", "These are not within our reach". I would like to underline this perception. No sir, these tools are actually tools that everyone can access and reach. And they are only tools. This is how it should be looked at. When they are described in scary terms, such as "circular economy" or "industrial symbiosis", businesses may say, "This is not something I can do". However, it already does these practices due to the nature of its business. But when the terms change, so does the approach.	9.Confidence Building simplifying the language and terminology	51 - 51
3:16	Especially consulting firms like to make these issues look very sophisticated. Because that makes businesses need them more. This is understandable from their point of view. But I really believe that public institutions and non-profit organizations need to simplify it and make it accessible.	9.Confidence Building simplifying the language and terminology	51 - 51

3:17	<p>But telling about a green transformation practice in a similar business, in a similar or different workshop, makes other businesses say "Actually, this is something I can do too". Although concepts such as circular economy may seem distant at first, when explained through examples, the reaction "I hadn't thought of it like that" comes very often. I have received such reactions so many times at events. At that point, businesses say "We can do this too". Our number of applications was quite low at the beginning, but after a certain point, we really caught a serious momentum. We have already talked about peer learning in Türkiye, but in general, in business practice, it is probably the same abroad, when an enterprise in the same industrial estate successfully implements an innovation, especially if it has received support, it sets an example for other enterprises around it, and this creates a natural learning process.</p>	<p>4.Shared Awareness 9.Confidence Building simplifying the language and terminology</p>	53 - 53
------	---	--	---------

3:18	<p>the permanence of such transformation processes depends on the business's approach to the subject and the benefits it derives from the process. If the business really sees a benefit, the process becomes permanent. And sustainability issues are essentially issues to be benefited from. For example, studies on energy efficiency provide benefits at every stage of the business. A business that invests in renewable energy already feels this benefit in a very short time. For this reason, businesses that make these investments continue the process. When these systems expire in the future, they continue by renewing them. They continue to stay at that point in terms of perspective. Therefore, my first thesis is this: the business that benefits continues this process. My second prediction is that as they see that they will benefit anyway, they start to move in this direction. In other words, they proceed with a very pragmatic approach.</p>	level of contribution received by the SME	57 - 57
------	---	---	---------

3:19	we do not leave any institution working on this subject alone, because KOSGEB has such a structure, and probably many organizations in our structure are like this, too. If you are working in contact with the private sector, even if you don't want to, your target audience forces you to coordinate with other institutions, this is not something that comes from within us, it is a situation forced on us by the target audience. For example, if the Public Oversight Authority makes a regulation, we immediately take steps both to examine that regulation ourselves and to contact them. We look at what we can do together, what can be carried out jointly. Likewise, we are in constant contact with institutions such as TÜBİTAK, the Ministry of Trade, the Ministry of Environment, etc. We both try to contribute to their work and try to get their contribution for the services we can provide to businesses.	Collaboration Coordination	59 - 59
3:20	Honestly, as far as I know, there is no specific strategy document for training. But issues such as training and awareness on sustainability are included in development plans. Various institutions have been assigned duties in this regard.	not necessary	63 - 63
3:21	The training needs of industrialists on sustainability are different, those of individuals are different, the needs of the health sector are different. In this sense, defining all these issues with a single document, a single strategy, does not seem to me to be a very effective method.	not necessary	63 - 63

3:22	For example, there are measures to be taken, steps to be taken regarding SMEs. The first of these steps is awareness, then learning, then implementation. Therefore, it is more meaningful to evaluate the training needs of SMEs under its own heading. If a regulation is to be made regarding health, the training needs there will also be different for individuals, health workers or practitioners. So, organizing the training needs of each field within itself makes the subject more efficient and effective. That's what I was trying to say.	not necessary	67 - 67
3:23	Regional differences are not unique to our country; they exist in every country. For this reason, I find it more accurate to look at the issue not directly from a regional perspective, but from the perspective of the structural similarity of companies. In other words, there can be a lot of similarities between companies in the same sector, at similar scales, even if the region is different. Yes, it is very valuable for local actors to bring some services to the region. However, it makes more sense to me to evaluate the general need for training on a company basis, not by region.	National	71 - 71

3:24	<p>Maybe this has happened to you; it happened to me too.I used to think that I couldn't understand mathematics.Then I started to learn from a different teacher, with a different expression, and I realized that my ability was actually not that bad.I say this for this: The language of communication used in education is incredibly important.Regardless of the subject, the communication of the instructor should attract the interest of the participant, facilitate internalization and arouse a desire to learn.I think we still haven't solved this language in education in Türkiye.</p>	The role of the instructor	75 - 75
3:25	<p>In other words, the issue we call awareness is not something that is taught afterwards like technical knowledge; it should be shaped together with the moral values of the individual.I believe that moral foundations will support behaviors related to sustainability.Therefore, I think that education should not only be reduced to technical knowledge, but also to establish a value-based structure.Let this be my personal note.</p>	Value Creation	79 - 79

4:1	<p>But I don't have the SME's radio frequency. It's like it's blinking in the dark. I need to attract its attention first. For this, we have determined a road map for ourselves in four stages: First, awareness. Second, this stage of awareness is actually an effort to make him listen to us, to make him listen to us. How did we open this? Necessarily on-site visits and explaining ourselves, explaining the value proposition. Since we are an institution supported by the state, there was first an instillation of trust. In other words, it started to pay attention to the fact that we are not an ordinary consultancy company, but a subject that our state both financially supports and cares about. We organized technical trips. We took 20 or 30 industrialists each to companies that have succeeded in this type of work. They examined, watched, listened first-hand and were impressed. We organized events, breakfast parties, and they started to come and listen to us. This is how we tried to raise awareness.</p>	<p>1.Disorienting Dilemma</p> <p>Onsite</p>	25 - 25
4:2	<p>We evaluate them in 22 different parameters, 20 of which are components related to lean techniques, one related to digital, one related to green transformation. We call this a pre-analysis study. Here, we offer them this service, and this work takes at least a day in the field, both by visiting the field and by chatting with their relevant managers and engineers.</p>	<p>2.Self Reflection</p>	27 - 27

4:3	Therefore, the SME becomes a bit pessimistic in our preliminary analysis: "Are we so bad?" "Don't worry," I say, "Even the companies on the ISO 500 list are at this level. You are even good." On the one hand, they see the bad picture; on the other hand, we advise them not to be pessimistic. Not "we will do it, we will do it". Right now we are saying: All 130 of our projects have achieved the following successes. Please be comfortable. As long as you give support.	3.Assumption Review	29 - 29
4:4	Therefore, if you give support as the top management, it is already our job to support the change of the team below. We say that it will follow.	Vision of Business Management	29 - 29
4:5	Technical trips especially serve this purpose. Together with that, we organize benchmark meetings and sharing. For example, one of our enterprises wants to advance in A. I say: "Come, we have these companies from the best institutions in Türkiye, which are on the ISO 500 list, and I will organize a benchmark meeting with these managers from there. Go and learn on the spot."	4.Shared Awareness	31 - 31
4:6	Therefore, we act as a bridge in these matters. We bring our SMEs together.	4.Shared Awareness	31 - 31

4:7	This is exactly the purpose of the preliminary analysis. For example, we are in X, the country of furniture. Two predominantly furniture companies. Both with 80 employees, wall to wall. The methods we apply in both of them are very different. Because the needs and expectations of each of them can be different. We discover this at first with a preliminary analysis. We say: "You have areas for improvement in the following areas. This is how we should proceed" and we can go with different instruments.	5.Exploring Options	33 - 33
4:8	Very clearly we recommend a Gantt Chart. This Gantt Chart first of all shows the overall progress over three six months. Then, for the first six months, when we signed the first contract, it shows what we will do on a more detailed, weekly basis, on what date, or more precisely on what week. There is a very clear Gantt Chart. There, the tasks for us and the tasks for the other company are quite defined.	6.Action Planning	37 - 37
4:9	I think there is no need for accreditation or anything like that in such a place, because model factories have already become an authority in their own fields and the public has slowly started to accept that a certificate from there is valuable.	7.Skill Acquisition	39 - 39

4:10	And if the enterprise is not big, we don't need to choose a pilot area. When we start working there, it means the whole enterprise. But if it is a multi-process, I don't know, 3-4 hangars and each hangar is almost like a separate factory, then it is necessary to choose a pilot region. Because in all cases, we should not bite off more than we can swallow. Projects remain incomplete. We choose a region in order to focus on one place, to clearly show both their energy and ours, and to make them say "Wow, this is happening".	8.Role Testing	45 - 45
4:11	now we have created a platform called the "Lean Ambassadors Platform" in X to develop this indoctrination.	9.Confidence Building	47 - 47
4:12	We have now started an award process through this Lean Ambassadors Platform. Companies with such projects should please come and apply to us. Just like our Ministry of Industry's Productivity Project Award, we will organize it locally. Let these projects compete. This is not a competition, this is a festival. So lean techniques are being discussed in X.	9.Confidence Building	47 - 47
4:13	Therefore, self-confidence develops.	9.Confidence Building	47 - 47

4:14	there are those who decided to focus on green transformation and energy efficiency along with Lean and established a sustainability office together with the Lean Office. There are people from the X, that is, from the X1 region, X2, X3, who request technical trips to our companies in X. We have had companies with such good developments. Therefore, we have companies that have achieved sustainability in terms of integration and lean techniques. Of course it is not enough. In other words, we really want every company we touch to continue this consultancy process at least twice, three times, and to establish and maintain this team in their own enterprises. Our most important improvement open issue here is human resources.	10.Integration	49 - 49
4:15	Maybe a system that includes grants... In other words, organizations such as KalDer should provide training and consultancy on strategic plan preparation. Institutionalization should be developed in this way. Model factories should also provide support on lean techniques, digitalization and, if possible, green transformation.	Coordination	53 - 53
4:16	If they understand, if they are convinced, there is no reason for them not to change, not to transform. I do things like this because I feel like it, but then I also identify the source in my reading. For example, Simon Sinek has an approach. He says: "Friend, if you are going to market something, don't explain what the product is. Tell why there is a need for it."	The role of the instructor	55 - 55

5:1	we can easily say that. We are really effective in terms of awareness and we can say that we make companies ask more questions and act more consciously.	1.Disorienting Dilemma	25 - 25
5:2	Within the scope of our European Business Network project we just mentioned, X Chamber of Industry, one of our consortium partners, has created an interface on this issue. As a whole consortium, we use this interface and communicate it to our companies. As you mentioned, we are trying to make the first evaluations of enterprises in a qualified way with this tool.	2.Self Reflection	29 - 29
5:3	Businesses, of course, are all profit and return oriented, so these issues can be a bit more secondary in their perspective.	3.Assumption Review	33 - 33
5:4	Those two conditions, that is, there needs to be grant support or a sanction so that the company can really put this issue clearly on its agenda.	Funding	35 - 35
5:5	I have very rarely encountered a spontaneous reaction like, "Let's do something like this in terms of sustainability, in terms of recycling." But here's the thing: By human nature, if I were a company owner, I would think the same way. In other words, I want something I do to have an output for me. For example, if I recycle something related to sustainability, the product should be used as raw material in another factory or energy consumption should be reduced.	level of contribution received by the SME	37 - 37

5:6	EEN Energy, which is a sub-project of the European Enterprise Network we just mentioned, is a good example. 10,000 Euros is not a huge amount, but it is still a good support. For those who want bigger support, TUBITAK has projects such as 1831, 1832, 1833. These projects currently provide a minimum of 3 million TL and a maximum of 20 million TL, if I remember correctly. This kind of support is an important factor that facilitates companies to react in terms of sustainability.	Funding	39 - 39
5:7	I also think that such a work would be really good. Bringing together companies with similar difficulties and creating a synergy there... We have not been doing this in the form of "Yes, let's bring companies with similar difficulties together and let them hold a meeting among themselves".	4.Shared Awareness	41 - 41
5:8	Our approach, actually, is shaped by what the company wants, what their expectations are and what their concrete situation is at that moment when we first contact them. So, for example, a company wants to get very good support from international projects, they want to increase their experience in this field. Very good, we say we can offer this support, we say we can guide them. But we can offer versatile support to the company by making preliminary evaluations such as whether there are suitable personnel there or not.	5.Exploring Options	43 - 43

5:9	Again, we can consider this as a sub-stage within the European Business Network project that we mentioned at the beginning of our interview. There, when we make the first contact with the company, we create an "action plan" together. And according to this plan, we follow the company's process.	6.Action Planning	46 - 46
5:10	We don't have a certification program that we directly run in terms of knowledge and skills acquisition. We do not have such a program in terms of sustainability.	7.Skill Acquisition	50 - 50
5:11	We don't have a pilot application, that is, a trial application, especially conducted by us. This decision is left to the business itself.	8.Role Testing	52 - 52
5:12	So I can say this clearly: Concrete outputs, even if they are negative, have an impact. Now I have commented on the positive side, and I can say this about the negative side: We enable our companies to apply for an EIC Accelerator project. This is a multifaceted European Union project. One of the main points of this project, as in all other projects, is concepts such as sustainability and green transformation. Although some companies do not receive funding, they still leave the process satisfied. Because they receive very detailed feedback from the European Innovation Council about their projects. Thanks to this feedback, they try to move on. So both positive and negative outputs clearly develop a sense of trust.	9.Confidence Building	54 - 54

5:13	<p>We stop our work every month and a half or so, and without looking ahead, we call companies that we have been in contact with in the past or that have benefited from some funding. We ask the following questions: "How are you? What are you doing? Have you used this fund? Did you have any problems while using it? Would you like to benefit from a new fund?" Or, for example, as the University-Industry Cooperation Unit, you have developed a project with a lecturer. Are there any problems? We try to monitor the current situation of companies with this kind of feedback.</p>	10.Integration	58 - 58
5:14	<p>I can clearly and sincerely say that there are some good points in Türkiye in terms of cooperation and some points where we are lacking. For example, we cooperate with TUBITAK in terms of directing to appropriate funds and raising awareness. An expert from there can come here and clearly provide this flow to our companies at first degree. But when we met with ministry officials and said, "We want to raise such awareness among our industrialists" regarding sustainability, green transformation, the Paris Climate Agreement that Türkiye is currently facing and the reactions as a result, we went through many processes, but the result was negative.</p>	Collabration	64 - 64

5:15	I believe that there is definitely a need for a national strategy, but especially, for example, experts working in institutions like KOSGEB, experts working like us... The opinions of such people, i.e. those who are in direct contact with SMEs, should definitely be taken and a strategy should be formulated accordingly. In other words, I think that a strategy should be formulated not from a general point of view, but by taking the opinions of those who are in direct contact with SMEs.	National	72 - 72
5:16	Of course you can go into too much detail, but I think that this should be conveyed to the industrialists in a clear way without confusing or complicating it too much.	simplifying the language and terminology	76 - 76
5:17	I think it should be conveyed in a coherent and clear way without complicating it, without losing the other person, without losing their focus.	simplifying the language and terminology	80 - 80
6:1	this year, for example, we will have trainings under the "Key Solutions" program, which we can call awareness trainings.	1.Disorienting Dilemma	22 - 22
6:2	It will be face to face. These will be face to face. Face-to-face trainings are more useful. So it will be face to face.	Onsite	24 - 24
6:3	Because in consultancy, it will also be necessary to reveal the current situation. By revealing the current situation of the enterprise, mentoring can be provided to them in the areas they want. If there is an application in this context, of course, it can be evaluated from technical support.	2.Self Reflection	26 - 26

6:4	In fact, although it focused on a very serious and important issue, the interest of SMEs in this was a little weaker in general. That was also an on-site training. It was left in the air.	3.Assumption Review	34 - 34
6:5	Because you can imagine the X region. Especially the X region is the region with the lowest income rate in Türkiye.	Financial situation of the SME	34 - 34
6:6	They are very unlikely to be open to this kind of development.	Financial situation of the SME	34 - 34
6:7	We have seen that a small support given there in financing supports causes the company to want to improve itself. We saw that the investment was brought forward by the company, which normally has no intention of doing anything, saying "there is such a support, let's take advantage of it".	Funding	40 - 40
6:8	most of the businesses do not have a corporate identity. Since there is no corporate transformation - I mean, even if you go to the biggest enterprises in X - when you see that it is a family business and there are people who are not very expert in their own business, this time when you go to them with such terms, you will witness them saying, "What is this?".	simplifying the language and terminology	44 - 44
6:9	But if we look at the transformation, for example, the thing that mobilizes companies the most in green transformation is that they can install a solar energy system and reduce their bills. They will be able to sell it when needed. In the last 3-5 years, an incredible solar energy support has been given to all factories. I mean, KOSGEB also gave it, agencies also gave it. If this is what they can see, if they see the output, then they will definitely take action.	Funding level of contribution received by the SME	44 - 44

6:10	I mean like this... now, in line with the feedback we received from these technical support applications or the beneficiaries who came here, for example, we actually designed key solutions. Why? Because similar problems... for example, there was really a lack or a need for training on digital transformation among women business owners. Therefore, we thought that we would turn those sporadic requests into such an information training in a program. So we took it under a sub-heading under the key program. So of course, what happens sometimes? When problems come, plans can also be made for a group and accordingly.	4.Shared Awareness	54 - 54
6:11	Actually, we didn't do anything about it directly, but indirectly there was an application from the Provincial Directorate of Industry for technical support. I think it was a check-up for SMEs. They had a study to showcase their current situation. We indirectly supported them.	6.Action Planning	56 - 56
6:12	when we turn to companies, we actually provide many services for companies - especially SMEs - through outsourcing. As an agency, we often provide project writing trainings ourselves. But other than that, we generally outsource services.	7.Skill Acquisition	78 - 78
6:13	We don't get much feedback. Of course we don't. I mean, we don't get a very high level of feedback. However, we do not have a model implementation or a Model Factory situation.	8.Role Testing	83 - 83

6:14	Honestly, we don't do an effectiveness analysis of technical support in a very professional sense. We don't really know what the effects are.	10.Integration 9.Confidence Building	84 - 84
6:15	But if you are asking about the coordination between public institutions in general, there are already major problems there. There are problems in terms of legislation. There are problems in terms of reluctance. In general, public institutions approach it like this: "Don't make trouble for us, we are continuing with the current functioning. Don't introduce anything new." No matter how hard we push as an agency, we cannot get the necessary reaction from the other side	Coordination	94 - 94
6:16	In general, if there is a consortium partnership in Turkish public institutions, the probability of getting efficiency is very low.	Collabration Coordination	104 - 104
6:17	There is confusion both for beneficiaries and SMEs. Who provides what support in which area? There are overlapping parts. There are gaps that do not overlap at all. Therefore, it would be much more useful and beneficial to work in cooperation. But as I said, a top-scale planning needs to be done first.	Coordination	108 - 108

6:18	It should be regional. Really, the companies here and the companies in X are very different in every sense. A small touch may be very important for the SME here, but it may seem insignificant for the company in X. The structures are different, the distances to be covered are different. Therefore, it is necessary to work in a "tailor-made" way, that is, tailored to the SME. The structure here is different. For example, the structure of the X may be different. Different characteristics may emerge according to each region.	Regional	111 - 111
7:1	In X, sometimes you receive information on the Green Deal from many institutions that I am also registered with. I mean, sometimes you look at the Ministry of Industry, X University, X Chamber of Industry, KOSGEB... They can give big seminars on the same topic in the same week. Therefore, we don't get into the "let's raise awareness" business too much. Do we? We do. But you are doing one of the activities that all these institutions are doing.	1.Disorienting Dilemma	23 - 23
7:2	Therefore, we are developing our own methods to use our limited budget more effectively. Maybe it's not like awareness, but we sometimes try to go a step further,	1.Disorienting Dilemma	23 - 23
7:3	Again, as I said, by using our own flexible structure, we do this kind of thing by agreeing with some professional consultants, professors, etc. who know this kind of work, for some companies, much more simplified evaluations, and for some companies that have passed a certain level, more complicated evaluations.	2.Self Reflection	29 - 29

7:4	I see that there is not much of that kind of awareness in Türkiye. "Let's renew ourselves, let's keep our company going with various alternatives." Maybe that kind of culture is not very common among Turkish people, and due to the unstable economic situation in Türkiye for many years, most of the companies are focused on "How can we save the day?".	3.Assumption Review	33 - 33
7:5	due to the unstable economic situation in Türkiye for many years, most of the companies are focused on "How can we save the day?"	Financial situation of the country	33 - 33
7:6	Sure, I mean, as I said at the beginning, because we have been doing this for a long time, maybe in the first years it was like this: "We are organizing an efficient energy seminar. We found an energy efficiency lecturer from that university, he will come and talk. We send the information to all the companies in KOSGEB's database, and no matter who comes, whoever fills 60 people, okay, our capacity is full, we are closing down." We don't do that anymore. What is it? We will do digitalization, or as you said, we will do carbon emission or lean production efficiency. We can use various initiatives here.	4.Shared Awareness	35 - 35
7:7	Then, with the data we have, maybe companies that have done R&D projects, maybe just the five priority sectors in sustainability, metal, glass, cement... I don't know, I'm just giving an example right now. We first invite companies from that sector, and then if there is a vacancy, we inform other companies. In other words, we select the companies we try to inform according to a certain strategy and ensure their participation.	4.Shared Awareness	35 - 35

7:8	When companies want to utilize your services in some way or when they come to me saying "we want to know what this is", the first thing I look at is how willing the company is.	Vision of Business Management	37 - 37
7:9	So, as I said, my first criterion is the company's desire before its internal structure. Because, as I said, spending time on a company that you can't bring to a conclusion, maybe you are taking away the rights of 4 companies that you can really benefit from. Therefore, this decision is more important. Because otherwise, both your time is wasted, the company's time is wasted, and 3-4 companies that can benefit from these services cannot benefit from these services.	5.Exploring Options	37 - 37
7:10	I tell them about sustainability, digitalization, internationalization, innovation, resilience, collaboration, but the main burden is on the company. The company needs to take the time to understand and be convinced by itself so that this work is meaningful for me as well. After that, it needs to continue that work by coming to me from time to time and asking for support.	Vision of Business Management	39 - 39

7:11	in our activities on sustainability and these initiatives, if we provide support to the company at the mentoring stage -which, as I said, are very complex issues- we try to give them to professional professors who know this business. We ask them to prepare an action plan for those companies. Sometimes we also provide support in line with our experience. Therefore, they are like this: "Look, there are four problems in your company regarding sustainability. You can overcome these problems in this way. Maybe you can overcome two of them quickly with government support. You don't need to do anything about that in the short term, but you can solve it in the long term." You can call it a recommendation report or an action report or an action plan for the company in the form of a final report of the coaching service, mentoring service, etc. We give this, but we are not in a position to ask the company "what did you do?" after two months. Interviewer: So this is certain, limited. I understand that it is one of the activities you can do for companies in line with your budget.	6.Action Planning	45 - 46
7:12	I mean, again, personally speaking, I don't believe in all these certificates, I don't know, you go to an event, they give everyone a certificate at the end. They have no value for me.	7.Skill Acquisition	47 - 47
7:13	As I said, we didn't think about taking a job away, even if it was a pilot.	8.Role Testing	49 - 49

7:14	I mean, I don't think it's because of us. Anyway, if the company has confidence in itself, if it has confidence in its product, it is already successful in some way.	9.Confidence Building	53 - 53
7:15	As soon as he does it, as soon as he gets a certain benefit from it - and even if it's his first collaboration, his first project, his first - maybe I don't even want to say collaboration, but his first international business meeting, of course the second time he does it, it's very different.	level of contribution received by the SME	55 - 55
7:16	There were even companies that we took to matchmaking events abroad. In other words, while doing business, the man was trying to learn English. Five years later, I looked and he had distributors in six countries. So in a way, he trusts his product, he trusts himself, and he wants to do this job. It accelerates those kinds of things. But this is a natural process. I don't know how much we help companies in this process. It depends both on the person and on the motivation brought about by achieving that success. Various factors can be the reason for these changes. But I think the first factor, as I said, is the motivation of the company's own boss and employee. Secondly, the suitability of the product.	10.Integration	55 - 55
7:17	The trainer is absolutely important. Trainers who go into too much numerical detail and legislation get lost after a while. People break off when they don't understand. If he says three more sentences while thinking about two sentences, you realize that he has lost it. The person listening is playing with their cell phone.	The role of the instructor	57 - 57

7:18	it is difficult to find such trainers. And when you find them, they are already aware of this. As I said, sometimes their time is busy, you cannot find them easily. For example, we gave a training on how companies should behave at international fairs. The person who gave the training had been to fairs abroad for years. He approached from such beautiful places that he never lost interest.	The role of the instructor	57 - 57
7:19	in my opinion, face-to-face trainings are always more effective.	Onsite	61 - 61
7:20	I mean, you can go to any NGO, you can go to any state institution, you can go to any university - and we've been to many of them, we've done similar things - no one is like, "No, my friend, you can't come and tell such things to my members". Everyone is open to all kinds of things.	Collabration	63 - 63
7:21	But there is no problem in terms of cooperation	Collabration	63 - 63
7:22	I mean, if this process is managed in a certain way by an upper board, it would be much more effective. But it is not something very easy. In other words, that supreme board should handle this work not in a way that makes it difficult, but with its own flexible structure, with a strategy that facilitates this work and prevents wasting time.	National	67 - 67
7:23	In other words, a structure that advises, "It would be more effective if you do it this way." Otherwise, as I said, it can become a bureaucratic obstacle. "You can't organize events on such issues without asking me." "Send me the content of the event you are going to organize and I will set a level for it"... Then it can become a dead end. But with some thought, I think a solution can be found.	National	67 - 67

7:24	<p>But as I just said, a recommendation to be prepared by scientists and experts who know this... That can be done maybe like this: Who regulates these things? There are universities, state institutions, associations, projects. This recommendation is sent to all these interlocutors. "Read this". We can even organize a big conference where the decisions of this advisory committee can be explained to these institutions. This is explained without boring anyone. Then people say: "OK, if I am going to do an activity on sustainability, both in terms of my own organization, the projects I follow and my target audience, then I should follow the decisions of this advisory board to the maximum extent so that I can ensure coordination in the country."</p>	National	73 - 73
------	--	----------	---------

8:1	<p>But what do we do? We have a support program called "Management and Evaluation Support Program". There are three main titles under this program. Digital transformation evaluation analysis and road map support program related to digitalization services... In other words, when an enterprise wants to find out where it is in relation to digitalization, what stage it is at and what it needs to do, it can obtain a report to be prepared by DDX report researchers-consultants approved by TÜBİTAK. And KOSGEB provides support for this cost. But the main purpose is of course to encourage the business. In other words, "Where are you in digitalization?" One of the titles under this program is digitalization. The other is to get the YODA report, which we call "Lean Maturity Assessment Analysis"; we are trying to provide this service to the SME with our support program in this direction in order to get a YODA report as a whole in order to evaluate many topics such as energy efficiency, effective use of machines, how the personnel inside are managed, factory organization. The third title is sustainability reporting service. In other words, the company receives a report that determines where the company is in relation to this issue, the concept of sustainability; where it is in environmental, social and economic terms and what it needs to do...</p>	2.Self Reflection	13 - 13
-----	---	-------------------	---------

8:2	The most talked about issues in the European Union are concepts such as awareness, resilience, sustainability and digitalization. Through this European Union fund, we are able to turn these into training here. On top of the reporting I mentioned, we have the opportunity to have SMEs directly trained by experts - foreign or local, whoever it is	1.Disorienting Dilemma	13 - 13
8:3	There are always some people who have a competitive structure; some people have a let's see, let's watch, then let's start. Therefore, depending on which of these characters the business owner has, the results can be different.	3.Assumption Review	15 - 15
8:4	We get the biggest support from chambers of commerce and chambers of industry. We touch them in the first place. In other words, we contact the heads of the chambers and say, "We want to do such a study. The impact of this will spread within itself." According to the Turkish general cultural structure, we say to our friends who do not set out without seeing it, let us offer such an opportunity thanks to you. I focus more on the members of the board of directors in these chambers. There are usually 10-12 company owners in the board of directors. I especially say to the president, "First, we will do these works in your companies. We will start these works in the companies of your board members. If they see this, other companies in the industry will adopt these actions." Actually, this is a method of influencing each other, as you said.	4.Shared Awareness	17 - 17

8:5	We had a support program titled "circular economy" under the Green Industry Support Program. When we said "we provide you with funds " to enterprises that want to engage in a transformation related to waste, that want to increase their efficiency, they were very surprised. I mean, they know the general things, but more specific support for digitalization, resilience, sustainability, etc. needs to be explained more. Also, no one comes and says "I need this".	5.Exploring Options	19 - 19
8:6	This means the following: The enterprise has had its needs analyzed and a road map drawn up. The expert has guided them on where to start, what to do, which expenditures to make, in which unit inside. As you know, these reports are detailed and each one contains 10-15 topics. After receiving the report, when he comes to the institution for support, among the expenditure items, we want him to receive the training package provided by these model factories, as in the case of capacity building.	6.Action Planning	21 - 21
8:7	We don't have any certification activities other than our entrepreneurship supports.	7.Skill Acquisition	23 - 23
8:8	If companies don't know how to plan and program, they learn how to do this thanks to our support. They learn to budget, to create expenditure items, to set targets, to create activities to reach that target, and to follow up and report them. Therefore, the more they come to us, the more they improve.	9.Confidence Building Vision of Business Management	27 - 27

8:9	Impact assessment analysis needs to be done, Especially if you are in the public sector - and the private sector should also do this, if a budget is allocated and spent,	10.Integration	29 - 29
8:10	Most recently there was a package where the Ministry of Agriculture announced that businesses that will do manufacturing or R&D in the field of agriculture can access financial support from the Ministry of Agriculture by creating a fund. It has been about two-three weeks, if I remember correctly. However, KOSGEB is an institution that has been under the Ministry of Industry for forty years, independent of TÜBİTAK, that is, an institution that has been trying to create a culture by trying to support not academic R&D, but R&D to be carried out by industrialists who will turn towards commercialization. This was taken away from us under the same ministry and given to TÜBİTAK in the last year. This is another issue. In other words, it feels like each ministry is putting on its own show in the midst of private affairs. There is no coordination.	Coordination	31 - 31
8:11	, but I would like to say this: For example, digitalization, for example sustainability... The people who will explain these concepts must first internalize these concepts. You can convey a subject you know well to the other side in a simple way. In other words, if my expert has not internalized digitalization, how can he give examples to the business? The business can also see what is under this concept. I look at it a bit like this. The people who will transfer this work must first internalize this work.	The role of the instructor	35 - 35

8:12	Our businesses are trying to postpone some expenditures due to the economic structure in Türkiye. What do they say? "I don't want to spend money on anything that is not acute." Therefore, the practical public administrator who knows this says: "Look, you will get into trouble in terms of legislation. You need to prepare." In the same way, we say: "Look, there is a fund set aside for this. Come and apply for it." In other words, this is the rationale underlying the model you describe.	Financial situation of the country Financial situation of the SME Funding	39 - 39
8:13	Even the employee's narration can be incomplete; they can even manipulate it. I don't want to offend them, but we have experienced situations where this has happened, because when I met with the boss separately after the meeting, I received feedback saying, "That's not how he told it to me." When employees attend, even if they don't want to manipulate, they may not fully understand the issue and may give incomplete information to the higher-ups. The solution is this: As you say, it is not possible to organize meetings of 100-200 industrialists even in the industrial chamber. I have found a solution to this in my own city: I do a preliminary study on digitalization. I first get in touch with the companies that might be involved in digitalization and ask, "Would you participate in such an event ?" The answer is usually positive. Then, on a common calendar, I do the informing myself rather than the staff	Participation	43 - 43

8:14	But there is another thing I care about: Under national policies, maybe the public sector is trying to do this, but the reason why it may not work as expected may be regional differences. I think that each region should be evaluated according to its own potential and support programs should be created accordingly.	Regional	47 - 47
9:1	Yes, in fact, we are constantly emphasizing that sustainability and especially green transformation issues related to the environment are an inevitable transformation area for these businesses. Both in our field visits and one-on-one meetings with them, as well as in the seminars and trainings we provide. In the panels and seminars we organize, we try to reveal the possible effects of international developments on SMEs with concrete data. For example, there is SKDM; exporter companies will be affected by this. We made a calculation. For example, there is the Industrial Emissions Regulation. Almost 6,000 out of 10,000 of our members will be directly affected by this regulation. In these speeches, we make explanations to them with concrete data based on the research we have done ourselves.	1.Disorienting Dilemma	13 - 13

9:2	we verbally encourage enterprises to go back and assess their situation, but this is not done with a self-assessment formula. But we have two analysis tools in this TÜBİTAK 1831 program. One of them is Image developed by the Ministry of Industry. It is called the digital transformation observation tool. The other is EKOREKA, developed by the Technology Development Foundation of Türkiye. We have actually divided this into two: one for digital transformation and one for green transformation.	2.Self Reflection	21 - 21
9:3	Now there is a site visit in the tool we call EKOREKA. Again, the expert comes, looks at the situation, what can be done for green transformation, and a project proposal is presented.	2.Self Reflection	25 - 25
9:4	Some companies are aware. They have prepared in advance. Others don't care at all.	3.Assumption Review	34 - 34

9:5	<p>Apart from this, we will have a panel at our face-to-face events. There will be a sector representative and people from public institutions as panelists. We also invited one of the leading companies from the cement sector so that they can share their own problems or experiences. In addition, you mentioned clusters; for example, there is a community of foundry industrialists. We talk to its senior management and ask them: "Can you share your experiences?" This is in the form of a question and answer. In that part, we have companies on our mailing list that we have worked with before and have examples of good practices. We also say to them: "We have such an event, we would be very pleased if you come." They come and share their experiences</p>	4.Shared Awareness	36 - 36
9:6	<p>I mean, we don't give direct instructions like "do this in this way". Our field visits take half an hour - forty minutes.</p>	5.Exploring Options	38 - 38

9:7	<p>This always leads back to the TÜBİTAK program. But the main purpose there is to create a road map. There is a Ministry of Industry program, abbreviated as YDDP. It stands for: Green Transformation Support Program. It is a program that has been announced for a few months. It also says there: If companies make a minimum investment of 30 million TL - this can be land purchase or installation purchase, the scale is very wide - a grant of up to 50% is given depending on the success of the project. The rest is supported by a 2-year deferred loan in TL. It is actually a very advantageous program. But it also says there: You need to have a road map to apply for this. We can also call it an action plan.</p>	6.Action Planning	44 - 44
9:8	<p>We usually give certificates in trainings, but they are not TSE approved. The last time we had a very short, half-day training on carbon footprint calculation. It was a training given by X. We invited a trainer and had him explain it. We were given a certificate of participation there, but it was not in the form of a certificate. But within the scope of X's own capacity building activities, there is a "Green Collar" training currently being carried out in a development agency. Under our coordination, we are preparing a long-term training program where they can receive a certificate approved by TSE. In the trainings so far, either we have received certificates or the members who came here were given certificates of participation.</p>	7.Skill Acquisition	66 - 66

9:9	These studies are carried out in the model factory, but it is a place with its own structure. Yes, the X Model Factory is affiliated to us, but it is like a subsidiary. It has its own managers.	8.Role Testing	68 - 68
9:10	Of course, it is usually the pioneer companies that come to this process. Because it is difficult to convince people at some point.	9.Confidence Building	72 - 72
9:11	I mean, actually the projects of our first 5 companies have just finished. So I didn't have the opportunity to observe this, at least for our TÜBİTAK project. Because their reports just came in. Everything was completed in the last months.	10.Integration	74 - 74
9:12	I agree with that 100%. Sometimes we try to make a memo out of a memo. Because it is not really understood. Sometimes there are parts that even we don't understand.	simplifying the language and terminology	76 - 76
9:13	Everything is so new, so complicated. If we don't understand it, how can the people over there understand it? So we empathize with them and say, "How can we simplify and make it easier?"	simplifying the language and terminology	78 - 78
9:14	SMEs are right on this point: The income of a small enterprise and a medium-sized enterprise can be very different, the way of working can be very different.Now, when we say "SME", we put them all in the same category.But in fact, sometimes the gap between them is very wide.For example, a medium-sized enterprise that is close to being large is not the same as a small enterprise at the micro level. We should not approach them in the same way. Maybe you will need it in the future. If you make preparations, you can proceed more easily."	Financial situation of the SME	80 - 80

9:15	In fact, sometimes when we go to visit the company, they say, "Are you here from the ministry now, are you going to do an audit?" We say, "No, we came from X, as the Directorate of Environment." When it comes to environmental issues, the Ministry of Environment comes directly to mind. There were people from the Ministry of Industry, there were people from the Ministry of Trade regarding the EU harmonization process, Green Deal and SKDM, and there were people from the Climate Presidency. We also realize that they all have common sections in their presentation slides	Coordination	83 - 83
9:16	I think it's incredibly important. I mean, there are presentations that we can understand very clearly: "What a great presentation she gave!"	The role of the instructor	87 - 87
9:17	She is the head of the EU Single Market Department at the Ministry of Trade. She participates in many speeches. She gave such a good speech, from her tone of voice to her command of the subject... That speech lasted almost an hour longer than we had planned, normally it would have taken half an hour. People were also interested, she gave detailed answers. We were very happy to invite her. But it's not only about knowledge. Presentation skills are also important. It's very important to explain the subject in a way that the other person can understand. In the end, what he explains is as much as we understand	The role of the instructor	87 - 87

9:18	As someone who has studied in the pandemic for two years, I can say that online education reduces efficiency a lot. But there is also a point like this: We are in X1, we are based in X2. But the organized industrial zones are in X3, X4, X5. It is very difficult for these people to come and go here	Onsite	89 - 89
9:19	on a slightly softer subject, online training can be done for informational purposes.	Online	90 - 90
9:20	For example, if we are visiting a company, they ask us: "Who do you want to meet with?" If possible, we want to meet with a manager or a unit manager, because everyone says: "The workshop engineer says, "I will forward it to my manager." The manager says, "I will forward it to the senior management." As this sequence gets longer, the possibility of conveying the information in detail decreases,	Participation	92 - 92

10:1	Each organization is tasked with the weight of work in its field of activity. In this context, we have three separate activities under the names 1831, 1832 and 1833. These are carried out within the scope of the Türkiye Green Industry Project. Perhaps 1831 may be the one that may be in your field of activity, because this is a special program for SMEs. Here, we provide a mentoring service to SMEs on green transformation. But we, as TÜBİTAK, do not provide this mentoring service directly. There are expert organizations that we cooperate with on this subject. We can say that we accredit the stakeholders who can provide this training. In other words, we determine who can provide this training from the beginning. We are currently working with 43 expert organizations.	1.Disorienting Dilemma	13 - 13
10:2	As I said, we currently have 43 expert organizations. They prepare joint projects with SMEs on behalf of TÜBİTAK. The project is the SME's project. The SME aims to address a problem it is experiencing in its current activities and to produce a solution. Whether this solution is an investment or an R&D-based study, a road map is determined. Expert organizations provide support at this point.	6.Action Planning	15 - 15

10:3	<p>First, the SME tells us why it is applying for this program, its purpose. It needs to address an existing problem. It needs to say, "There is an issue in my business that needs to be solved or reviewed regarding green transformation". For example, it could be the renewal of the production flow chart. In other words, it specifies what it wants to work on specifically at the beginning of the project. Together with the expert organization working in this field, they evaluate what can be done, how it can be improved, whether this problem can be solved. This is our expectation. It can also be an analysis study. In other words, taking the current photo of the organization is actually done at the beginning. We take a photo. Whether the problem is defined correctly... It may be talking about a problem in the production process, but when the expert organization goes, it can also determine that it is actually a problem caused by raw materials or supply. We expect a study on how to identify such a problem, determine its source and what can be done to solve it. This includes analyzes. If various analyzes are required, they may also be included.</p>	2.Self Reflection	23 - 23
------	---	-------------------	---------

10:4	<p>Interviewer: I see. Well, let's talk about them. Can there be more than one solution proposal, can there be 3-4 separate projects for an SME?</p> <p>Interviewee: Actually, we expect it not to happen. Each project has to target a basic problem like electricity, water, waste. If there is more than one problem and it will be solved in different ways, maybe there can be a second or third application. Because a company can apply to this program three times. It may also be necessary to work with different expert organizations. In other words, while one expert organization is an expert in energy, it may need to apply for a different project with another expert organization for environment or waste. Therefore, if it is not related to the same problem at the same time, we prefer to receive it as a new project application.</p>	5.Exploring Options	24 - 25
------	---	---------------------	---------

10:5	Mentoring service is actually an awareness service for those who do not have any idea on this path, who do not know what to do, who are at the very beginning of the process. While promoting the program, we try to bring together organizations in this focus. In other words, we inform the program in this direction. When we hold an information meeting for the 1831 program, of course we do not invite large-scale organizations that have been doing R&D for years. As they ask each other questions during the meeting, the purpose of the program and who can benefit from it and how is better understood. We send invitations to organizations that are suitable for the target audience, not only for focus group meetings, but also for program promotions. In our meetings with CSOs, we also provide this information in advance. We say, "These people are the focus group of these programs". We try to reach them. We inform them gradually.	4.Shared Awareness	27 - 27
10:6	No, we don't have certificate programs.	7.Skill Acquisition	37 - 37
10:7	It depends on the implementation of the project. Yes, the organization itself draws that framework.	8.Role Testing	39 - 39
10:8	Sure. We also ask about their plans on how they will implement the steps in the roadmap, which is the output of the project, going forward. So, step by step, let's say an investment plan was proposed in the roadmap.	6.Action Planning	41 - 41

10:9	<p>I can't explain it numerically and statistically, I can't prove it right now. But I can say according to my own observations. The first project application of a company to X is very difficult. Because they are not familiar with the system. It does not know our working principles and system. At that stage, it has difficulties in the first application. But once integrated into the system, organizations will definitely try our different programs. Especially SMEs follow all our calls. They also wait for our information e-mails. And they follow our guidance accordingly. Therefore, I observe that SMEs, in particular, continue to try our different support programs once they enter the support system compared to corporate companies, as they can make decisions faster and prepare projects faster. Especially SMEs in serious need of support continue this process.</p>	9. Confidence Building	45 - 45
------	---	------------------------	---------

10:10	<p>We do not measure the effectiveness of the program ourselves, but program-based effectiveness evaluations have been done before. However, our evaluation of effectiveness may not be very objective. For this reason, different departments evaluated our support programs from time to time. Reports on this were also published. But we do the monitoring and evaluation of the projects. We also have this expectation: Since we, as X, support the private sector, we monitor whether the support we provide translates into commercial gains - in other words, a cash realization. We have commercialization monitoring processes. After the project support process is over, we monitor whether the grant support we provide under all our programs or the reimbursable support that we have recently started in cooperation with the World Bank, whether the product developed and the result of the project is commercially offered for sale, and whether the companies generate income from it. In other words, we monitor the project not only during the support period but also afterwards. This process is referred to as the "commercialization monitoring process". Because the main purpose of X is to obtain a commercial output and contribute to the national economy.</p>	10.Integration	47 - 47
-------	--	----------------	---------

10:11	<p>I actually find the companies right, because as you said, there are so many institutions and organizations producing programs. Some of them are very similar to each other, and some of them are a continuation of one another. Since we are in the business, we can more easily understand what is the purpose of the program, what is the scope of the support or training, which organizations can benefit. But organizations are usually after cash support, so they can interpret the information according to their own interests. I agree that this situation is complicated. However, I also observe that some organizations are trying to interpret the information in a way that will benefit them, either intentionally or unintentionally. We recently went to X for an event. As you said, the Ministry of Energy, the Ministry of Trade, us, the exporters' associations there, they were all there. Their members came. I tried to observe as an outsider, as an official of an organization. It is really very confusing at first glance. Everyone tells something. Money, application dates, legislation... There is talk of "green transformation", but it is difficult to understand who gives what.</p>	<p>Coordination simplifying the language and terminology</p>	55 - 55
-------	--	--	---------

10:12	There are definitely SMEs that are aware. Especially those who export. But sometimes it is said that there will be laws, and then the process is prolonged. So I am not sure about its reliability. At the last meeting we had in X, we also talked to friends at the ministry. Dates such as sustainability reporting will be mandatory in 2026 and quotas will be imposed on exporting companies were given. Then it was discussed whether these dates could be stretched. When this happens, SMEs do not want to invest in vain. They say, "I would like to make this investment if I really have to face it."	level of contribution received by the SME	63 - 63
10:13	I think for general trainings - that is, if there is not a very specific focus - the trainings can be online. Because not everyone is expected to grasp everything in detail in such trainings. It is more useful to have general framework, general approach trainings online. The more people you can reach, the better. Physically, a two-hour meeting takes everyone all day. This is both a financial burden and a loss in terms of time	Online	67 - 67
10:14	But very specific topics - for example, carbon footprint calculation - can be done face-to-face instead of online. In face-to-face trainings, it must be like a workshop. In other words, there must be a method where everyone can be involved in the work. Because just listening and leaving loses its effect after half an hour and 45 minutes. That's why small and focused trainings should be shorter and face-to-face	Onsite	67 - 67

10:15	That comment has a point. Because employees, as you said, see this as extra work. They see it as "I'm going to deal with the TÜBİTAK project".That's why when we send information, we send it to both the organization official and the company responsible.So that the organization official is aware of these changes, and if he deems it important, he can also participate	Participation	71 - 71
NOTE: The quotation ID format (e.g., 4:8) indicates the source of the quote. The first number refers to the organization ID used in the Findings section (e.g., Organization 4), and the second number represents the quotation number from that organization.			

APPENDIX E- Transcripts

Interview Transcript – 22.04.2025 (Interview 1)

Interviewer: Hello

Interviewee: Hello

Interviewer: This interview is conducted as part of my master's thesis at the University of Groningen. My aim is to understand how sustainability training is conducted for SMEs in Türkiye and to evaluate this process within the framework of transformative learning theory. The interview will last a maximum of 45 to 60 minutes. The information you provide will be kept anonymous and used solely for academic purposes. Is it okay if I record the session?

Interviewee: Yes, no problem.

Interviewer: Alright, then let's begin if you permit.

Interviewee: Of course. I would like to state that all necessary pre-information forms were shared with me by you prior to this meeting. I have read and approved them.

Interviewer: Very good. Let's start with some background questions. Could you briefly introduce yourself and your institution?

Interviewee: Sure. I am Lecturer Dr. X. I am a faculty member in the Department of Machinery and Metal Technologies at the Vocational School of Technical Sciences at X University. I have two different roles. One of them is as the coordinator of the Technology Transfer Office in the university's affiliated technology development zone. The other is as the assistant coordinator at the University-Industry Cooperation Patent and Licensing Support Coordination Office, which is another administrative unit of the university. Academically, I have been working for nearly 15 years on renewable energy sources within the field of biosystems engineering. I also hold a master's degree in economics and another in innovation and entrepreneurship. In addition, I've been part of an international program since 2020. Under this program, I hold the title of Registered Technology Transfer Professional. I was the 25th person in Türkiye to earn this title. Globally, there are around 600 RTTPs, and as of this year, there are approximately 50 in Türkiye. I am currently the only RTTP working in our university and in the X region. I have taken part in 4 TÜBİTAK projects and 5 European Union projects, sometimes as a principal investigator and sometimes as a researcher. We are still actively working on various projects. I have also been a researcher in 3 projects supported by our university's scientific research funding program.

Interviewer: Very good. I see. You are managing a wide range of projects, including TÜBİTAK, university-based, and EU-funded initiatives. My second question is somewhat related to this. While performing all these roles, are they related to SMEs? Do they only target SMEs or also include large enterprises? I assume you provide services to SMEs within the scope of these projects, right?

Interviewee: Yes, that's correct. Let me explain it this way. From the university's perspective, the responsibilities of the units where I serve as assistant coordinator and TTO coordinator are defined as

providing benefits to enterprises located in our region and in Türkiye at large, supporting the university-industry collaboration component, and conducting activities such as scientific awareness, education, research projects, and R&D within the university.

Interviewer: Understood. As I mentioned at the beginning, my topic is about training SMEs in sustainability. Do you provide such training as part of your duties? If so, who participates in them, how do they participate, are they conducted online or on-site, and which tools do you use?

Interviewee: In this regard, we have been running a European Union project since 2015, which includes both our university and our technopark. This project is entirely focused on enhancing the international competitiveness of SMEs and providing them with support. It falls under the European Enterprise Network and includes a project in which KOSGEB serves as the lead organization for Türkiye. This is exactly the kind of work you mentioned. It involves serious efforts targeting SMEs. As for sustainability, especially in our last two projects, our project methodology has increasingly incorporated sustainability elements such as awareness-raising activities, preliminary research, feasibility studies, initial assessments, training, and at a more advanced level, capacity-building efforts.

Interviewer: I see. Is it online?

Interviewee: The training processes or meetings are conducted online. This is because in these efforts, we don't just rely on experts from the X region. We work with individuals at the national and international level who can effectively manage this work, raise awareness, and provide expert advice tailored to the needs of SMEs.

Interviewer: Alright, now I'd like to talk a bit about the content of the training. The first part was generally about your institution and the sustainability training programs. The second part will focus more on the content of those trainings. I'd also like to briefly explain the theoretical background. Now, there's a theoretical approach by Mezirow which suggests that transformative learning requires going through ten stages. I will actually ask questions related to each of these stages, trying to understand how much of that process your training programs cover, from creating awareness to prompting action. Together with the interviews I'll conduct with other institutions, I'll be able to build a more complete picture. So, let me start with the first question in that context. Do you offer content that clearly shows sustainability is an inevitable transformation area for businesses? In other words, do participants react by saying "this is important"? For example, do you include warnings like "the European Green Deal might directly affect you"? Do your training programs contain such awareness-raising materials? What do you think? Do you have such content?

Interviewee: Absolutely. First of all, we can categorize the businesses in our region into three groups. We can divide SMEs into three as well. Of course, when we look at large enterprises, companies using advanced technologies, and those that develop products, we see that they have reached a certain level of awareness on sustainability and have already taken some steps in that direction. But when we look at those that haven't yet institutionalized, we often see that their awareness of sustainability is quite low.

The first part of our training sessions is focused on explaining why this issue is important for businesses. We build the content and scope in such a way that they can first recognize why this is necessary for them. Then, sometimes we encounter this situation: some businesses have actually done work related to sustainability, but they don't even know it falls under the scope of sustainability. That's when the awareness is formed. Others are aware of the topic but don't engage in any activities because they say, "I don't want to engage in international trade, I just want to continue in my own way, so it's not important for me." And for some businesses, this is genuinely valuable and crucial. These are the ones we target, businesses that may not be aware yet but want to improve. Maybe they're already doing something but they don't realize it.

Interviewer: Right. So let's say someone participates in this training. In the second stage, is there a structure that enables them to return to their own business and ask themselves "where are we in this matter, what are we doing wrong"? In other words, does your training content include a reflective component where they can also evaluate themselves?

Interviewee: Absolutely. Our program is designed as both a training and a mentoring process. After conducting an awareness session with the SMEs who reach out to us or whom we identify, we ask them to fill out a questionnaire. This is actually the Sustainability Capacity Assessment Tool available on the websites of our university and the technopark. Once they complete the questionnaire, it gives us a "check-up" of their business in terms of sustainability. This check-up allows both us and the business to build a roadmap. We can identify their strengths, weaknesses, areas where they have no activity, and areas where they are already strong. You can think of it like a SWOT analysis. The business realizes, "I'm at zero," or "I'm at five." On a scale of ten, they might see that they're at six or seven. It offers a clear and objective evaluation of where they currently stand.

Interviewer: This is actually great because my third question was about this. Assumption questioning. Are there parts of the training that prompt participants to reflect on their current habits and ways of doing business? For example, does it include examples that lead them to ask questions like "why do we automatically choose plastic packaging"? So at the end of that evaluation, they see not only their status but also the assumptions they hold, right?

Interviewee: You're understanding correctly. There are 194 questions in that survey. We assess sustainability without focusing in detail on the sectoral level. Then, once the results are available, we create a roadmap that is very closely related to the SME's sector. There are differences in sustainability priorities across sectors, and we take these into account when defining the key milestones for the roadmap. For instance, the sustainability actions a textile company needs to undertake differ in some areas from those of a machinery manufacturing company.

Interviewer: I see. But from what I understand, this is a survey that you send out after the training. It's a self-evaluation to understand where they stand.

Interviewee: Yes. So it's not applied during the training itself.

Interviewer: What's the response rate like then? Can everyone manage to complete it? What's your observation there?

Interviewee: Of course, it's mainly those who are volunteering. Businesses that find sustainability important for themselves. Especially the ones that are exporting, want to export, or want to continue exporting. Growing businesses care much more about this. Textile companies tend to be more aligned with our way of thinking.

Interviewer: So you're basically saying it's necessary to start by creating awareness. That's why you begin with general training. That's also why you do it online. And that's why you can't apply the evaluation during the training. Because if you did it in a limited setting, you could have participants complete the survey during the session. But now you send it afterward and only those who are interested respond. I completely understand that.

Interviewee: Let me add a note here. Some of them respond, but for those who don't, we insist within our internal pool. Yes, our team is very sensitive on this matter. We try to raise their awareness again. This time we contact them directly. Whether it's online or on-site, sometimes we can't reach everyone during the initial session. But afterward, if someone receives the roadmap and says "I want to proceed on my own," we follow up again. We tell them, "You need to do this for the right reasons. Please let's continue," and we persist.

Interviewer: So first a training is provided, then there's a one-on-one evaluation, the business sees where it stands, its score or level, and then a roadmap is created accordingly. This is done under an EU-funded project, right? If such funding wasn't available, would technoparks carry out this kind of work? Could a technopark not running an EU project still provide training in digitalization and sustainability, show the firm its level, and prepare a roadmap? Is funding important in these kinds of settings?

Interviewee: Funding is definitely important in such cases, but even more important than funding is the visionary leadership of the managers. The perspective of the leadership matters. Technoparks or universities are now compelled to care about this due to national policy. The amount of funding we receive simply makes things more comfortable. But even if there is no funding, let's say we plan to do this three times a year, we could still do it once a year without funding. Awareness meetings are held whether there's EU funding or not.

Interviewer: Of course, since it's online, it's a bit easier to manage operationally and financially.

Interviewee: But for mentoring, and especially for directing SMEs toward more specific, sectoral needs beyond mentoring, significant funding is necessary.

Interviewer: I see. Another important point is probably shared awareness. Because sometimes similar businesses experience similar problems. They might even learn from each other. Do you have this in your case? For example, do participants interact with other businesses facing similar challenges and develop a feeling that they are not alone? Do you provide an environment like group work or case studies for this purpose? In other words, do you have applications specifically designed for similar types of businesses?

Interviewee: We do. When do we observe this? We see it within the content of the training itself. During the training sessions, businesses are placed in the same environment. Regardless of whether it is onsite or online, they realize they are suffering from the same issue and feel the need to communicate with each other. They talk to each other during the session or the training, and shared solutions start to emerge. Different approaches are revealed sectorally. One business may be ahead of another in sustainability and, having already traveled that road, can provide advice and share experience during the training.

Interviewer: So it's a naturally developing environment. Do you systematically say, for instance, "let's create something specifically for businesses in the chemical industry"? Does this kind of thing happen?

Interviewee: Yes. In fact, we carry this out at the provincial level together with the provincial directorate of industry.

Interviewer: So you take a specific group of businesses by sector and apply sustainability practices tailored to the similar challenges they face.

Interviewee: Yes. Because being able to act together with stakeholders in the ecosystem causes a change in the perspective of SMEs. They start to take the situation more seriously. They don't just say, "The university cares about this." They say, "If the government, with all of its institutions and organizations, is focusing on this, then clearly there's something we should be doing too." So they look at it from a different angle.

Interviewer: You actually already answered this question, but I'd like to get your view on it again. The question was whether you encourage participants to create a concrete sustainability action plan for their own businesses at the end of the training. If I'm not mistaken, you said you provide an action plan based on the evaluation, right?

Interviewee: Absolutely, we do. In fact, we go further than that. We not only provide an action plan but also explain how it should be implemented, who they may need to contact if necessary, and which stages to follow for progress.

Interviewer: So are there options within this action plan? For instance, are two or three alternative routes provided? Or is it a fixed plan with set goals and steps?

Interviewee: That completely depends on the business. We can't offer a single, standard action plan. Action plans vary by sector. They also vary based on the business's capacity and organizational structure, including which departments exist internally. Let me give an example. Let's imagine one company has a sustainability department. Another company doesn't have a dedicated department, but a single engineer is told by management to handle sustainability tasks. Then there's a company with nobody assigned at all. So the roadmap changes entirely based on the organizational structure. If there's a department, things progress more easily. If not, then you first need to build a culture of sustainability within the business. You need to establish that culture. To achieve full success, first a person must be assigned, and later a dedicated department should be formed.

Interviewer: Now, not everyone who completes the evaluation ends up with an action plan, right? You probably proceed according to the resources you have. For example, suppose 100 people complete the evaluation. Say someone scores 4 or 4.5 out of 5 and wants a roadmap. Would you assist them? Or do you say “let’s prepare a roadmap for you too” to everyone who comes in? How does the selection process work?

Interviewee: Here’s how it works. The process of creating the roadmap is already handled through a fully digital platform. So for all businesses that say, “let a roadmap be created for us,” we ask them to fill out the survey, and we ensure the roadmap is delivered to them. We don’t make any distinctions here. The real process begins after the roadmap is generated. Then we determine SMEs to continue, we define our pool, we decide who we want to engage with further or who is willing to continue down this path voluntarily. Of course, this depends entirely on the resources we have at our disposal. We have to plan it within a certain capacity each year.

Interviewer: I see. So basically, everyone can evaluate themselves.

Interviewee: A general roadmap is provided to the everyone who wants.

Interviewer: When it comes to implementing a detailed roadmap, a selection process kicks in at that point, right?

Interviewee: Yes.

Interviewer: Alright. And since this is done within the scope of a European Union project, I assume it’s provided free of charge?

Interviewee: Yes, it is provided free of charge.

Interviewer: Understood. So does the training include the acquisition of technical knowledge and skills? Or is it more about activating participants to take action? For example, issues like waste management, energy efficiency, or perhaps European sustainability reporting techniques. These are all technical topics. The application would differ for the chemical industry, for instance, compared to other sectors. Do your trainings go into these areas? Or are the technical aspects left out?

Interviewee: What you said first is actually more accurate. We focus on triggering action. We don’t have a certification program aimed at building specific skills. Developing skills would mean increasing knowledge and expertise on the topic, getting close to a professional level of understanding within the business. We don’t offer a certification program, but we do provide guidance for this. We provide proper direction. We offer accurate referrals, for example related to energy efficiency or carbon footprint calculation. Nowadays, you can even Google how to calculate your carbon footprint. But when it comes to international reporting, very serious and reliable data is required regarding sustainability. That’s where we ensure proper guidance.

Interviewer: Got it. So in the matter of gaining technical skills, could other departments, training units, or relevant university faculties be brought in?

Interviewee: If they have a strong need, yes, here's what we do, Mr. Yakup. We direct them to experts within our universities who work on this topic. We actually create a crucial connection here. There are organizations out there saying, "we provide training," or "we're offering certification," or "we can consult on the reporting you need to submit." We don't want businesses to have a negative experience, so we make sure to connect them with the right people and institutions. In other words, we don't leave them on their own. They are properly guided.

Interviewer: Now, I would like to ask about pilot applications. For instance, a company might not immediately implement what it has learned or experienced operationally within its business. Maybe they want to try a pilot project for, say, three weeks first. Do you support such pilot applications? Or do they go straight to full implementation? Or do they first test it through a pilot phase, observe the results, and only then fully integrate it? How does it work?

Interviewee: Actually, conducting a pilot phase is necessary. It would be wrong to implement it directly. Because this situation is directly related to the company's processes. They have a daily routine, an operating procedure, a production line that must keep running. We cannot change this production or organizational structure suddenly just based on the roadmap. The business would not accept that either. Therefore, a trial period takes place first. When the company sees the benefits during this period, then they integrate these practices into their production lines.

Interviewer: Based on your own observations, I want to ask that when you have delivered the training or assessed the company and created a roadmap, and you are working together, do participants develop a sense of confidence? Do they start saying, "We can do this too"?

Interviewee: The people who attend the trainings are usually engineers working in the company or management representatives. So again, management is involved. If management is committed, the process leans towards "we can do this." But when it is just the engineer participating, there are more question marks. Employees often wonder, "Is this going to create extra workload for me?" Which is understandable. There is a natural hesitation there. Also, establishing a sustainability culture within companies requires serious effort. It is not a simple task. Sustainability is valuable both organizationally, environmentally, and financially. Someone who fully understands the company's processes must lead and advance the sustainability initiatives.

Interviewer: So you are saying that if the company simply sends an engineer without being personally involved, that engineer might view the process as an extra burden?

Interviewee: That is exactly what happens. Participation often happens under management pressure. They are told, "We have to do this. We must maintain our exports. So fill out this survey and let's see what kind of roadmap they'll provide us." That is how it begins. But the person attending the training might think, "My salary won't increase, but my workload will."

Interviewer: So in your view, there must be someone in an active decision-making position involved from the beginning to ease the movement toward action.

Interviewee: Yes, management definitely needs to be directly involved from the very beginning.

Interviewer: Okay. So you delivered the trainings, then made an assessment and created an action plan. Have you had companies that successfully integrated the action plan into their long-term and permanent processes? If so, were you able to monitor this? Do you encourage such follow-up? What is your current situation?

Interviewee: Frankly, we have only been continuing this work for about a year. We are progressing through conducting the surveys, then creating the roadmaps, and moving forward with the mentoring activities based on these roadmaps. Within this scope, we have observed that if a company is expecting an audit, they want to speed up this process, complete it, and make it sustainable. However, we monitor the process. In sustainability, there is no such thing as saying, "I am done."

Interviewer: I understand, of course.

Interviewee: This is a matter that requires continuity, and this continuity starts from scratch. As I mentioned, initially we aim to create a culture within the company. After building that culture, the organizational structure of the company must also change. We want to see this change starting from the company's strategic plan, including its mission and vision. For example, when we visit a company's website and check their "About Us" section, sustainability should already be visible there. It starts there and continues throughout the production process.

Interviewer: I see. So since you have only recently started applying this program, you have not yet had the opportunity to monitor the full process.

Interviewee: We have not yet had the opportunity to fully monitor, but here is what happens in the later stages. Imagine a company completes its sustainability-related work, fine. However, that company also has subcontractors. These suppliers must also become sustainable. They too need to complete their own sustainability phases so that the company we are working with can fully enter into the sustainability framework. In other words, both horizontal and vertical integration must occur. The companies that a business is connected with must progress at the same pace regarding sustainability. That is why this is a long-term process. Especially in the X region, which is the fifth most industrialized region in Türkiye. We are addressing a highly developed industrial sector. Yet despite this, we still face challenges. Everyone in the ecosystem needs to meet the same standards so that we can progress together on sustainability.

Interviewer: I understand. You are talking about the supply chain. Now, all these questions so far have been about your institution and the content of your training activities. Finally, I would like to discuss the broader situation in Türkiye. For instance, during these educational processes, are you systematically collaborating with other institutions like development agencies or universities?

Interviewee: Yes, definitely. We work together. We strive to collaborate with all stakeholders in our region, and even stakeholders across Türkiye. We make efforts to learn from the innovations we observe in others and to share our own innovations with them. As I mentioned before, we work together with the

development agency, the provincial directorate of industry, the industrial zones in our region, chambers of commerce, and chambers of commerce and industry.

Interviewer: But in these partnerships, you are collaborating through EU projects or other TÜBİTAK projects. Let me ask this, is this cooperation a matter of preference, or is it a systematic policy aimed at strengthening SMEs' competencies and training?

Interviewee: This is a policy. How did this policy begin? It started with the public-university-industry cooperation policy. It was structured under the R&D and internationalization headings in the 11th and 12th Development Plans. What is included in this structure? Stakeholders located in the region and the province must act together. When they act together, SMEs develop a perception that the state is supporting them, and as a result, we begin to use our resources jointly. For instance, we are not partners with the X Chamber of Commerce and Industry in the European Union project. They are not part of our consortium. However, we provide joint trainings. Why do we do this? Because the Chamber of Commerce and Industry can reach SMEs that we, as a university, cannot access, with just a phone call. We use the resources we have, and they use the resources they have. We actually have a protocol as a province in this sense. Moreover, we prefer it to be organized this way. You are not necessarily bound by the protocol, nor are you obliged to sign a protocol. We believed and saw that acting together is much stronger than acting individually.

Interviewer: Now, within the development plans, roles are assigned. Some institutions have a primary role, and others are designated as partners for collaboration. Then these are monitored and evaluated. So currently, is there a need for a national-level strategy for sustainability training for SMEs in Türkiye? For example, there is an AI strategy, and national strategies are emerging in other fields too. Should there also be a national strategy for training? What do you think? Where should policymakers start? Or should strategies be regional? What is your view on this?

Interviewee: I believe strategies should be regional. Of course, we should have a general overarching strategy within a common framework regarding sustainability. But when we think about Türkiye, we encompass such great differences regionally. In different regions, different sectors have come to the forefront. We must first recognize this distinction. Now, of course, Türkiye develops some policies by following world trends. This is a correct approach, but in my opinion, it is also incomplete. Because we are not moving at the same level as the world. We are still a developing country, trying to catch up with Industry 4.0. Our policies regarding sustainability are already different compared to countries like Japan, the US, or China. We progress more from the perspective of a country adapting to European Union policies. However, our technology level is not the same. Because our technology level is different, we need to design strategies and trainings that are appropriate to our own cultural structure and to the cultural structure of our SMEs. Regarding climate change, we first need to conduct scientific, data-based studies to determine our strategy. We must first understand how our enterprises are clustered regionally and what their needs are so that we can design an appropriate training plan accordingly.

Interviewer: So, a kind of confusion arises. Institutions have their own strategic plans. For instance, KOSGEB has its 2025–2029 strategy. There is the public-industry cooperation mechanism. Development agencies have their own strategies. Then, for example, the Climate Change Directorate issues another separate strategy. But maybe, as you suggested, the approach should be like this: We first determine how many SMEs are in each region and what the sustainability focus should be. First, we identify the training needs, then provide the training according to those needs, and finally draw up an action plan after the training. Should there be a central authority that designs this overall vision, or should it be left to the regions? If you were to draw a vision, who should take which roles, and how should the SME training needs be addressed? It is a general question.

Interviewee: There must be an overarching strategy, a common framework. But outside of that framework, I think the approach should be regional. Because when we list the industrial cities and regions, as I said, we are in the fifth position. Could the carbon footprint of the fifth-ranked city be the same as that of the tenth-ranked city? Could the water footprint be the same? No, it could not. Therefore, we cannot all fit into the same basket. The general strategic framework can be suitable and necessary for sustainability work overall. You have to reduce your carbon footprint. If you cannot reduce it, you should conduct equivalent work in another area. Similarly, you must reduce your water footprint. If you cannot reduce it, you must implement an equivalent solution. In terms of training, if we are thinking of it this way, awareness training across Türkiye should be at the same level. Once awareness has reached the same level, the next steps must be adapted to each enterprise's capacity, to each region's capacity, to each region's production capabilities, and to sustainability needs such as carbon footprint, water footprint, and efficiency efforts. Within this structure, universities must absolutely be included. KOSGEB must absolutely be included. Chambers of Commerce and Industry must absolutely be included. Provincial Directorates of Industry must absolutely be included. And in my opinion, most importantly, NGOs must be included.

Interviewer: Civil society organizations.

Interviewee: Civil society organizations. Even independent individuals from the public should be involved. Citizens should be included as well. Actually, we often focus only on SMEs. However, in our region, agricultural enterprises and farming are very prominent. Livestock farming is also significant. In fact, livestock production is one of the largest contributors to carbon footprint. Similarly, crop production has a major impact. For example, textile production processes are among the industries where the highest amount of water is consumed.

Interviewer: So you are saying that farmers and other individuals from civil society should also be included in this structure, is that correct?

Interviewee: Yes. I believe that NGOs should definitely be included and that both the beneficiaries and the providers of benefits should be part of the same cluster. Let's think of it this way, Mr. Yakup. I am a sustainability mentor at the Turkish Exporters Assembly. I work as a mentor both for innovation and

sustainability. In some programs, we provide mentorship for 11 months, in others for 8 months to businesses. We work together with them through all stages of building their corporate structures and sustainability efforts. What we observe is this: when we talk about sustainability, the first thing that comes to mind is the environment. We talk about issues such as using less water, avoiding the use of paper in communications and documents, shifting to digital systems, using cloud technologies, and so on. When we explain these concepts to employees in businesses and establish a culture around them, what happens? They take these ideas home. Imagine a household with three or four members. By reaching one individual, we indirectly reach the other three or four people. Then the child in the household takes these ideas to school, to their social environment, and gradually, a cultural transformation begins. Once they embody this behavior, those around them are also affected. In this way, like the roots of a tree, a single idea can reach every level of society. Therefore, we should not look at it only from the perspective of SMEs. Because it is not only SMEs that live in this world. As legal entities, we all exist, and we must all be part of this process together. Citizens must also be included and be conscious participants in this process.

Interviewer: Thank you. Now, as a final point, if you were to offer a recommendation to policymakers, although you are already involved in the policy-making process through your institution, what would you suggest? Considering both the economic and social aspects of sustainability, not only issues like carbon footprint or waste, but also issues like labor rights, gender equality, and poverty reduction, how would you summarize your recommendations for the training processes in the policy-making framework?

Interviewee: Well, actually, the United Nations Sustainable Development Goals, the 17 main goals and their detailed sub-targets, have been very carefully thought out and clearly presented. Personally, I fully support all of these goals. As living beings, not just as humans, for us to continue to exist and to sustain life on Earth, these 17 goals are extremely valuable and thoughtfully structured. In my opinion, every one of these 17 goals should be carefully studied when forming policies. When creating strategies, these goals should be analyzed, assessed according to SMEs' conditions, categorized appropriately, and actions should be taken accordingly.

Interviewer: So you are advocating for a process of diagnosis and treatment.

Interviewee: Yes.

Interviewer: Thank you very much.

Interviewee: Thank you. See you.

Interviewer: Take good care of yourself. See you.

25.04.2025 (2nd interview)

Interviewer Welcome.

Interviewee: Welcome.

Interviewer First of all, I would like to introduce myself. I am Yakup Inalkaç. This interview is part of my master's thesis at the University of Groningen. My aim is to understand how sustainability trainings for SMEs are conducted in Türkiye and to evaluate this process within the framework of transformative learning theory. The interview will take approximately 45-60 minutes. The information you provide during the interview will be kept anonymous and will only be used for academic purposes. Thank you again for your participation. Do you mind if I take a voice recording?

Interviewee: No.

Interviewer: Well, let's start with the informational questions. Could you briefly introduce yourself and your organization?

Interviewee: I am X. I have been working as a manager at X Chamber of Industry Foreign Economic Relations and Projects Directorate. I have been in this organization for about 6.5 years. I started as an assistant expert, then as an expert and then as a manager. We carry out EU projects and ensure X Chamber of Industry's foreign economic relations with other institutions. X Chamber of Industry has approximately 2500 active members. It completed its 50th anniversary last year. It has various departments and it has about 30 employees as Industrial Services Department, Foreign Economic Relations Directorate, Survey and Research, General Secretariat, Human Resources and Administrative Affairs. It has its own subsidiaries here. There are also X Technology Development Zone, INO Park and X Vocational Qualification and Consultancy firm. And through these, we continue our energy efficiency studies, technology development and sustainability studies.

Interviewer: You said we have 2500 members. So your organization has a serious relationship with SMEs. We can say that, right? How many of those members are large enterprises and how many are small enterprises?

Interviewee: Now, I cannot say anything very clear proportionally right now, but the majority is of course SMEs. Because I think there are over 40 thousand SMEs in X. And in order to become a member of us, they must be operating in the manufacturing industry. It must employ at least 10 people. Of course, there are also very large companies in X. But I can say that we have 2358 active members. I guess we can say that the majority of them are at the SME level.

Interviewer: I know over 90%.

Interviewee: Maybe bigger.

Interviewer: You also said that you provide them with sustainability training. More precisely, you stated that you provide sustainability services. Do these services include sustainability trainings? If so, how and with which tools are these trainings provided? In other words, do you provide online training or on-site training?

Interviewee: Yes, we organize various trainings and seminars on sustainability. They are usually attended by company owners, managers and relevant technical staff. The trainings are given both face-to-face and through online platforms. It is Zoom or with different technical tools. We also conduct workshops from time to time in cooperation with external experts and universities.

Interviewer: I understand that you represent and serve all businesses in a big city like X. You mentioned that most of them are SMEs and that you also provide sustainability trainings. Now I would like to get into the content of these trainings a little bit. More precisely, you provide trainings, but in what way? Here, I would like to give a brief information. In this study, I will use the Transformational learning methodology, which consists of 10 stages. Each stage describes the process from awareness to action. I wonder how much of these 10 stages do the trainings cover? There are some organizations that fill some of them. There are some organizations that fill others. Or there is no coordination between organizations. It is actually a thesis to understand this. So my first question will be about awareness. I mean in terms of the content of the training. Are there awareness-raising contents in these trainings that show that sustainability is an inevitable transformation area for business? For example, are warnings such as the European Green Deal may directly affect you included in these trainings? In other words, as a result of this training, does the person reach the awareness that "this is an important issue"?

Interviewee: Yes, we include topics such as the European Green Deal, carbon footprint, sustainable supply chain in our trainings. For the last two or three years, we have been telling companies that this transformation is necessary. Because as you know, the majority of Türkiye's exports are to European countries. There is also America, of course, but we export more to Europe. We are trying to raise awareness about this, especially about the effects of regulations. This year we are organizing Carbon Regulation at the Border meetings. We are doing these studies.

Interviewer: I see. So, do these trainings have an evaluation structure where businesses can turn to themselves and ask themselves, where are we on these issues, what are we doing wrong? Do you have such specific evaluations in your trainings?

Interviewee: It happens. It's like this, during the trainings, companies can analyze their own situation. We use tools like questionnaires, SWOT analyses or industry comparisons. We try to encourage the participants to think back to themselves. For example, when we provide energy efficiency trainings, we

try to direct companies' energy efficiency efforts through our X subsidiary I mentioned here and encourage them to have energy efficiency measurements.

Interviewer: I see. The person who comes to the training is actually measuring himself in energy efficiency. Do you understand correctly?

Interviewee: Yes, yes that's right.

Interviewer: Ultimately, it makes the business think in a way. It asks why we automatically prefer plastic packaging. Or why don't we use renewable energy? In this way, when it is evaluated in this way, it also questions itself in a way. What do you think about that?

Interviewee: During the trainings, questions are asked about why traditional methods are preferred and how they have become unsustainable. Energy consumption habits, such as the plastic usage habits you gave, are also included in our trainings as other questioning examples.

Interviewer: I see. Do you provide a common awareness, that is, an environment in which participants can feel that we are not alone by communicating with other businesses experiencing similar obligations. Do you use this methodology in training, for example, do group work, case studies for similar businesses? In other words, do you apply methodologies where there is a common awareness that we can call learning from peers?

Interviewee: In these trainings, panels and events, in order for companies to learn from each other and feel that they are not alone, some case studies are actually given to companies and these joint group works are created in this way. Here, we realize that companies establish an interaction among themselves. However, we do not have a specific study on this.

Interviewer: This was a spontaneous process as far as I understand.

Interviewee: Yes, it happens spontaneously.

Interviewer: I see. Now, are there business models or alternatives that are specific to businesses? For example, this business model offers you such opportunities, this could be your role. In other words, are there options where roles are determined and models are offered to all participants individually

Interviewee: Actually, we do this with new projects rather than trainings. For example, we have added many companies from our own members to supply chains and defense industry supply chains in recent years. Our guidance is project-based, such as changing your business models and using sustainability to integrate this sector with this business model.

Interviewer: Now I understand that you have chosen a few themes, especially in X. For example, energy efficiency is important for you as far as I understand. Now you have also organized training here. You

also organized surveys for enterprises to evaluate themselves. This is what I have understood from the interview so far. But I would like to ask this question. Is an individual action plan also presented to the enterprise? I mean, your steps should be this and that. You should take action with such and such an action plan.

Interviewee: As you said, we focus on certain issues within sustainability. So energy efficiency is the priority in these. And when it is energy efficient, we give feedback on these plans. And after the energy efficiency measurements of the companies are made through our own subsidiary, an action plan is prepared for them. And a road map is presented, such as you need to get these kinds of consultancies, you need to change these things.

Interviewer: I see. So is this only for energy efficiency? For example, do you also do this for waste management? Or let's say another topic. For example, is it about the use of raw materials, the choice of materials, or is your focus on energy?

Interviewee: In fact, we provide consultancy not only on energy efficiency but also on greenhouse gas calculation, carbon footprint calculation, water footprint calculation, renewable energy use and we guide our companies through the supports provided by the government

Interviewer: Are these free of charge Mr. X? Do you offer this as a service to your members?

Interviewee: We offer it to our members as a service.

Interviewer: Very good. So, for example, is training the task of one of your experts?

Interviewee: Actually, the distribution here is as follows. It is realized with an energy created by various components of the departments. We act jointly by combining the energy efficiency studies we carry out through our X consultancy and professional competence company subsidiary and the trainings provided by our department. For example, we offer technical content on sustainability reporting to our companies. We provide consultancy on access to finance related to these. We provide greenhouse gas calculation consultancy and we also implement it. As I said, energy efficiency is also a very important point for us. We also provide information about the support mechanisms here with the joint action of the relevant departments.

Interviewer: X Chamber of Commerce and Industry is already a legal entity. There are separate departments here, but all of them are already established to serve businesses. On the one hand, how to access funding, on the other hand, mentorships are provided on energy efficiency, greenhouse gas calculation, sustainability reporting. On the other hand, specific trainings are organized on certain topics. In fact, these sub-headings I have mentioned are activated in different ways by different units. Do I understand correctly?

Interviewee: Yes. Because everybody has different specializations. We are trying to get the components here to work together.

Interviewer: Got it, great. Now I want to move on to this. We talked about trainings, we talked about self-assessment of enterprises and action plans. I would also like to talk about the acquisition of knowledge and skills and the provision of certification. Enterprises acquire knowledge and skills

Or is there only guidance there? For example, how to use a drivable material or how to manage waste, is direct specific technical knowledge acquisition among your services?

Interviewee: As I mentioned, our organization gives vocational qualification certificates. Here, of course, we have more applications for training intermediate staff. But this should be considered as an element that supports sustainability. On the other hand, we already have energy efficiency experts. They are energy efficiency experts with official documents issued by the Ministry of Energy. Here, we are directing our companies to train energy efficiency experts within their own organizations and we are conducting awareness raising activities. Another topic we have chosen this year is sustainability reporting. However, we are trying to raise the awareness of companies on the sustainability reporting side. At this stage, we create certain concepts for ourselves

Interviewer: I was wondering here, is there any certification that you give or do your members go to the professional qualification institution and get it themselves?

Interviewee: Actually we have our own professional qualification body. So we are the authorized organization. Through X. We are a vocational qualification and certification center. Here, as I said, we conduct exams and certifications for the need for intermediate staff in various subjects.

Interviewer: I see. Yes. So, I would like to ask about the piloting. Now, as far as I understand, the participants receive many services from you. So, do you give them tasks? For example, do you pilot them for 2 weeks, 3 weeks? Or do you advise them to start their practices directly? What exactly is your approach there?

Interviewee: I mean, it's actually project-based, because if the government gives an incentive for it, they need to pilot it after they have already received training

Interviewer: For example, you have many members, including businesses with good institutional capacity. They have come, they have received training, they have acquired knowledge and skills, they have evaluated themselves. Do you observe that these businesses have come from a certain point to a better point? Do people gain more confidence after the services you provide? What is your observation?

Interviewee: Actually, I think about it like this. With the trainings and various projects we do on sustainability and the practices that follow, the relevant companies reach a certain stage. But again, I think

on the financing side, it is sometimes difficult to encourage companies to do these things because they are very affected by macroeconomic fluctuations. Because more people focus on themselves through cash flow. And they want more incentives to manage this side. And when they want this incentive, for example, they try to export more. It is not easy for companies to increase their capacities and achieve this sustainability transformation and green transformation.

Interviewer: Of course you need certain costs, right?

Interviewee: Yes, there is actually a high cost here. Unfortunately, they do not put their hands under the stone. This is my subjective opinion.

Interviewer: Yes, I mean, can we say like this? Either there will be pressure from outside, they have to make this kind of transformation for export, otherwise they will not be able to export. Or secondly, there has to be an incentive, like public support. You say that these two situations are actually triggering factors.

Interviewee: Exactly. Yes, that's exactly how it happens.

Interviewer: And how is the integration of these services you provide? I mean, what do you think about this, do they take it and integrate it into their business on a long-term basis? Or for example, he made a project-based energy efficiency application. Does it start in that project and end with that project. In other words, what kind of evaluation do you make at the point of integration, at the point of continuity of those trainings and the services you provide?

Interviewee: We conduct impact analysis with our organization after the events. As a result of the impact analysis, some of the companies of course try to integrate them into their business. Others, as I mentioned, ask for incentives in connection with the issue.

Interviewer: These questions were about trainings. Our initial questions were already about your organization in general. Now I would like to finish with a few questions about Türkiye in general. Now, in these training processes, do you have systematic cooperation with other institutions, for example, agencies, chambers, universities? Do you have a systematic cooperation? Or do you communicate in an event-oriented, action-oriented manner? Do you conduct these trainings with a certain cooperation within the scope of a protocol? Or with your own resources?

Interviewee: So we work in cooperation with universities, development agencies, environmental consultancy firms, consultancy firms, educational institutions, some international organizations. And projects and training programs are carried out together with such stakeholders.

Interviewer: I mean in what way, for example, do you use his physical building, do you call his expert, how is the cooperation there?

Interviewee: Let's take the example of the Development Agency. If they come up with a cooperation project, we look at this. Is it relevant to the industry in the region. Are there demands from our members. We measure the efficiency of this. In other words, it is analyzed whether this work will really provide a benefit. Then, if there is this benefit, this work is carried out.

Interviewer: I see.

Interviewee: We also have partnerships with universities. For example, we also have project partnerships, of course.

Interviewer: For example, as you know, you are a partner of the X Region in the European Enterprise Network. Again in this regard, as a partner of the project, you organize training together, for example with KOSGEB or with your other partners. Since this is a European Union project, you also signed a cooperation protocol at the beginning of the project. In fact, the trainings you organized together, with their budget, methodology, were systematically realized in cooperation. I wanted to find out if there is this kind of systematic cooperation in other trainings, because the need arises. Your institution has a relationship with another institution. You invite a trainer from the other organization, or you use the physical building of the other organization. But as in this European Enterprise Network Project, are the processes certain, how to do it systematically, are they put under a protocol? Or is it done by contacting the actors as needed? Actually, I would like to learn about this.

Interviewee: Now we have cooperation protocols with local institutions. X1 University, X2 University. You know we are the X Chamber of Industry, but in X, the Chamber of Industry and the Chamber of Commerce are separate institutions. And we actually have a partnership with the chamber of commerce there. So we cooperation protocols with local institutions. In other words, we have cooperation protocols and we carry out a work together with them and other institutions in a certain systematic way, because we have a past experience. For example, we can organize fair visit organizations together. We can also organize training organizations. We can also organize big events together, we can also organize training organizations at such events.

Interviewer: I see, most of the businesses are SMEs. 60, 70 percent of Türkiye's exports are to the European Union now. And one of the priority policies of the EU is sustainability. Therefore, it is a fact that SMEs need to transform. In order for them to transform, they need to learn, and in order for them to learn, they need to receive training. From this point of view, do you think there is a need for a national strategy? Or should these be left to the region's own dynamics? What would be your personal opinion on this subject?

Interviewee: Currently, practices are quite scattered and vary across institutions. With a national framework strategy, the quality and prevalence of these trainings can be increased. So a national level

training strategy on sustainability has not actually been published. But as you know, there is a program published by this ministry, the Ministry of Trade, in accordance with the European Green Deal, and the Ministry of Environment is also working on it. But I think this needs to be adapted regionally. Because you know, the environmental factors are different, the natural factors are different in each region. And therefore, we think it would be more appropriate to prepare a program in accordance with this reality.

Interviewer: So what you mean is that there is an umbrella strategy document. In the umbrella strategy document, some tasks are given to the regions step by step. But the regions take action by determining which sector to focus on, which subject to focus on, based on their own resources and their own needs. But they act in coordination. Do I understand correctly?

Interviewee: Yes, there needs to be coordination and the framework you mentioned, the regions actually need to feed it with feedback. With the analysis and studies to be done.

Interviewer: In other words, it makes its own analysis in the region, which goes back to the upper roof as feedback. The upper roof revises it again, and in this way, it provides information flow downwards. Yes, I understand, very good. Well, you have given trainings. How were their monitoring, evaluation and reporting processes? You mentioned an impact analysis. Could you elaborate on that a little more?

Interviewee: So in the impact analysis, we ask more like 10-15 questions. Here we are working on practical learning and strengthening the follow-up mechanism after the training. In other words, did this training benefit the companies? Will it be used in future stages? As you mentioned earlier, will you present this to your company as a pilot application example? We do this 15-20 days after the event. Because we are waiting for digestion time there. After that, these studies are carried out.

Interviewer: Our last two questions. Now let the first question be about this. In these trainings, I am asking in general, not in terms of X Chamber of Industry. I think you have participated in many trainings in your personal career. I think you have organized many trainings. Do you think there is a place where you say, "It would be much better if something like this was done". Is there a place where you say, "This point is always missing ". Which area would be the most needed? This can be in terms of topics, you can evaluate it in terms of methodology. Based on your personal experience, what do you think is the most needed area?

Interviewee: I think it would be more productive if the trainings were more interactive and conducted through case studies, so that the participant can interact with the trainer. The participant should have a certain level of knowledge so that he/she can advance it and turn it into a project. In other words, there should be a level of technical knowledge. For example, not just an environmental engineer or a mechanical engineer. An economist should also be involved in this work

Interviewer: So there has to be a team. That team should participate there. They should be at a certain level and they should be able to interactively communicate with the trainer during the training so that the trainings are useful and have a return. You also said that it should be based on case studies with examples. I guess that is also very important because the business will have seen it through a real example, right?

Interviewee: Yes. For example, as you mentioned, we are also a partner of the EEN Anatolia project and I myself am a member of the Sustainability thematic group. For example, in the last training in October, I realized that what our other European partners also attach the most importance to are the case studies. Case studies are very important. Because it can encourage people with knowledge to think differently.

Interviewer: I see. Mr. X, you have been very helpful. Thank you for your time.

Interviewee: Thank you. Good luck with your work.

Interviewer: Thank you very much.

25.04.2025 (3rd interview)

Interviewer Welcome Ms. X.

Interviewee: Welcome Mr. Yakup. Hello, how are you?

Interviewer: Thank you, thank you. First of all, thank you very much for accepting our invitation. Let me give you a brief introduction and then we will continue with the questions of our interview. This interview is being conducted as part of my master's thesis at the University of Groningen. My aim is to understand how sustainability trainings for SMEs are conducted in Türkiye and to evaluate this process within the framework of transformative learning theory. This transformative learning framework is not normally related to sustainability, but is used in the education community for adult education. It covers processes from awareness to action. Therefore, can this be applied to SMEs in terms of sustainability? What are the actors doing? We will try to understand this. The interview may take about 45 minutes or 60 minutes. The information you provide during the interview will be kept anonymous and will only be used for academic purposes. Is it okay if I take a voice recording?

Interviewee: No there is not.

Interviewer: Well then, could you briefly introduce yourself and your organization?

Interviewee Of course. X. From KOSGEB. KOSGEB is the organization responsible for both the development and support of SMEs in Türkiye. I am the Sustainability Supports Manager there. KOSGEB has a dual structure. There is a central organization and a provincial organization. In the central organization, supports to improve the competitiveness of enterprises are designed, infrastructure is prepared, and implementation units, i.e. the provincial organization, put into practice. At this point, enterprises are actually more in contact with the implementation units. We try to keep our relations with SMEs up to date in order to provide support that is usable and, frankly, easy to utilize. We try to support this both through our application sciences and our own communication. The Sustainability Support Directorate is a unit that was established in recent years. We design support programs for both digital transformation and green transformation, sometimes for one purpose, sometimes for both. We put these into practice and monitor and try to monitor the results. On the other hand, in terms of technical support, we try to focus on support related to consultancy services. Sometimes we organize trainings. In order to reach SMEs in 81 provinces, we usually try to do it online.

Interviewer: I see. Anyway, my thesis title was sustainability trainings in SMEs. My second question was actually about the relationship between SMEs and your organization. As far as I know, KOSGEB is currently structured as a support organization as an organization responsible for SMEs at the national institution level, right?

Interviewee: Mr. Yakup, you lost your voice for a while. Can I hear your last statement again?

Interviewer: Now your organization is responsible for SMEs. So it is a national public organization then? Yes, it is.

Interviewee: Yes it is.

Interviewer: What is the target group? In general, I mean, can you give an approximate number?

Interviewee: In accordance with the definition of SME in Türkiye, it actually represents a certified group. It includes both the manufacturing sector and the service sector. We look at the sector in which an enterprise operates, its financial data, and the number of employees when giving the SME qualification. By classifying in this way, we accept a certain group as SMEs and include them in our target group.

Interviewer: I see. Now you mentioned that you provide sustainability training. Although you said that we give it online. Is it all online or are there face-to-face trainings with other tools?

Interviewee: Yes, we definitely do. We try to do this as much as we can, within the framework of the existing possibilities. Sometimes by using local actors, sometimes by trying to bring actors in X or international actors to the local level, we have carried out these activities in physical capabilities. But I cannot say that we have reached very high numbers here. In fact, I cannot say the same for online trainings. I can say that SMEs still do not see awareness about green transformation as a need. That's why we usually try to offer some training and awareness content by hiding behind the attractiveness of the support when we explain our trainings or awareness raising activities through a support. But when we focus only on providing training, we cannot reach a very wide audience. In general, we face such a challenge.

Interviewer: So, when you go to explain a support program, you are also making an effort to raise awareness in the process. As far as I understand, you use support as a tool and try to raise awareness in this way. Now I would like to go into the content of the trainings a little bit. Our next 10 questions will actually be about the content of the trainings. These 10 questions are based on the 10 stages of the transformation in the theoretical background I just mentioned. The first stage is about awareness; you have just talked a little bit about this. So, do these trainings include awareness-raising content that shows that sustainability is an inevitable transformation area for businesses? For example, since topics such as the European Green Deal will directly affect the participants, is there an introduction at the beginning of the training that will make them say, "Yes, this topic is important"?

Interviewee: Of course, we do this especially. Because it is very valuable information, especially for SMEs, to be able to draw the participant into the subject, to indicate how this process will affect them financially in the future. So yes, we make sure to underline that practices such as the European Green Deal, the Border Carbon Regulatory Mechanism will affect businesses commercially and financially in the near future. The awareness part of the trainings starts precisely in this framework. Starting from the

basic documents such as the EU Green Deal and Kyoto Protocol, we provide a framework on how we got to where we are today and what awaits us in the future.

Interviewer: Can you hear me? I'm here now. I think you were talking about the Kyoto Protocol in terms of what's going to happen?

Interviewee: Yes, I was referring to the basic documents, and I was giving examples in the process, so starting from them, we want to explain a little bit of the story and the background of the issue, and obviously, we want to systematize it in the minds of the business. Starting from there, we then give them information about the regulations that await them in the near future, and we try to emphasize that businesses that have already transformed or have already made the effort to transform are not only affected by these regulations, but also benefit in terms of efficiency, and even achieve financial benefits much more quickly. So, if you want, we can move on to the next question. Maybe I talked a little bit too much.

Interviewer: I see. Actually, you say that you started mindfulness training with a historical process. I guess there is a flow like this: First the United Nations process, then the European Union regulations, then regulations and so on... In the meantime, the participants reach awareness by saying "This issue is important". And you also mention that it provides financial efficiency in this process, right?

Interviewee: Yes, yes, you are right. It should be emphasized here. I think there is a similar approach in the US and Türkiye as well. This transformation or the necessity of regulations first started in certain sectors, especially in carbon-intensive and large sectors. In these sectors, there are generally not many SMEs, or even none in some sectors. SMEs do not yet see these practices and regulations as an issue that concerns them. At this point, we are trying to emphasize that this situation will affect them in the future. Some exporting SMEs have already started to deal with these issues. The companies to which they sell or supply demand certain data and information from them, or this information becomes mandatory within the framework of regulations. However, for SMEs that do not yet feel this necessity, we try to convince them that it will affect them in the near future.

Interviewer: Okay. Now that we have passed the awareness part, I would like to move on to the "self-reflection", i.e. self-evaluation part. For example, in any of your trainings, in general or in particular, has there been a situation like this: "Where are we on this issue? What are we doing wrong?" Have you used structures such as a survey or an evaluation method for this? Have such approaches been applied?

Interviewee: Honestly, I cannot say that we have such a systematic practice in our own organization. But we have done this kind of work: You know, there are some software especially related to carbon emission calculations. We organized trainings that provided information about the tools developed by many private organizations, public institutions or international institutions that offer maturity assessment or self-assessment. Thanks to these trainings, enterprises were given access to these tools. After the

training, they had the opportunity to evaluate themselves. However, I cannot say that we systematically applied an evaluation process during the training.

Interviewer: My third question is actually a bit related to this topic of self-assessment. Are the participants able to question their current habits and ways of doing things? Questioning can take place even without an evaluation ; maybe questioning can be triggered when there is such an evaluation as part of the training. What is your observation? Do you get any feedback from the participants in this sense?

Interviewee: Actually we do. I am quite satisfied with the approach of the participants in this regard, usually in the meetings and events I attend. However, I would like to underline something else here. We invite these businesses to our trainings through various means. In physical meetings, we reach out to participants through local actors and our own e-mail system; in online trainings, we reach out to participants through social media announcements and e-mails. The participants who come to the training are the people who are really interested in these issues in the business. In this sense, we encounter people who can both perceive the needs of the business and draw conclusions from these needs. I can speak clearly about this. However, there is such a situation in SMEs: In large, more corporate enterprises, it may be enough to convince only the technical team on issues such as technical transformation. But in SMEs, the people who need to be convinced are the business owners or top managers. Therefore, when these people do not participate in the training, even if there are conclusions drawn from the training, there may be difficulties in putting them into practice. I have attended or personally organized many trainings, meetings, workshops and similar organizations on this subject. This has been my general observation, Mr. Yakup.

Interviewer: You made a very interesting point. Because I got a similar feedback in an interview I did before. They usually say that either an engineer or someone from the relevant department attends. But these people can also think like this: "OK, we will do these jobs, but our salary does not increase; our workload only increases." Therefore, in order to create this change, perhaps the direct participation of the business owner or a decision maker from the management in the training could increase the effectiveness.

Interviewee: I absolutely agree. We are meeting with the audience that can potentially turn this training into a benefit, yes. But we are not reaching the audience that will take action. In order for the impact of the training to really materialize, we need to reach the decision makers.

Interviewer: I see. Now I would like to move on to the fourth topic, which is peer learning, which is what we call learning, which aims to provide an environment where participants can come together with other businesses that are experiencing similar challenges and feel a sense of "We are not alone". It could be a group exercise, it could be a case sharing or it could be organized for a specific group. So, do you think the participants there tend to learn from each other? Or are the trainings open to general participation? How do you plan the organization in this regard? Do you use peer learning in particular?

Interviewee: Actually, we don't use this method in general, let me state that. Because the number of participants or the interest of the target audience is not very high in total anyway, we try to act regardless of the sector or the scale difference within SMEs in order to proceed in the most effective way while conducting an operation. However, there have been times when we have organized trainings on the topics I just mentioned, such as emission calculation. In such cases, we have tried to specially invite businesses in certain sectors, especially in the question-and-answer part, so that the participants can understand each other better and draw common conclusions. In other words, there are examples where we organize sector-based training. Other than that, I cannot say that we applied a systematic peer learning approach. But this is important information for the narrator. Because when the focus is on a specific sector, the training becomes much more effective when the narrator gives examples specific to that sector and describes the current situation in that sector. We do not apply this practice especially in trainings that provide basic terminology and background information. However, in more technical trainings, we try to bring together similar groups by classifying them according to sector or export regions.

Interviewer: I see. So, awareness training can be open to everyone in general, but technical trainings naturally appeal to a more focused circle, right? Well, especially in physical environments, methods based on group work and experience sharing are not practiced. There is no place for such practices. Do I understand correctly?

Interviewee: Yes, that's right. We do not practice this kind of group work methods. However, there are certain structures in our country where such practices are realized. For example, the "learn-return" programs of model factories can be counted among such examples. These programs both raise awareness about lean production and reinforce it with practical training. I suggest you meet with these teams. If necessary, I can refer you to a friend of ours working in this field. But in our trainings, due to the size of the target audience, it is not possible to realize the kind of application you mentioned.

Interviewer: I see. Well, recently there are some models and training practices that are based on roles. For example, the "doughnut" model applied abroad; this model shows how a business can transform its purpose, organization and management. Or some roles need to be defined in the circular economy. Do the trainings seek answers to such questions? For example: "What roles do I need? Which personnel do I need? Which business model is right for me?" Or do they only focus on more basic issues such as awareness and emission calculation?

Interviewee: As I said, this process is still at a very early stage for SMEs in Türkiye. But in the future, as you mentioned, I foresee that this situation will be different, both through regulations and financial instruments. At the moment, Türkiye is not yet at that level in terms of implementing such advanced models.

Interviewer: I understand it like this then: First of all, awareness is required, emission calculations need to be made within the scope of some regulations, but in Türkiye, the trainings are not at a level that will

affect the business processes, business models or the general structure of the enterprises, because the enterprises have not yet fulfilled even the basic requirements. Do I understand correctly?

Interviewee: Yes, that's right.

Interviewer: Ok. So, at the end of the trainings, do you encourage businesses to create a concrete sustainability action plan? For example: "This step, then this step, then this path should be followed"? Have you had these kinds of trainings or do they happen in general?

Interviewee: I would like to point this out: Although we are not doing it in a structural or fictional way, we have done such things through the support mechanism I just told you about, that is, by using support as a tool. For example, for the past one and a half to two years, there was the Green Industry Support Program that we ran with World Bank funding. From the design stage of this program, we have made a lot of effort to create a structure according to the needs of SMEs that they can easily benefit from. I think this has been successful, because we have managed to commit a budget of 250 million dollars within a year, and we have even exceeded this budget. We received applications much faster than we expected, and I would like to share how we managed this process: As part of the project, we organized 'info days', awareness events. In these events, as I mentioned before, we first explained the terminology and background, then we told businesses that they need to make this transformation and the regulations that await them. Afterwards, we shared examples of businesses that wrote projects, started projects and achieved success, and enabled them to create their own action plans. Participants physically experienced this process. I say this not to tell a success story, but to describe its impact. For example, we had a support component within the scope of 'SPP (Solar Energy Systems) investments'. In this context, we presented examples of a business that switched to renewable energy by transforming, comparing past and current energy costs and fossil fuel consumption. Businesses that saw such examples started to ask questions such as "Can I do this too? I have these resources, how can I apply them?". At this point, we both provided guidance and observed that there was an intention to invest. We had a second call: a call to support circular economy tools and cleaner production practices. Here, we exemplified projects focusing on energy and water efficiency and waste recycling. We received feedback from the participants such as "I have a similar problem, so I can apply this". So these kinds of results emerged, but I repeat: I am not talking about a systematic, structured process. These developments emerged naturally within the training.

Interviewer: I understand, but you made a very important point. As far as I know, KOSGEB projects also include sections such as a work-time plan. In other words, the enterprise actually analyzes its own situation and creates an action plan. The self-assessment or action plan I just mentioned is included in these projects. However, this seems to be more of a demanded part. In other words, "You evaluate yourself, create a work-time plan and I will support you". But in the trainings, they usually stay at the point of "We are raising awareness and this is our support program". The self-assessment or action plan part seems to be left to the organization. Do I understand correctly?

Interviewee: We can say it's true and it's not exactly true. Let me explain it like this: As you may be aware, there is a 'board evaluation' stage in projects. First of all, I would like to state this again: The application forms you mentioned, and I keep saying this both in trainings and support lectures, filling out our application form is a very instructive process even for an enterprise that does not know how to prepare a project. Because when the enterprise intends to do the project, it has to ask many questions that it has not yet asked itself through these documents. Therefore, these documents enable the business to assess its own situation. With their answers to these questions, enterprises reveal their current situation beyond just requesting support. I find these documents very valuable in this respect, and our board evaluation process is also a serious control phase. In the initial evaluation of the projects, I think it provides important contributions in terms of guiding the companies. For example, an enterprise wants to make an investment. This is a very common situation. We ask them to describe the benefits of this investment in their documents. The enterprise also describes it. But our evaluation board or our experts say, "You need to calculate it this way. Both you look at it and we look at it". This enables enterprises to revise their projects and think more carefully. In general, these processes are perceived as bureaucratic. And especially in our country, and probably in many countries. But I think these processes are important and instructive both in terms of enabling businesses to ask themselves questions and in terms of helping them make investment decisions more carefully.

Interviewer: I see. So you are saying that filling in the application form or even the revision suggestions given by the board can be instructive in these matters. Is that right?

Interviewee: Yes, yes. Exactly.

Interviewer: So far we have talked about awareness, self-assessment, peer learning and action plans, but all these require technical skills as well. For example, as far as I know, sustainability reporting has become mandatory in the European Union. Although this obligation covers companies with more than 1000 employees, so 99% of companies are out of scope. But not only reporting, but also other regulations confront businesses. You said that you also provide trainings on technical aspects. Which knowledge and skills do these trainings cover? Is it only carbon calculation? Or do you also have other knowledge/skill applications, such as certification? Do you have any practices where the participant can receive a certificate or gain knowledge and skills after the training?

Interviewee: No, we do not have such a practice at the moment. We only provide trainings on emission calculations at Scope 1 and Scope 2 level; we have not yet entered Scope 3. This is our current stage at this point. Of course, many things can be done in the future, we have thoughts in this direction. By the way, the sustainability reporting you mentioned is also on the agenda in Türkiye. The Public Oversight Authority has published the regulations that we can call the Turkish version of ESRS. The Public Oversight Authority is working on creating training standards for those who will make these reports. In

other words, it is building the process in a sense. Gradually, training institutions are also starting to be authorized. As KOSGEB, we do not directly receive authorization as a training organization and provide these trainings. However, we are considering taking the initiative to support such trainings in the near future. As you said, there are also efforts to establish a system for the certification of individuals or companies in this field.

Interviewer: Actually, as far as I know, you had a regulation on "Guidance and Technical Counseling". Within this scope, training was to be provided and people were to be certified. But as far as I know, is only at the level of legislation at the moment, authorization has not yet been realized in practice. Is that right?

Interviewee: Yes, that's right. We have carried out a serious work there; we have come a long way in terms of authorizing individuals, namely consultants. But at this point, we have moved to an approach where the private sector carries out this process within itself and we support structures that have reached certain standards.

Interviewer: Okay. Now I want to move on to the testing phase. Are the participants able to apply what they have learned or do they have to test it at certain stages? Because changing the whole production process or structure at the same time can be risky for the business. What is your observation?

Interviewee: By test phase do you mean a pilot?

Interviewer: Yes, yes.

Interviewee: To be honest, there is no such practice in our training system, there never has been. But I would like to emphasize again that there is a similar practice in model factories. They run a program called "Learn-Return". As the name suggests, the current situation of the enterprises is determined after the training. Afterwards, a process is carried out together with consultancy services to transform at least one aspect of the production process. This is one of the most valuable examples I know of in Türkiye. Other than that, I cannot say that there is any other training with this kind of practice.

Interviewer: I see, now I would like to ask an observation question. You are in constant contact with enterprises, either in trainings, or in the design of the support program, or in explaining the supports. What are the reactions, is it like this? "This is beyond me", or is the reaction "I wonder if I can do this"? In other words, how is the confidence of SMEs in Türkiye on this issue? What are your observations?

Interviewee: I have been working at KOSGEB for about 16 years and I have been involved with SMEs in one way or another for 16 years. SMEs continue to surprise you every day. Every day you come across something new. Some SMEs are incredibly brave and pioneering; there are such enterprises. But some of them also have an approach like you said. Green transformation, digital transformation... Whenever I

organize an event or talk to an SME, this is always one of the first points I want to mention. There is such a perception: Businesses find such concepts, such as green transformation, green consensus, digital transformation, too sophisticated. "These things are not for us", "These are very advanced topics", "These are not within our reach". I would like to underline this perception. No sir, these tools are actually tools that everyone can access and reach. And they are only tools. This is how it should be looked at. When they are described in scary terms, such as "circular economy" or "industrial symbiosis", businesses may say, "This is not something I can do". However, it already does these practices due to the nature of its business. But when the terms change, so does the approach. For this reason, I think the right communication language must be found, and I am very pleased that you have underlined this issue. Whether it is public institutions, NGOs dealing with these issues or consulting firms, everyone needs to pay attention to this. Especially consulting firms like to make these issues look very sophisticated. Because that makes businesses need them more. This is understandable from their point of view. But I really believe that public institutions and non-profit organizations need to simplify it and make it accessible.

Interviewer: So you actually linked communication with trust. If you can reach them in simple language, they think you can do it. But if it's too complicated and you give the impression that you can't do it, the person will run away. You got it right, right?

Interviewee: You are right. Yes, that's exactly what I'm trying to express. I mean, these examples I'm talking about are not fictionalized examples like inspiring success stories in TEDx format, of course. But telling about a green transformation practice in a similar business, in a similar or different workshop, makes other businesses say "Actually, this is something I can do too". Although concepts such as circular economy may seem distant at first, when explained through examples, the reaction "I hadn't thought of it like that" comes very often. I have received such reactions so many times at events. At that point, businesses say "We can do this too". Our number of applications was quite low at the beginning, but after a certain point, we really caught a serious momentum. We have already talked about peer learning in Türkiye, but in general, in business practice, it is probably the same abroad, when an enterprise in the same industrial estate successfully implements an innovation, especially if it has received support, it sets an example for other enterprises around it, and this creates a natural learning process.

Interviewer: That's exactly why I asked. Maybe the trainings should include the enterprises that have received support and implemented it, so that communication can be more effective. As you said, one enterprise starts implementing the practice, then it spreads to other enterprises in the surrounding organized industrial zone. Also, the language issue is important. For example, the European Union legislation, which you call ESRS, is 240 pages long... If an SME sees this document, its first reaction would probably be "This is not for me".

Interviewee Absolutely. Obviously these kinds of documents are quite challenging, not only in terms of sustainability, but also in terms of the way they are written in general. Therefore, there will always be consultants, authorized bodies, public institutions. And companies will receive services or support from these institutions. But the first thing that needs to be broken here is the insecurity at the point of "Can I do this or not?". I think this mistrust stems from a wrong communication language, and this can be broken when the right communication is established. As a team, we try to give businesses this confidence as much as we can. If there is a service they need to access, we also show them how they can access this service. For example, if the business has made a maturity assessment, we tell them which services they can access afterwards. We have absolutely no intention of disrupting competitiveness here. We are just giving examples. As a public institution, we do not have an approach such as directing to a specific service provider. But we do have guidance activities such as accessing more qualified services and explaining what they should pay attention to.

Interviewer: I see. Now I have one last question about the content of the training, and then I would like to move on to the general policy. This is about the issue of integration: I mean, what is the sustainability of this after the implementation? In fact, all these issues we talked about, self-assessment, peer learning, testing practices, action plans, may not be in the trainings, but they can be supported by other practices. What is your observation? If a business has successfully applied what it has learned, does it continue to do so? Or is it just a one-off process?

Interviewee: I look at these kinds of issues by going back a bit further. There was a time when everyone in our country and in the world was talking about Total Quality Management. There were various regulations and certifications related to it. For some businesses, this process was very beneficial, while for others it became a burden. Therefore, the permanence of such transformation processes depends on the business's approach to the subject and the benefits it derives from the process. If the business really sees a benefit, the process becomes permanent. And sustainability issues are essentially issues to be benefited from. For example, studies on energy efficiency provide benefits at every stage of the business. A business that invests in renewable energy already feels this benefit in a very short time. For this reason, businesses that make these investments continue the process. When these systems expire in the future, they continue by renewing them. They continue to stay at that point in terms of perspective. Therefore, my first thesis is this: the business that benefits continues this process. My second prediction is that as they see that they will benefit anyway, they start to move in this direction. In other words, they proceed with a very pragmatic approach.

Interviewer Thank you. First of all, as KOSGEB, do you cooperate with other institutions in these training processes? Are there any institutions that you collaborate with?

Interviewee: We do. I can say this: we do not leave any institution working on this subject alone, because KOSGEB has such a structure, and probably many organizations in our structure are like this, too. If you are working in contact with the private sector, even if you don't want to, your target audience forces you to coordinate with other institutions, this is not something that comes from within us, it is a situation forced on us by the target audience. For example, if the Public Oversight Authority makes a regulation, we immediately take steps both to examine that regulation ourselves and to contact them. We look at what we can do together, what can be carried out jointly. Likewise, we are in constant contact with institutions such as TÜBİTAK, the Ministry of Trade, the Ministry of Environment, etc. We both try to contribute to their work and try to get their contribution for the services we can provide to businesses.

Interviewer: So, is this your institutional choice? Or is it an obligation defined in development plans or national strategies?

Interviewee: Structurally, of course, such coordination is defined in development plans or action plans. However, I can say the following about the coordination I just mentioned, especially the coordination with a focus on sustainability: This is completely based on our preferences. I mean, yes, coordination tasks are written in the top policy documents, responsibilities are specified. But our efforts in this field become a necessity in order to establish and maintain healthy communication with SMEs.

Interviewer: I don't know, but is there a national strategy on sustainability in Türkiye? Or is it included in development plans? Is there a specific strategy document in terms of trainings? Do you think there should be a strategy document on sustainability training for KOSGEB or SMEs across Türkiye? Or would such a document be too narrow? Should it be handled at a regional level? At which level do you think this strategy document should be?

Interviewee: I don't think I can answer this clearly, but I would like to say a few things in general. Honestly, as far as I know, there is no specific strategy document for training. But issues such as training and awareness on sustainability are included in development plans. Various institutions have been assigned duties in this regard. We, too, have undertaken tasks related to raising the awareness of SMEs. There is a Green Deal Action Plan coordinated by the Ministry of Trade, which is the responsibility of all institutions. This action plan is prepared within the framework of the EU Green Deal, and the measures included in it are both prioritized and important. There is not only a job description, but also a ranking of what needs to be done. So I can say that there is a very tight and coordinated work here. Every institution is working on this issue. And I think this is not only a technical coordination, but also a mental consensus. This is very valuable. Because this sense of ownership may not develop in every issue. But here, everyone is trying to be a part of the process and I find this common consensus environment very positive. There are institutions in our country that are leading this process and institutions that are following them. In this sense, I see Türkiye in a good position, and I think that it attaches importance especially as a political

priority. As far as I know, there is no action plan specific to education. If there is and I don't know about it, I apologize for giving wrong information. However, if you ask me whether there should be a strategy document on this issue, I should also say that the Ministry of National Education is also working on this issue, because it is seen as an area where individuals need to be educated from an early age, but I don't believe that it is necessary to prepare a very specific strategy document, as I think that the education of each subject is different. The training needs of industrialists on sustainability are different, those of individuals are different, the needs of the health sector are different. In this sense, defining all these issues with a single document, a single strategy, does not seem to me to be a very effective method.

Interviewer: So you mean like this: Sustainable development is not only environmental, it also has social dimensions, it has 17 topics. So a strategy can be made at a high level, but a separate strategy for sustainability education for SMEs only, maybe it is too narrow?

Interviewee: No, no, no, that's not what I meant. What I'm trying to say is that education policies should be horizontal in nature. I mean, I think that education should have a structure that cuts across every field and touches every sector. Instead of treating it as a vertical policy, we should proceed with solutions specific to the needs of each sector. So, for example, the need for education in industry is different from the need for education in the service sector. For this reason, instead of covering everyone with a single document, it would be better for each field to determine its own needs and produce solutions. This does not mean that the issue is unimportant; on the contrary, I argue that a more elaborate and customized approach is needed.

Interviewer: Can you explain this "horizontal" approach a bit more? I don't quite understand.

Interviewee: Sure. Let me try to describe it like this: For example, there are measures to be taken, steps to be taken regarding SMEs. The first of these steps is awareness, then learning, then implementation. Therefore, it is more meaningful to evaluate the training needs of SMEs under its own heading. If a regulation is to be made regarding health, the training needs there will also be different for individuals, health workers or practitioners. So, organizing the training needs of each field within itself makes the subject more efficient and effective. That's what I was trying to say.

Interviewer: Okay, now I understand. So you are talking about a structure that can be evaluated together with other sustainability issues under the title of "SME".

Interviewee: Yes, exactly.

Interviewer: Well, in a previous interview, it was also said that there are regional differences in Türkiye: There are regional differences in Türkiye. For example, there are many differences between SMEs in the 3rd region and those in the 5th region, such as technology level, potential, competencies, etc. Therefore,

each region should conduct its own needs analysis and develop an action plan accordingly. It was said that this can be done through development agencies or various consortia.

Interviewee: I actually think it has to do with the region, the level of development of the region: The development of a region can have an incredible impact on the way a company does business, its profitability and its access to services. This is a fact. But I should also say this: Regional differences are not unique to our country; they exist in every country. For this reason, I find it more accurate to look at the issue not directly from a regional perspective, but from the perspective of the structural similarity of companies. In other words, there can be a lot of similarities between companies in the same sector, at similar scales, even if the region is different. Yes, it is very valuable for local actors to bring some services to the region. However, it makes more sense to me to evaluate the general need for training on a company basis, not by region.

Interviewer: So you are saying that there can be similarities between an enterprise in one region and an enterprise in a similar sector in another region, even if there is a regional development difference?

Interviewee: Yes, that's exactly what I mean. They may be similar in terms of their exposure to regulations, the opportunities and needs they face. We shouldn't expect every region to be good at everything, or to be good at everything. What matters is the capabilities, potentials and capabilities that the business has within itself. I find this perspective more accurate.

Interviewer: I have two last questions. The first one is: What do you think is the most needed and missing area in sustainability education in Türkiye? And secondly, if you were in a policy-making role, what would be the first step you would take to intervene in this area?

Interviewee: Regarding the first question; I would like to explain the most needed area in trainings as follows: Maybe this has happened to you; it happened to me too. I used to think that I couldn't understand mathematics. Then I started to learn from a different teacher, with a different expression, and I realized that my ability was actually not that bad. I say this for this: The language of communication used in education is incredibly important. Regardless of the subject, the communication of the instructor should attract the interest of the participant, facilitate internalization and arouse a desire to learn. I think we still haven't solved this language in education in Türkiye.

Interviewer: You make a really important point. There are two aspects of training: The content and the trainer. The language of the trainer should not be annoying, it should encourage the participant. But this should be done in the right way. A structure that is open to participation should be provided without forcing the participant.

Interviewee: Yes, interactivity is a topic that has been discussed for a very long time, but a style of education that disturbs the learner by saying that it will be interactive has also developed in time.

Interviewer: So, if you were in a policy-making role, what would be the first step you would take?

Interviewee: (Humorously) I would have abolished all training! Joking aside, I was supporting the training department for a while. At that time, the friends there were not very sensitive about training: "The prerequisite for working in our department is not believing in education!" But of course, if you ask what I would do as a first step: I would take the initiative on the issue I just mentioned. Some trainings are of course explained on the board, supported with visual materials. But some things should be at the basis of the social development process of the individual. In other words, the issue we call awareness is not something that is taught afterwards like technical knowledge; it should be shaped together with the moral values of the individual. I believe that moral foundations will support behaviors related to sustainability. Therefore, I think that education should not only be reduced to technical knowledge, but also to establish a value-based structure. Let this be my personal note.

Interviewer: Very well said. We were talking about "value-oriented entrepreneurship" in an article on this subject. If someone loves the environment and people, they don't want to harm the environment in what they do. This is related to the values of the person, the purpose of existence. So the basis of these issues may lie in the character of the person, their ethical approach. What you said complemented this point of view very well. Thank you very much, Ms. X, it was a very enjoyable interview. I hope to see you again in the future.

Interviewee: Thank you, I hope it was useful, we look forward to the results of your work, see you soon, goodbye.

Interviewer: See you soon, take care.

30.04.2025 (4th interview)

Interviewer: Hello Mr. X, welcome.

Interviewee Hello.

Interviewer:First of all, I will give a brief introduction and then I will start our interview. This interview is being conducted within the scope of my master's thesis at the University of Groningen. My aim is to understand how sustainability trainings for SMEs are conducted in Türkiye and to evaluate this process within the framework of Transformative Learning Theory. The interview will last approximately 45 minutes to 1 hour. The information you provide will be kept anonymous and will only be used for academic purposes. Do you mind if I take a voice recording?

Interviewee: No, no. No, no.

Interviewer Thank you. Then could you briefly introduce yourself and your organization Mr. X?

Interviewee: I am a 1998 X University Business Administration graduate. After graduation, I worked in a futures trading unit at the metal exchange in a company in X. I worked in this unit for two years and developed myself in the fields of "hedging" and "futures trading". Afterwards, I worked as a manager in foreign trade and finance units in the private sector until 2008. In 2008, I started working at KalDer in X. I worked as the Secretary General of the X Branch of the Turkish Quality Association until 2014. From 2014 to 2020, I worked at X KalDer; we had returned to our hometown. Since 2020, I have been the General Manager of X Model Factory. I also completed my master's thesis on hedging at the X Metal Exchange in 2012. Apart from that, I took part as an evaluator in 4 or 5 different award processes on management issues, lean techniques and sustainability.

Interviewer: I see, so can you give us some information about your organization?

Interviewee: The X Model Factory is a project of the Ministry of Industry and Technology. The Ministry started this concept by establishing the X Model Factory in 2018 by examining examples from around the world. The aim of these units is to support SMEs in lean production and digital transformation, and to provide training and consultancy services. The X Model Factory was established in 2020 as a joint stock company in partnership with X Chamber of Industry, X Chamber of Commerce and X University. The Ministry built us a production facility with an investment of approximately 1.8 million dollars. We produce battery-powered spice mills here, but our aim is not to sell these products. Our aim is to make SMEs experience lean production techniques within the framework of scenarios in which we have reduced 30 different topics to 20, first theoretically in the classroom environment and then practically in the application area. In other words, for example, a participant receives 5S training, and then we say, "Let's experience this together in the production area" and start practicing. In this way, we first explain many

lean production techniques such as line balancing, 5S, Kaizen, TPM, value flow mapping, etc. and then have them applied in the field. After the trainings are over, we usually go to the field of the enterprises with an expert, an assistant expert and two university students. During these visits, which we make once a week, we conduct value stream mapping for the first month. This allows us to identify bottlenecks in the production processes of the enterprise. In the remaining 4-5 months of the project, we try to eliminate these bottlenecks with lean production instruments. If you ask if this works: We were established in 2020, but due to the pandemic, our machines could only be installed in January 2021 and we were able to go to the field then. From that day until the end of 2024, we completed 116 projects, and we are currently on the 134th project. In these projects, daily production increases ranging from 20% to 350% were achieved. When success is achieved, industrialists recommend each other and there is a desire to receive services from the model factory. This is roughly what we have done.

Interviewer: As far as I know, are these model factories being established in Türkiye as a result of a joint project between the United Nations and the Ministry of Science, Industry and Technology?

Interviewee: Just in terms of financial support, UNDP has supported the establishment of four model factories. There were similar contributions from UNDP in some other model factories. But the dominant financial support was provided through the German Development Bank KfW. UNDP acted as a bridge for the transfer of this funding. In other words, the physical and digital infrastructure of the model factories was created with these resources. However, responsibilities such as the operation process and furnishing were left to local institutions such as the chamber of industry or OIZ (Organized Industrial Zone) in that province. We were established as a joint stock company in X. For example, the Model Factory in X was established as a unit of the X Chamber of Industry. The one in X started its operations as a subsidiary of the OIZ. So different model factories have different legal structures. However, the institution that coordinates, plans and manages all of them is the General Directorate of Strategic Research and Productivity of the Ministry of Industry and Technology. There are currently 10 active model factories in Türkiye and 5 more are planned.

Interviewer: In other words, there is a structure coordinated by the ministry, but the legal entities are left to local authorities. In total, 10 have been established, and it is aimed to reach 15. And these structures are actually like schools, but schools that offer applied education. Do I understand correctly?

Interviewee: Yes, you understand correctly. At the same time, these organizations have to ensure their own financial sustainability. So we offer our services for a fee. But the state also has some support mechanisms. For example, KOSGEB used to offer financial support for specific projects to learn lean production techniques from model factories. These supports have recently been removed, but we learn from the ministry and KOSGEB that new ones will be coming. The loans announced at the beginning of

this year also included support for services to be received from model factories. These were in the form of loans, but we are also hearing that direct grants are planned.

Interviewer: I see, so public institutions are encouraging services from model factories. Because these structures are already part of a publicly coordinated system that is intended to exist. Is that right?

Interviewee: Yes, absolutely right. In fact, our ministry explains it like this: If we don't make progress in digitalization by 2030, there will be a difference of about 40 dollars between the East and the West in the production cost index worldwide. Türkiye is currently in the middle of this scale. There is a difference of about 20 dollars between Türkiye and the West. If we do not increase our production efficiency and digitalize, this gap is expected to widen by about 15 points by 2030. In order to prevent this situation, we need to first improve our processes with lean techniques, and then digitalize and produce better quality and faster. The main functions of model factories are exactly in these areas.

Interviewer: I see. So you have three main service areas: lean production, digitalization and green transformation. Is that right?

Interviewee: Yes, that's right. Green transformation is new, it is slowly becoming our responsibility. At the moment, there is no direct instruction from the ministry to "provide training on green transformation". However, this is a bit related to the institutional capacity and competence of the experts in the province where the model factory is located. In other words, whichever model factory develops itself earlier on this issue, the ministry encourages it to take part in this issue, to raise awareness among industrialists and, if possible, to provide trainings. The Ministry is currently making efforts to develop the experts of model factories in this field.

Interviewer: I see. So, how many employees do you currently have at X Model Factory?

Interviewee: We currently have 10 full-time employees. With this number, we are the model factory with the highest number of full-time employees in Türkiye. Generally, other model factories have 3 to 4 employees. Of these 10 employees, all but three are engineers or technical personnel working directly in the field. Apart from that, we have 12 consultants working part-time. We also assign two university students to each project. We both train them and enable them to gain experience in the field. Last year, we were able to carry out 32 projects simultaneously. During this busy period, a team of approximately 80-90 people worked in the field. This was a result of our efforts to increase our capacity. But our core, full-time staff is currently 10 people.

Interviewer: Well, I was very interested. In the services you provide, you see every business as a project. In other words, you say "we have carried out so many projects". An enterprise doesn't just come and receive a training, it becomes a project for you. It is a process with a beginning, a goal, a planning. Do I understand correctly?

Interviewee: Very true. When we want to provide services to a company on lean techniques, we recommend a three-phase work. These three phases consist of six-month periods. The first six months is the awareness phase. Because SMEs generally do not know much about lean techniques. At this stage, we try to raise their awareness through various events, technical trips, on-site visits or inviting them to invite us to their facilities. The aim is to convince them to start the project. At this stage, we try to achieve outputs that will make them say "Wow, this is happening". Who should say that? One: The boss. Because he needs to believe so that he continues. Two: the employee. Especially blue-collar employees sometimes show resistance. There are reactions such as "I have spent years on this job, will it change now?". And they are right. But lean techniques are a process that should be carried out together with employees, not in spite of them. We are actually conducting a change management process. Not exaggerated promises like "Lean techniques will make you fly". But we have concrete data: There are companies that have achieved daily production increases of up to 350%. These are figures confirmed by the accounting, finance and engineering teams of the relevant companies. So if there is such a huge benefit, change is needed. But change is difficult; people don't want it, they resist it. In that first phase, the employee is motivated when they see that they can produce more with less work. And when the boss sees that there is money in his pocket, he feels, "Let's keep going." Second phase: Expansion. In the first phase, we started with a product family, and now we want to spread the work to other production stations and all employees. We definitely want a "lean office" to be established. Because this is a team work. Thanks to the lean office, we are able to carry out many Kaizen projects at the same time. Third phase: Sustainability. At this point, the organization needs to establish an individual suggestion system and a reward system. In other words, without the need for us or the business managers to suggest things to the employees, the employees should start to come up on their own and say "I have this idea" or "Wouldn't it be better if we did this or that?". At this stage, we make them ready by training them in problem-solving techniques, project management, teamwork. And this is really how it works. At the moment, we have conducted 130 projects, but this does not mean 130 different companies. We have worked with about 86 different companies, because some companies receive services from us again and again. We even have businesses that receive service for the fourth time. Recently, a scene like this happened while we were traveling in the production area with a business owner: An employee was panickedly asking, "Where is Osman Brother?" When we asked him why, he said, "My machine malfunctioned, I called Osman, the maintenance man, but it's been 5.5 minutes and he still hasn't arrived." When we said, "He'll be here soon," he said, "No? What am I going to tell the Asaka Board tomorrow? My values will drop!" So this employee is now completely in charge of his machine. He's following every stop in the machine, second by second. Because this affects his performance indicator. With this awareness, it becomes a problem that even the maintainer does not arrive on time. This is the point we want to reach. But in order to reach this point, we are conducting a change management that is not only technical but also emotionally strong. Communication, empathy, gaining trust are very important.

Interviewer: I see, so there are three stages: The first stage is a local and limited implementation, the second is enterprise-wide dissemination, and the third is the construction of a corporate culture in which the change becomes permanent. Is that right?

Interviewee: Exactly. Yes, it needs to be internalized and become a corporate culture. Otherwise, when you leave, the work ends. When we leave, the work should not stay there. It should become a corporate culture. Employees should report spontaneously. They should carry out practices such as Kaizen projects and 5S competitions on their own. In this process, we try to motivate employees with small rewards. Not big rewards, but simple but valuable rewards such as a gift voucher from the market, a theater ticket, eating baklava together. There are many reputable companies in Türkiye that implement these practices: TEİ, Pınar Süt, Arçelik, Artema, Ford Otosan, Brisa, Corsa, Yünsa, Temsa, Bosch Injector (Bursa), Viko Elektrik, Panasonic. In these companies, employees working within suggestion systems offer hundreds and thousands of ideas. And they also receive awards. But more importantly, now even the way of giving awards has developed. What does this mean? Rewards are no longer given in the production area as "Let's applaud Ahmet". A picnic is organized, the employee is invited with his/her family. For example, "We are here today to congratulate our friends who participated in Kaizen quality circles last year." The CEO or general manager rolls out a small red carpet in the picnic area and welcomes the employee's family. "Welcome Mehmet Brother, welcome ma'am, this is your seat, the food service will start soon". In this way, the employee is very honored, and his child sees his father in a much more valuable position. Such practices also increase corporate loyalty. There are such companies that send surveys to the spouses of their employees. "Your spouse has received training on such and such topics. The purpose of the trainings is to change behavior. Have you noticed a change in these behaviors at home?" Can such companies fail? Of course, this kind of work, which is data-based but prioritizes people, is directly reflected in production efficiency.

Interviewer: I understand. Actually, I was very pleased with this interview, I would like to say that. Because my reason for choosing this thesis topic was that the organizations were mostly giving online trainings, and they could not make the transformation in a real sense. Because the trainings we provide are a tool. In fact, our goal is to realize a change and transformation in the individual. In this sense, I can say that this interview was very good. Now I understand the model factory and your relationship with SMEs. Now I would like to start with questions about my theoretical framework. The framework I use is Mezirow's 10-step transformation theory. So I have prepared 10 short questions about these 10 steps, and you can briefly tell me where your services fit into this. Now the first stage is actually the "dilemma", that is, the first stage of the emergence of an awareness in the organization. What and how is this stage met in the services and trainings you provide?

Interviewee: I realized that we are concerned about similar issues, and I enjoyed it very much. Hopefully, I am looking forward to the results of your thesis. Now, as you said, it is necessary to first raise the

awareness of an SME on whatever subject it is. I think like this; what if I want to learn about lean techniques, model factory, our state, something like that... But I don't have the SME's radio frequency. It's like it's blinking in the dark. I need to attract its attention first. For this, we have determined a road map for ourselves in four stages: First, awareness. Second, this stage of awareness is actually an effort to make him listen to us, to make him listen to us. How did we open this? Necessarily on-site visits and explaining ourselves, explaining the value proposition. Since we are an institution supported by the state, there was first an instillation of trust. In other words, it started to pay attention to the fact that we are not an ordinary consultancy company, but a subject that our state both financially supports and cares about. We organized technical trips. We took 20 or 30 industrialists each to companies that have succeeded in this type of work. They examined, watched, listened first-hand and were impressed. We organized events, breakfast parties, and they started to come and listen to us. This is how we tried to raise awareness. This is the stage of attracting their attention. The second stage, we didn't just tell the plain. We call it "unity of meaning." I mean, he is listening to me right now, but he doesn't understand yet. "Friend, why do you need lean techniques, why should we work lean?" We explained this. What is it? This is a national issue. Look, the ministry's net work until 2030, which we are starting to experience now, the minimum wage is increasing. We are gradually losing our competitive advantage due to labor costs. At the moment, while Egypt employs workers for 150 dollars, our labor cost reaches about 1400 dollars with food, service and dressed wages. Therefore, we are slowly losing the chance to compete against Europe with labor. As the state, we say to the companies that have started to listen to us for this reason, "Friend, be sure that you will save money with lean techniques, but the main issue is that this is a national issue." So, if we don't move forward, we will become uncompetitive in this regard. Especially when we talk about these issues with middle-aged bosses, it comes to this: "Okay, Mr. X, we understand, we are there for you. I'm sending my team, give us the trainings and send them to us." Therefore, one: we make them listen to us in the awareness part. Two: sharing meaning. Lean, total quality, digitalization, green transformation... whatever we call it, they have to listen to us. Because this is a national issue. "30 percent, 40 percent improvement in your factory, brother, if you want, I can make a commitment, we will do it. But that is not the issue. After you learn about this, tell your sub-industry, tell the other factory, open your door to other industrialists so that they can see the improvements in you." Therefore, while I am here in X talking about these things, my friend X Model Factory Director is in X, he is in X, and the other one is in X. We are working with the belief that we will contribute to the development of our entire industry. When they see these, the SME says "OK" and is convinced. So yes, the first stage really is awareness. But the awareness part is not about "tell them about lean techniques and they will realize it". It is about understanding why we need that subject. This is how it has progressed so far. Anyway, if there is an advertisement on the radio or if scientific statements are mentioned elsewhere, the person will probably change the channel. But you capture that enterprise through technical trips, by going to other enterprises and telling them about it, without stopping, without resting, by making it a goal, by developing the feeling of "let's work

together for the common denominator of the country". They also reveal that awareness. I think like this, I don't want to prolong the interview too much in terms of your time, but now, due to my readings in communication, I understand it as follows: The technical term is "interactive exchange of information". But the deeper issue is "sharing meaning." So, for example, how much is this pen? You buy it for 10 liras at the stationery store. But if it's a souvenir of my late father, you can't take it away from me no matter how much you pay for it. Therefore, a subject is as important as the meaning you attach to it. When we go to companies, we do not say, "Lean techniques are very important, you will do this". We do not tell them about 5S, Kaizen. "When we say "Friend, this is a matter of national importance", almost every SME, regardless of their political views or economic size, says "OK". In other words, a business with 30 employees also says "OK", and so does one with 3000 employees. Both those who hold view A and those who hold view B. So the main issue is: Our common benefit is an important issue for both our future and our offspring. And when we say it is really a double-impact issue, they say "okay".

Interviewer: Is there a section where the participants can go back to themselves and ask, "Where are we on these issues, what are we doing wrong?" or is there a section where that business is evaluated?

Interviewee: We evaluate them in 22 different parameters, 20 of which are components related to lean techniques, one related to digital, one related to green transformation. We call this a pre-analysis study. Here, we offer them this service, and this work takes at least a day in the field, both by visiting the field and by chatting with their relevant managers and engineers... So these 5S, Kaizen, TPM, line balancing, strategic management, process management, standardization and so on... We determine the maturity level of the business under these headings. We report to them in a large document with graphics. While discussing this, we emphasize the following awareness: "Look, the questions we are going to ask you now are actually topics that we will also train you on. And which topics are included in lean techniques and how they will improve you, let these give you an idea. Also, come and imagine your own grade with the answers you give yourself." Therefore, this conversation, this interview, this pre-analysis work makes the organization itself feel where it is in terms of lean techniques, even before it receives the report. And when they receive the report: "Yes, where were we? We thought we were very good, not so. Okay, we are ready, now where do we start?" companies start to say.

Interviewer: I see, that's actually very good. Anyway, my third question was "questioning assumptions". I mean, is the evaluation done and passed, or do the participants question their own way of doing business when they do this evaluation, in what we call assumption questioning? I was going to ask if there is an evaluation that makes them think for themselves.

Interviewee: It is already happening, you answered. They even develop a pessimistic picture of themselves: "Is this how mediocre we are?" I say this there too: In 2010, during my duty in X, I was chatting with the general manager of the X refrigerator business. You know, there is probably no harm in

sharing names now. Mr. X is now in the holding company. "X, look," he says, "every time you breathe in and out, we produce a refrigerator." "What do you mean, brother?" "The product comes off the line every 15 seconds, but we have 3-4 lines. Every 2 seconds you can see a refrigerator over there." "Ooo super, very delicious achievements." "Oh," he says, "we only achieved these last year. We are the flagship of X, so we thought we should learn this lean business from the source." We signed four contracts with a Japanese consulting firm. The first thing they did when they arrived was to calculate OEE. OEE is overall equipment effectiveness, total equipment efficiency. I said, "What's a good number?" I said, "I don't know." "The level we call world class manufacturing is 85%. So if a business operates with 85% OEE, it is considered world class successful." He explained himself a bit badly. I said, "Did it come out at 60% or something?" "No," he said, "it came out at 33%. That's how mediocre we were." But that year we did what the Japanese told us to do, and with 90%, X was awarded as the world leader in its sector. X repeated this success in the following years. We hear the same story from X1, X2's umbrella organization, X3, X4, X5. Therefore, our companies started these studies with an OEE of 35-40%, that is, even our good companies started at this level. Therefore, the SME becomes a bit pessimistic in our preliminary analysis: "Are we so bad?" "Don't worry," I say, "Even the companies on the ISO 500 list are at this level. You are even good." On the one hand, they see the bad picture; on the other hand, we advise them not to be pessimistic. Not "we will do it, we will do it". Right now we are saying: All 130 of our projects have achieved the following successes. Please be comfortable. As long as you give support. And the biggest support: top management support. Edwards Deming is considered the father of total quality management. Edwards Deming has a saying: "Total quality management starts in the boardroom." Therefore, if you give support as the top management, it is already our job to support the change of the team below. We say that it will follow. Therefore, as you said, they question themselves in self-assessment, and since we do it one-on-one together in the field, they directly realize the self-assessment and the areas open for improvement. It becomes more meaningful when a report is added on top of it.

Interviewer: I see, then let me go to the fourth stage. We call this stage "shared awareness". Do you have any kind of services like group work, joint events, case sharing, where the participants can interact with other enterprises that are experiencing similar challenges and feel that "we are not alone"?

Interviewee: It happens. Technical trips especially serve this purpose. Together with that, we organize benchmark meetings and sharing. For example, one of our enterprises wants to advance in A. I say: "Come, we have these companies from the best institutions in Türkiye, which are on the ISO 500 list, and I will organize a benchmark meeting with these managers from there. Go and learn on the spot." Okay, this is one. Two: "Oh, it's a big company, it has financial means." Don't get your hopes up. Just 3 streets away, our SME with 30 employees has achieved this. Come and chat with the friends there. How did they overcome these issues? Therefore, we act as a bridge in these matters. We bring our SMEs together.

Interviewer: Okay, now before the action plan, I would like to ask you about: "Exploring options." Are there times when you think that a business is suited to implement more than one role? Or do you offer such options for a business, or does the action plan go straight through one option?

Interviewee: This is exactly the purpose of the preliminary analysis. For example, we are in X, the country of furniture. Two predominantly furniture companies. Both with 80 employees, wall to wall. The methods we apply in both of them are very different. Because the needs and expectations of each of them can be different. We discover this at first with a preliminary analysis. We say: "You have areas for improvement in the following areas. This is how we should proceed" and we can go with different instruments. The pre-analysis study shows us what level of maturity you are at in lean, in which areas you are open to improvement or where you are strong. We explain this to the other party and convince them. "Yes," he says, "we need to improve here." And we say: "This is not something we can solve in 6 months. In the first 6 months, we can give you radical improvement in certain areas and show you the pleasure and taste of it." Then you need to move forward until it becomes a corporate culture. These are common. In other words, work on raising awareness, work on diffusion and work on internalization form the foundations of our road map in general terms, in a general framework. When we enter into these topics, each of them progresses with different instruments and methods in each business.

Interviewer: I see. So, in the end, there are options in businesses. Some of these options become operationalized.

Interviewee: Right, yes.

Interviewer Okay. Then let's move on to the action plan after the option presentation. Is there a concrete action plan in the services you provide? Although in our conversations so far, I understood that there is.

Interviewee: Very clearly we recommend a Gantt Chart. This Gantt Chart first of all shows the overall progress over three six months. Then, for the first six months, when we signed the first contract, it shows what we will do on a more detailed, weekly basis, on what date, or more precisely on what week. There is a very clear Gantt Chart. There, the tasks for us and the tasks for the other company are quite defined.

Interviewer Okay. So, did you give certificates here? I mean, our other stage is knowledge-skills acquisition. Do the participants get something like a certificate? What is the situation there? I understand that they are informed on certain subjects.

Interviewee: Yes, we give certificates to our participants at the end of our trainings. But sometimes they ask, "Is it a certificate approved by National Education?" or something like that. I think there is no need for accreditation or anything like that in such a place, because model factories have already become an authority in their own fields and the public has slowly started to accept that a certificate from there is valuable. Therefore, these certificates are given in relation to the trainings received. We also present a

certificate of appreciation to our enterprise at the end of the project for its contribution to these activities. We even do this with a small ceremony, by planting a sapling in our own garden, that is, in its own production area as a model factory, we thank them and give them their certificates.

Interviewer: I see, now that we have asked about knowledge and skills, we have three last stages left. One of them is trial and practice. In other words, are there practical sections where participants have the opportunity to try out what they have learned? For example, I was going to ask if there is an understanding such as three weeks of practice and then dissemination.

Interviewee: But you probably already understood it well. This is the purpose of the model factories. So we actually provide training or consultancy services theoretically here. We want to come and show it in your factory. The SME says: "Brother, how can I stop the line? My container will reach the port tomorrow" or "There is an inspection." We do not have the opportunity to give the training we want there on its own site. For this reason, the ministry established model factories for us. Therefore, after we provide theoretical training here, there is a model factory environment so that they can see the practical application. Our production area was established for this reason. Beyond the trainings here, when we start a project in their own factory, they can spare time because they focus on that subject. Our colleagues also actually, what can I say, pull on overalls and work in the field. Together, we try to discover and eliminate the bottlenecks in those production processes. And thank God we succeed. Therefore, this is definitely the basis of the services offered by these model factories: implementation. In other words, the most important distinguishing factor compared to another consultancy company is that we can see the possibility of implementation.

Interviewer: Well, it happens, doesn't it? You produce one product now. You always produce the same product in your own model factory. But you have a certain technique. And you want other enterprises to choose this technique as an understanding for themselves. Now, are those who come to you workers, operators or engineers?

Interviewee: Both good questions. Well, I forgot to mention it at the beginning. For example, X Model Fabrika produces a battery operated spice grinder. A salt and pepper grinder. Our X1 Model Factory was built very similar to the model factory McKenzie built in Frankfurt. Pneumatic cylinders are produced there. X2 produces grocery scales. X3 produces electrical socket switches. The model factory in Japan produces fans. It doesn't matter what we produce. We are actually explaining the approach. In other words, 8 basic wastes: the lean approach says that we make the following wastes in production processes, whether we are aware of them or not. There are wastes such as intermediate stocks, handling, unnecessary movements, unnecessary transportation. Regardless of the production process, this is a food company, a textile company, a machinery manufacturing company or a manufacturing sector; it does not necessarily have to be a manufacturing sector; it can be service businesses such as hotels, hospitals, restaurants. The

main issue is that we make these wastes without realizing it during an activity. Let's recognize them. When we reduce them, production efficiency will increase by itself. Both the employee in the flour factory and the company in the textile sector who comes to the model factory learn the approach. They learn the approach by practicing it. Who comes to us for training? Basically, we bring 3-4 companies together. A class is formed. We invite 4 participants from each company. 4 times 4, 16... A class of 16-18 people is formed. Which 4 people come from the companies? Someone who has a say in production. Why? Sometimes we will suggest a layout change or sometimes we will test something. Someone with the competence and authority to directly say "OK, let's implement it", not "Wait a minute, let me get permission from my manager to come". Two, if the organization has a planning unit, definitely from there, friends. Three, If there is a quality team, lean office or someone who has carried out similar studies, they are them. Four, Blue-collar friends from the field such as shift supervisors, postmasters, operators. In fact, these are the ones who show the most resistance. Because when they come, they are impressed when they see the trainings here. When we started the project, Hasan, who used to say, "Leave these jobs," says, "It's not like that, I went and received the training, I was very impressed," and takes a stand in favor of us. Those blue-collar friends too. Now we call this team the core team. In other words, the basic team, consisting of 4-5 people, who will support us while the project is running. But it is not limited to this. For example, we will conduct a 5S study in this selected pilot region. But 20 friends here don't know 5S. Then we say to the production manager: "Can you give us an hour for these friends? Let's give 5S training." They organize the cafeteria at work. If there is a meeting room, or if there is none, it doesn't matter. We offer those trainings in the form of single point training, at the machine, with our own instruments. After receiving this training, we say, "Let's implement it together". So basically, for this project to work, the enterprise needs to allocate us a core team. These people are someone who has a say in production, sometimes they are the son or daughter of the boss, or a business with a slightly more advanced level of institutionalization. This time we invite 4-5 people with profiles such as production manager, planning manager, shift supervisor, an operator. But as I said, it is not limited to these. When our consultant in the field starts, we provide similar trainings on-site to all employees in that pilot region.

Interviewer: Then I understand that you already have a factory. Not a factory to sell products, but a factory to transform SMEs. You have a certain standard product, but the important thing there is to show the approach. And the SME comes from the business, and together with four or five of them, you first make that application in your own model factory. Then you personally go to the enterprise with that core team. There, you implement the project as a project in only one department, either by giving training at the machine or by implementing it. Not in a way that completely changes the factory; you have a pilot application in the first 6 months.

Interviewee: If it becomes widespread, we move to the second phase. And if the enterprise is not big, we don't need to choose a pilot area. When we start working there, it means the whole enterprise. But if it is

a multi-process, I don't know, 3-4 hangars and each hangar is almost like a separate factory, then it is necessary to choose a pilot region. Because in all cases, we should not bite off more than we can swallow. Projects remain incomplete. We choose a region in order to focus on one place, to clearly show both their energy and ours, and to make them say "Wow, this is happening". Otherwise, if it is already a very limited business, the fact that we start working there means the whole business. For example, a white goods business... The hair comes in, it is sized. It is bent on the saw and press brake. It enters the tailstock, goes to welding, goes to the paint shop, goes to assembly and so on. Each of these is like a separate factory. Especially if it is a high-volume business, there are 400 employees, each hangar consists of the processes I mentioned, there are dozens of machines, it is not possible for us to create wonders there with a team of two to four people. We focus on a region. "Oh, wow, this is happening". This region is usually the most important bottleneck in both workflow and value flow. When they see that we can solve that bottleneck, they feel, "Oh, great, now let's look at other areas."

Interviewer: I see. Well, I would like to ask you. It's a personal question actually, about developing trust. There were two other topics left. One is confidence building. Do you see an increase in self-confidence in businesses as a result of the services you provide? Yes, we can do this, we can realize this change... What kind of changes occur at the point of confidence, confidence in the company at the point of breakthrough or confidence in oneself?

Interviewee: Well, we are trying to do that there, thank God. And we see good results. First of all, let me tell you about ourselves. So much success... Praise God, it is a success. I can say this because our ministry defines it as such. Otherwise, it's not something we look at in a cocky way. We say that we are in an important place in Türkiye. In other words, we are currently providing this service in 14 different provinces: X1, X2, X3, X4, X5, X6, X7, etc. Why don't we take it to Europe? I mean, we can go and ensure the lean transformation of a factory in Romania. Why don't we set up a model factory in Azerbaijan? We can meet with the authorities there, tell them that we can do these things, explain their importance and contribution, and attract their attention. Now, when we develop such self-confidence in ourselves, when our companies achieve production success, this is also reflected on the other side. And they say, "Yes, we are a business with 30 employees. Mr. X, you took us on a technical trip and we saw X. Wow, it is possible. So not only X can do this, we can do it too." And now we have created a platform called the "Lean Ambassadors Platform" in X to develop this indoctrination. We bring together lean experts from companies in X that have such activities. We had a meeting just yesterday. We come together every month at someone's factory. How can we support our sub-industry and SMEs? These are discussed. We organize technical trips through this team. One of our SMEs goes to another SME. One of our SMEs goes to a larger enterprise. And we make them realize that the issue is not financial means. "Of course Ford Otosan will do it, will I do it? The man has money and stamps." It is not. We make them realize that it is important to show interest in the issue. I think there are two basic elements for change: A sphere of

interest and a sphere of influence. I am a Galatasaray fan. We chat with you about Galatasaray, it is in our area of interest. But I have no influence. I'm not Okan Buruk, I don't build the team, what influence do I have? We say to SMEs: "Look, change is in your area of interest and influence. Since someone is focusing on it, you should focus on it as much as you can." You have seen what happened. We went to such and such a place. We saw it in X in Adana with 30 employees. We also saw it in a kindergarten with 15 employees in X. Therefore, it happens when you focus. When you see the suggestion in real life, you develop self-confidence. We have now started an award process through this Lean Ambassadors Platform. Companies with such projects should please come and apply to us. Just like our Ministry of Industry's Productivity Project Award, we will organize it locally. Let these projects compete. This is not a competition, this is a festival. So lean techniques are being discussed in X. Look, Hasan Usta in our 40-employee company has a project, which was developed to be applauded. Last year, 13 projects competed. There are now about 14 project applications for this year. What is happening? SMEs with 30 employees can compete with X's giant companies such as X1 and X2. And here, of course, there is a plus 5 points in the award process. If the SME is implementing a quality production system, etc., it can easily get an extra 15 points. Last year, our SMEs received awards ahead of a few big companies. Therefore, self-confidence develops. They say, "Brother, next year we will come up with a better project." We try to inculcate them with this approach. But of course we are only as good as our meat. This has already happened all over X. We cannot say that there are flowers here. But these works exist.

Interviewer: You have really done very good services. Finally, I would like to ask about the last stage. Integration... Do you think businesses can integrate applications and make them sustainable?

Interviewee: Again, it is necessary to actually say this with numbers. As I said, some of our 130 projects are duplicate projects. Why? The company is satisfied, successful and wants to continue. A small number, I mean, not a small number in our opinion; according to the number of companies we provide services to, about a quarter of our businesses have received services at least for the second time. Then they established a lean office and continue to do so. Some of them even established a sustainability office. In other words, there are those who decided to focus on green transformation and energy efficiency along with Lean and established a sustainability office together with the Lean Office. There are people from the X, that is, from the X1 region, X2, X3, who request technical trips to our companies in X. We have had companies with such good developments. Therefore, we have companies that have achieved sustainability in terms of integration and lean techniques. Of course it is not enough. In other words, we really want every company we touch to continue this consultancy process at least twice, three times, and to establish and maintain this team in their own enterprises. Our most important improvement open issue here is human resources. The other party says: "That's very good, we've done great things, but after you left, I don't have the engineer to continue this. I mean, I left the good expert..." I'll buy an engineer who can handle a conspiracy. That's why we take our students there. Our top engineers and senior students are also taken there. In general, so far 284 of our students have received the same training as a professional at the X

Model Factory, completely free of charge. 190 of them took part in projects. 110 of them were employed even before the end of school. This is the reason for employment. The SME says: "Mr. X, who are we going to work with when you leave?" "Brother," I say, "look, two young people are growing up. Give one of them some pocket money, let him be a part-time employee. Let him come three times a week while we come once. Bring him his diploma and he'll be a full-time employee." "You're right," he says. We now regularly bring two university students to each of our projects, even though it is not our primary task. This was not the case in our time. There is employment in the field.

Interviewer: Not in our time. I am also an industrial engineer. We didn't have model factories. There was no structure that would take us and bring us together with the business and teach us these techniques. You have to start somehow after graduation, and then it is really difficult for the student.

Interviewee: I think this is a very important project of our state. I mean, we have KOSGEB, there is a development agency, there are other units. But it is more like this: If an SME is in a hurry, has a problem, has a request, I feel that it reaches KOSGEB and says "do you have support for this?". I don't know if this is how KOSGEB or the development agency works directly. But we have to go to their feet. We go to the feet of our SMEs. We go down to the factory, workshop, kitchen. We are concerned with their problems and we look at how we can derive solutions. On this side, the student says: "Brother, they immediately ask about experience in the job interview. Where will I gain experience?" The model factory is not our institution, it is a state institution. If we can run it well, God bless us, the child gains experience here. Our academician comes and says: "I have a thesis study." "Sure, teacher, let's work together." This is already our first target audience. We are trying to create value. So what is it where many stakeholders are intertwined? We are actually a common meeting area. Let the student come and work in the field. SMEs were saying something about interns. "Oh great, let them come." Academics? I mean, we have been the subject of many academic studies, we have worked together. Currently, the subject of digitalization... One of our professors from X University, a student of our professor, a PhD student at a university in Germany... I forgot his name... With artificial intelligence, I wonder how, as a result of this preliminary analysis work we do for our SMEs, we can realize which techniques we need to offer much earlier and can we offer the approximate output to the SME in advance... I'm not just talking about X; if model factories all over Türkiye are aware of their duties and opportunities and open themselves up, they can be a very valuable production area for the relevant segments of society.

Interviewer: The education topic is over. My last two questions are about Türkiye in general... How can we improve Türkiye in general rather than your organization? I would like to get your opinion on that. First, do you think there is a lack of cooperation, coordination, coordination? Or let me put it this way: How can we improve it? Because as you just said, public institutions, support institutions, organizations like you, chambers of commerce, technoparks, TÜBİTAK, businesses... Do you think coordination is good in the development of SMEs? Or how can it be done better?

Interviewee: The development of SMEs is not only through lean techniques. Because of my background in KalDer, I realize very closely that the most important development roadmap of any business is its strategic plan. This is Uncle Mehmet's factory with 80-100 employees. Uncle Mehmet's vision... He had a shop in a corner in the old industry, he had four employees. How did it work and grow? Yes, thanks to his vision. Vision is not necessarily something written on a web page with beautiful words. It's about your real dream and what steps you plan to take to get there. Now the business is in the hands of Uncle Mehmet. It should define the right vision for the products and open up to Europe and the world. It needs to determine very clearly how it will get there with a strategic plan. The service it will receive from the model factory must also define its place in this strategic plan. In other words, when we say, "We have improved everything and the production process," this does not mean that the business has improved... There is a need for a development roadmap in many areas such as marketing, finance, foreign trade. For this reason, we said to the Ministry of Industry, to the General Director of Productivity... Thankfully, our General Director is very open, pays attention to these issues and values our ideas. "Look, we need to make a strategic plan. A road map for model factories... We need to make an effort to convey this to SMEs." A two-day workshop was organized in September. These workshops included both strategic plan training and coordination sections. It was prepared by the General Directorate of Strategic Research and Productivity and started to be carried out. This is exactly the intention: In other words, to provide our SMEs not only with lean techniques, but also to enable model factories to draw their own strategic plans and to inculcate these issues in them. Maybe a system that includes grants... In other words, organizations such as KalDer should provide training and consultancy on strategic plan preparation. Institutionalization should be developed in this way. Model factories should also provide support on lean techniques, digitalization and, if possible, green transformation. I think there is still room for improvement, but a start has been made. Hopefully there will be good results. Ten years ago, we were neither talking about model factories nor strategic plans... We are currently in the development phase. It will get better over time.

Interviewer: I see. Now you have more than 20 years of experience. Let me ask you my last question. You are going into an SME for example. Let's think in terms of a medium-sized SME: It has 30-50 employees. It is a production, manufacturing enterprise. It operates in Anatolia. It also exports to one or two countries. What do you think is the main reason for not making this transformation? Is it cash flow? In other words, it has a check, it has to get it broken, it says, "I don't have the money for this change right now"... Or is it the business it has been doing for 20 years, its habits? Is he afraid of change? What do you think is the biggest reason for the resistance here?

Interviewee: Hodja, we actually had a conversation at the beginning: It is about "creating faith". Is that right? I mean, Uncle Mehmet, Hasan Brother... "Look, this is how you will work with lean techniques..." "Get over it." He doesn't know what lean techniques are anyway. But first we need to make them believe. When he believes in the subject, a change in behavior comes with a change in emotion. We explain it in

such a way that... "Brother, there is waste all around us. Let's talk in numbers. Let's go to the field together." We made a video analysis, we show it: "We shot a video of 8 operators at your assembly station for just one and a half hours. Brother, there are 54 thousand steps of walking." In other words, employees are walking for nothing. This means: "You paid for eight people to walk around for an hour and a half." "Did you ask for such a thing?" "Oh my God..." When we show waste in numbers like this, belief develops. When there is a change in emotion, there is a change in behavior. "Okay, friends, you say that lean stuff is a thing. Let's start." In order to be able to say this, we need to provide that belief. Sometimes we make them listen to someone who has experienced this. Uncle Osman, for example... He talks to his peers: "The children are telling the truth. I was like this and that. We worked for 3 months, what happened..." When they see it on the spot and hear it from the boss, they are convinced. Yes, we can have a middling SME. Are financial means limited? Is the service expensive? Or do these jobs seem a bit tricky? There may be many reasons. But as we say: When hearts are united, the haystack becomes seyrān. Possibilities are not important at all. As long as he believes. After he believes, he creates the means to his own extent. "Sir, let me just cover my costs and take my profit..." He resists change. On the one hand, it is as if it is an excuse not to deliver services. If they understand, if they are convinced, there is no reason for them not to change, not to transform. I do things like this because I feel like it, but then I also identify the source in my reading. For example, Simon Sinek has an approach. He says: "Friend, if you are going to market something, don't explain what the product is. Tell why there is a need for it." Now I realized that I was doing this without realizing it. So we didn't tell the SME about lean techniques, 5S, Kaizen, 6S. No need. First we explained why it needs it. Then we said: "There is an instrument for this. We can solve it. Look, there are examples." When you say that, he says okay. Otherwise, he doesn't understand what 5S means. Forget about them. He doesn't know the terminology anyway, it doesn't matter. We say, "You need it. The solution is here. The state is with you." When we say this, it creates a very serious trust.

Interviewer: Mr. X, it was a very pleasant conversation. Thank you very much. I will of course share the results of the analysis with you later. Thank you very much again for your participation.

Interviewee: You gave your time and effort; it was very valuable for us. Thank you, sir. I'm sorry too, sometimes there were questions that could have been covered in a few sentences, but... Since these types of topics are topics that I enjoy and enjoy very much, I could not help talking for a long time. Thank you for your patience. I hope your work will lead to good things.

02.05.2025 (5th interview)

Interviewer: Mr. X, welcome.

Interviewee: Welcome Mr. Yakup, thank you.

Interviewer: Hello, first I would like to give a brief introduction. This interview is part of my master's thesis at the University of Groningen. My aim is to understand how sustainability trainings for SMEs are conducted in Türkiye and to evaluate this process within the framework of Transformative Learning Theory. Our interview will last 45-60 minutes at most. The information you provide during the interview will be kept anonymous and will only be used for academic purposes. Is there a problem if I take a voice recording?

Interviewee: No, there is no problem.

Interviewer: Okay. Then shall we start by introducing yourself and your organization?

Interviewee: Of course. X Technopark is a technology development zone established in 2004. It includes both technopark activities and technology development and technology transfer office. It currently serves approximately 300 companies. I work in the technology transfer office as the University-Industry Cooperation Unit Coordinator. At the same time, I continue my work as the coordinator of the European Business Network Project, which is a European Union project. I can explain it this way.

Interviewer: You said Technopark. These are generally technology-oriented companies. You provide services to these companies, right?

Interviewee: Yes, services are generally provided to technology-oriented companies that carry out studies on R&D products. In the main sectors, of course, as in all technoparks, the software sector is predominant; biotechnology, biomedical, health, followed by sectors such as agriculture and food, as well as defense industry companies, albeit to a lesser extent.

Interviewer: So most of these enterprises are SMEs, I mean, you mentioned these 300 enterprises. I think all of these 300 enterprises are SMEs, so you are working with SMEs that are technology-oriented. I understand correctly, right?

Interviewee: Yes, you interpreted correctly. We can say that all the companies in Teknopark are SMEs. Therefore, we have a very intense contact with SMEs. One of the services of the technology transfer office is to provide support and mentorship to the companies in its ecosystem on issues such as entrepreneurship, patents, and university-industry cooperation.

Interviewer: I see. In this context, then let me ask you this: In the scope of mentoring, entrepreneurship and information, do you also include sustainability in your topics?

Interviewee: Yes, sustainability is also included. For example, we recently held a face-to-face event in X1, X2, and emphasized the theme of sustainability in our event. Of course, we also have multifaceted activities in terms of entrepreneurship. We organize support, trainings and events especially for startups and entrepreneurs on how to draw a road map. I can also add this about sustainability: There are currently green transformation projects numbered 1832, 1831 and 1833, funded by the World Bank and KOSGEB is also an intermediary. We promote these projects in order to raise awareness and try to explain these supports to our companies in order to increase the number of applications.

Interviewer: Are these numbers you have given TUBITAK project numbers or KOSGEB projects?

Interviewee: Sorry, TUBITAK project numbers. TUBITAK projects are projects funded by the World Bank with the main theme of sustainability and reducing energy consumption. For example, applications for these projects are open now, with a deadline of June 16th. We are explaining this to our eligible companies. In the coming days, we will organize an online webinar with the participation of an official from TUBITAK. In this way, we plan to ensure that our companies receive clearer information.

Interviewer: Very good. So you are trying to direct SMEs with the main theme of sustainability through a program directed by TUBITAK to the World Bank's fund. Is sustainability one of the main themes of this European Union project you mentioned?

Interviewee: Yes, one of the main themes of this project is sustainability. I should even share this: The name of our project is Enterprise Europe Network. Within this project, a sub-project called "EEN Energy" has been created. EEN Energy received a project application for companies with SME status to commit to reducing their energy consumption by 5%. We promoted this project intensively and four companies applied. Currently, one of these companies has been awarded the fund. The fund is not very big; 10 thousand euros. This fund has not yet been granted at the moment. EEN observes the activities of these companies. It looks at the work done by the company and if it sees that it really reduces energy consumption by 5%, if it is convinced that it has created an energy saving and sustainability awareness, it gives this 10 thousand euros as a 100% grant. We worked on this project together with our companies.

Interviewer: So EEN Energy's parent project is the European Enterprise Network, right? I know one of your partners is KOSGEB, is that right?

Interviewee: Yes, one of our partners is KOSGEB, the other one is Teknopark. The other two partners are the Chamber of Industry. This is how we have a consortium structure.

Interviewer: Then I understand it like this: As Teknopark - which one is correct, by the way, should I say Teknopark or Teknokent?

Interviewee: We can call it Teknopark.

Interviewer Okay. As Teknopark, you provide services to about 300 technology-oriented enterprises. Your entrepreneurship services are predominant, but you also offer sustainability services. As far as I understand, you have two special projects. One of them is the project of directing enterprises to the supports offered by TÜBİTAK. This project is funded by the World Bank. The other is a European Union project. You are a direct partner here. In this project, you provide services within the scope of sustainability. You even run a sub-project called "EEN Energy". In this project, you provide mentoring for businesses to use grants to increase energy efficiency. I understand correctly, right? In general, we can summarize it like this?

Interviewee: Yes, this is how we can summarize it in general. We can say that this is our activities.

Interviewer Great. Then I would like to ask a few questions about the content of the services you provide to your business, whether it is a training service or a mentoring service. First of all, is there any awareness-raising content in these trainings or mentorships? In other words, even if the person has never heard of this subject before, do they gain awareness? For example, when you go to a training on energy efficiency, you might say, "Oh, this is important. Do you get a reaction like, "Oh, this is important, there are grants for this"? In other words, can we say that the aim is to raise awareness at the starting point?

Interviewee: Yes, we can easily say that. We are really effective in terms of awareness and we can say that we make companies ask more questions and act more consciously.

Interviewer: So, do you offer pre-assessment services, do you provide a tool for businesses to assess themselves in this context?

Interviewee: We actually offer a tool for businesses to assess themselves. But what exactly do you mean by a tool here? I can be more descriptive if you specify that clearly.

Interviewer: Let me put it this way: It could be the level of digitalization, it could be the entrepreneurial aspect, it could be the level of technology or the level of sustainability. With some questions, businesses can position themselves, for example, out of 10 here, out of 5 there, or understand that they need this or that. In other words, do you offer a self-assessment tool, a survey or an analysis?

Interviewee: I can interpret this service as follows. When you explained it in detail, it came to my mind. Within the scope of our European Business Network project we just mentioned, X Chamber of Industry, one of our consortium partners, has created an interface on this issue. As a whole consortium, we use this interface and communicate it to our companies. As you mentioned, we are trying to make the first evaluations of enterprises in a qualified way with this tool. We also try to implement this system in our own organization, but this is more of a joint work of the consortium. Therefore, I can say that we have an evaluation system in this way.

Interviewer: I see, this is a module developed within the European Business Network Project, right? One of the partners created a tool where businesses are asked some questions. Through these questions, enterprises have the opportunity to evaluate themselves. Do I understand correctly?

Interviewee: Yes, they evaluate. And according to that, the first preliminary assessment comes out. Of course, I can make a small self-criticism about this system, I think we need to use this system more. If you ask which main focal points are there in this assessment tool, for example, there were questions such as the fields of activity of the enterprise, in which fields it works, in which fields it plans to carry out projects, and also the TRL levels of its projects, I can't remember all the questions now, but there were questions like that.

Interviewer: You are in constant contact with SMEs and you talk about these new concepts in your project. You said that you referred them to TÜBİTAK; you mentioned that you referred them to EEN Energy, one of the sub-projects of the European Union projects on energy efficiency. I am curious: Based on your own experience, when businesses encounter such issues, do they question, "Can I do it? Should I do it too"? Or are they clear about this? Do they have a definite attitude like "I will do it" or "I will not do it"? Do they question themselves when they encounter such services?

Interviewee: That's a good question. Businesses, of course, are all profit and return oriented, so these issues can be a bit more secondary in their perspective. But when we support this awareness with grants such as the EEN Energy Project, we try to attract their attention a little more. We carry out informative activities and presentations to raise awareness. However, I cannot say that companies' attitudes on this issue are very positive. If I were to give a score out of 10, I would give 5 points. Because, as I said, companies are more profit-oriented and are not very interested unless there is a sanction. We are making efforts to increase this interest.

Interviewer: I see. So what you are actually saying is that I want to confirm whether I understand correctly or not. In order for this transformation to take place, one of two things has to happen: Either there will be a sanction, there will be a legislative obligation so that the business will act in this direction, or there will be a reward mechanism, that is, there will be a support such as grants, incentives, so that the business will take steps in this direction. So basically, one of these two forces is needed right now to achieve transformational change. Is that so?

Interviewee: Yes, I definitely agree with this comment, and I would say that this is what we inferred from the interviews we did. Those two conditions, that is, there needs to be grant support or a sanction so that the company can really put this issue clearly on its agenda. Other than that, there is information and awareness, but in terms of getting any reaction, I also agree that one of the two items we mentioned should be one of them.

Interviewer: I see, and what do you think is the main reason for that? Is it cash flow? You work more with entrepreneurs. These people are starting their first job in Technopark. So maybe their first goal is to survive. Can we make the same comment for larger enterprises? Of course, you don't provide direct services to larger enterprises, but you must have come across SMEs with 100-150 employees. Is this a general trend for SMEs or is it something that varies according to the structure of the SME? What would be your comment on this issue?

Interviewee: As a structure, we have the opportunity to meet with different types of companies. Not only with SMEs, because we work within the scope of university-industry cooperation. At the moment, we are also in intensive contact with R&D centers. These centers usually belong to large companies. I can definitely make the following comment here: There are certain items on the agenda of companies. In order to be on this agenda, one of the two things we just shared needs to happen. I have very rarely encountered a spontaneous reaction like, "Let's do something like this in terms of sustainability, in terms of recycling." But here's the thing: By human nature, if I were a company owner, I would think the same way. In other words, I want something I do to have an output for me. For example, if I recycle something related to sustainability, the product should be used as raw material in another factory or energy consumption should be reduced. There has to be a return so that we can raise awareness in this area. For this reason, we try to explain the subject to companies with concrete examples such as "If you do this, it will give you a return like this".

Interviewer: Actually you made a very good comment. Sustainability has three dimensions: economic, environmental and social. The environmental dimension aims to protect nature; the social dimension aims to touch and support people. But while doing these, it is also necessary to ensure economic sustainability. Unless a business makes a profit and gains competitive advantage, it becomes difficult for it to realize the other two dimensions and establish a balance. Therefore, if the economic dimension cannot be offered, this transformation may not be fully realized. Is it possible to draw this conclusion?

Interviewee: Of course we can draw that conclusion. Because when we think as a business owner, you take into account that a staff member is going to spend time on this. Also, if he is going to spend, he wants a certain return on his expenditure. In this context, EEN Energy, which is a sub-project of the European Enterprise Network we just mentioned, is a good example. 10,000 Euros is not a huge amount, but it is still a good support. For those who want bigger support, TUBITAK has projects such as 1831, 1832, 1833. These projects currently provide a minimum of 3 million TL and a maximum of 20 million TL, if I remember correctly. This kind of support is an important factor that facilitates companies to react in terms of sustainability.

Interviewer: I would like to move on to this, the common awareness. In the services you provide, do you invite SMEs with similar challenges or similar situations, or are the services you provide general, can

everyone participate? Because when businesses with similar challenges come together, they can also learn from each other. "Do you do this systematically, or do similar companies already find each other within the event? How is your organization in this respect?

Interviewee: I also think that such a work would be really good. Bringing together companies with similar difficulties and creating a synergy there... We have not been doing this in the form of "Yes, let's bring companies with similar difficulties together and let them hold a meeting among themselves". But of course, I took note of this, and this was one of the best points of this interview for me. I'm thinking right now, "Why not?" And I think it will have a very good, positive impact. That's why we are not doing such a study at the moment

Interviewer: Well, an option research, there is a section here called "option research". Here, for example, in the services provided, the enterprise may overlap with 2 or 3 topics. For example, we look at an enterprise, it can go into energy efficiency, it can go into waste management. The institutional structure of the enterprise is suitable for this. Or another may focus on water, another on energy efficiency. In the businesses you serve, do you offer different options to the people about the optional paths they can take, or do you offer different options in your mentorships? Or do you make them focus only on one point? What is your approach in your mentorships?

Interviewee: Our approach, actually, is shaped by what the company wants, what their expectations are and what their concrete situation is at that moment when we first contact them. So, for example, a company wants to get very good support from international projects, they want to increase their experience in this field. Very good, we say we can offer this support, we say we can guide them. But we can offer versatile support to the company by making preliminary evaluations such as whether there are suitable personnel there or not. We can enable them to benefit from national supports, we can enable them to benefit from international supports. Or we tell them that they need to strengthen their infrastructure and employ a staff for this before moving on to those supports. In other words, after the preliminary evaluation, we can provide these supports not only in one direction, but in many directions, according to the company's request. This is one of the main tasks we do as the University-Industry Cooperation Unit: To ensure that the necessary requests in the companies meet with the academics at the university and to ensure that a project emerges.

Interviewer: I see. So, for example, you say that they can have 2-3 options in terms of accessing funds. But in doing so, I understand that these orientations emerge according to the structure and characteristics of the enterprises.

Interviewer: Well, do you provide services such as providing an action plan, for example, "This should be your two-year road map" or "This should be your one-year road map"... Do you provide such services?

Interviewee: Again, we can consider this as a sub-stage within the European Business Network project that we mentioned at the beginning of our interview. There, when we make the first contact with the company, we create an "action plan" together. And according to this plan, we follow the company's process. We check whether it is progressing in accordance with that process. We also provide support and mentorship to help it reach the goals we have planned. If it does, we consider it a success story. So we make such an action plan.

Interviewer: So it's called KPI (performance indicator two) in that project, right in the European Union project?

Interviewee: Yes, having an action plan in the European Enterprise Project is really important for the European Union. Because when we meet with a company, it is very important that this meeting turns into an action plan and becomes a process. In this way, we realize an action plan with our companies.

Interviewer: I see. Now, you know, in order to realize some transformations, you need to acquire knowledge and skills. We can think of it a bit like professional certification. Do you have a process that results in a certificate as a result of such knowledge and skill acquisition? In other words, does the person become able to do a job or carry out a project with the certificate they receive? Or do you only provide mentorship by referring to the vocational qualification institution? Do you have a certification program?

Interviewee: We don't have a certification program that we directly run in terms of knowledge and skills acquisition. We do not have such a program in terms of sustainability. However, within the scope of the Enhancer project, which is also a European Union project, software training was provided and there was a certification process at the end of this training. So such certifications can be realized within the scope of the project. Outside the scope of the project, there is no certification process that we directly provide. We mostly provide guidance.

Interviewer: I see. For example, I recently talked to model factories. In the services they provided, they did not apply directly to the whole factory. They were doing a trial application first. You said that you also provide an action plan, and you also provide mentoring. Is there ever such a pilot application in these processes? In other words, "Let's implement it in one department, then we'll spread it to the whole"? Or do you leave this to the initiative of the organization itself?

Interviewee: We leave it more to the initiative of the enterprise itself. We don't have a pilot application, that is, a trial application, especially conducted by us. This decision is left to the business itself.

Interviewer: Okay. Now I would like to ask for your personal opinion. You just mentioned TUBITAK and its funding, the European Business Network and its sub-projects. You run many European Union projects. You have one-to-one contact with businesses. Do you observe a behavioral change among those who have implemented, received funding or ranked in any of these enterprises? Does their confidence

increase? How is that reflected in their operations? How would you assess the impact of such services in building trust with businesses?

Interviewee: When businesses achieve tangible results in this way, of course it clearly increases their confidence. I can explain this with a concrete example: We got in touch with a company in our ecosystem as part of the European Business Network. Together, we created an action plan and as a result of the journey carried out in this direction, we created the success story of the company. Afterwards, we made this company announce itself to the whole world at the award ceremony of the European Business Network. After this development, the company had the opportunity to express itself in many places, appeared in many news and started to receive offers from different places. Now the company is trying to move forward with a higher level of confidence. So I can say this clearly: Concrete outputs, even if they are negative, have an impact. Now I have commented on the positive side, and I can say this about the negative side: We enable our companies to apply for an EIC Accelerator project. This is a multifaceted European Union project. One of the main points of this project, as in all other projects, is concepts such as sustainability and green transformation. Although some companies do not receive funding, they still leave the process satisfied. Because they receive very detailed feedback from the European Innovation Council about their projects. Thanks to this feedback, they try to move on. So both positive and negative outputs clearly develop a sense of trust.

Interviewer: So you are saying that if a person has achieved success thanks to the service they received, they don't hesitate to take the next initiative. Even if they get a negative result, the feedback they receive becomes a guide. Is that right?

Interviewee: Yes, yes, absolutely so. Both situations contribute.

Interviewer: Well, let me continue from the business side. Let's say you provided mentorships, trainings, people used funds in the projects. Does this remain only project-based? Or is it integrated into business processes in the long run? How would you evaluate it?

Interviewee: Mr. Yakup, I can share this in particular. Within X Teknopark, as the executor of the University-Industry Cooperation and European Business Network Project, we are trying to get in touch with many companies. With a new application we have just started, we are trying to meet with all R&D centers in Türkiye by using the possibilities of technology. We listen to their problems, learn about their problems and create a project together with the academics at our university. I can also make this comment clearly: A company that is really interested in a project or a situation shows itself very clearly. Most of our companies are already interested. We stop our work every month and a half or so, and without looking ahead, we call companies that we have been in contact with in the past or that have benefited from some funding. We ask the following questions: "How are you? What are you doing? Have you used this fund? Did you have any problems while using it? Would you like to benefit from a new fund?" Or, for example,

as the University-Industry Cooperation Unit, you have developed a project with a lecturer. Are there any problems? We try to monitor the current situation of companies with this kind of feedback.

Interviewer: Afterwards, you continue your work again, but you mentioned monitoring and evaluation. I would like to ask: What do you observe as a result of this monitoring and evaluation? I mean, is the person really doing an operation limited to the project? Or, for example, as in the EEN Energy Project, if they have achieved energy efficiency and see that it is reflected in their invoice, do they say "I should continue this"? In other words, are the operations limited to the duration of the project, or after a successful project and grant, is this transformation reflected in the overall way of doing business?

Interviewee: In terms of the business perspective, I would say it's about the perspective of the business. But most of the time, this is limited to the support we provide. Because there is too much intensity, too much rush, too many programs in the enterprises. Therefore, our occasional guidance needs to continue and be continuous.

Interviewer: So you're saying that because the organization has so many operations, so many projects that they are carrying out, there is a risk of being limited to the project. You make a comment that the organization providing the service needs to be a follower. Do I understand correctly?

Interviewee: Yes, that's right.

Interviewer Okay. So far our questions have been mostly about your own organization. Now I would like to get your general views. For example, how would you evaluate the level of cooperation in Türkiye? Are your partners in the trainings and mentorships you provide at regional or national level? Are other institutions and organizations in Türkiye able to carry out these collaborations well in their services? For example, we can give examples such as using someone's personnel, using someone's physical building. How do you think cooperation works in Türkiye? What do you think?

Interviewee: I can clearly and sincerely say that there are some good points in Türkiye in terms of cooperation and some points where we are lacking. For example, we cooperate with TUBITAK in terms of directing to appropriate funds and raising awareness. An expert from there can come here and clearly provide this flow to our companies at first degree. But when we met with ministry officials and said, "We want to raise such awareness among our industrialists" regarding sustainability, green transformation, the Paris Climate Agreement that Türkiye is currently facing and the reactions as a result, we went through many processes, but the result was negative.

Interviewer: So, your cooperation with some institutions may be clear, while with others it may not be the way you want it to be because of their processes, or because of their intensity, or because of other situations. For example, you run the European Enterprise Project or other projects. As far as I know, you establish consortiums there and consortiums are based on cooperation protocols. So there is a systematic

cooperation here. But in your other works and transactions, I think that cooperation is either efficient or inefficient, depending on the intensity, workload and importance attributed by the institution. This is how I understand it.

Interviewee: Yes, that is correct. Within our own consortium, we already cooperate with four different organizations. The European Enterprise Network project is a big family. Many institutions are also involved in it in Türkiye. We can easily cooperate with many institutions. However, as you have commented, in some cases, there are points where we cannot achieve the efficiency we want due to reasons such as the availability of some institutions, the agenda items at that moment, their intensity.

Interviewer: An airplane flew by and your voice went out for the last question. I apologize. It's just my environment.

Interviewee: Estağfurullah.

Interviewer: Could you repeat, in some projects there are cooperation protocols, in others it can change. Do you agree with this comment?

Interviewee: Exactly, that's the way I think too. Because we are a consortium, because of the project, the European Enterprise Network is a big family in Türkiye. There are many organizations in it. That's why I have tried to answer your questions sincerely so far. I mean, I have tried to share both the negative aspects and the positive aspects. But at some points, we can say that there are some points where we could not reach the cooperation we wanted with some institutions when there was a need, that is, not in a personal sense, but when information for our companies could be done very well, due to reasons such as the perspectives of the institutions at that time, their intensity or their unavailability.

Interviewer: Well, let me ask you this. Now we are talking about education topics, sustainability education. This is a transformational process. Businesses need to prepare themselves for green transformation. At this point, as we mentioned, do you think a national strategy is needed, a regional strategy is needed, or a policy document that covers both is needed for the process from awareness, self-assessment, making an action plan and integrating it into the business? Which do you think would be a better approach? What is your opinion on this?

Interviewee: If I were to answer my point of view on this issue again in a sincere way, I believe that there is definitely a need for a national strategy, but especially, for example, experts working in institutions like KOSGEB, experts working like us... The opinions of such people, i.e. those who are in direct contact with SMEs, should definitely be taken and a strategy should be formulated accordingly. In other words, I think that a strategy should be formulated not from a general point of view, but by taking the opinions of those who are in direct contact with SMEs.

Interviewer: I mean, it should be a long-term strategy, but you made a comment about the process of making this strategy. You say that it should be created by getting feedback and information from local actors, people who are in contact with SMEs, people who know their needs.

Interviewee: Yes, yes. That's exactly what I think.

Interviewer: Okay. First of all, you have seen many trainings in your career: online trainings, face-to-face trainings, you have observed the trainers, the content, the people invited. Do you have an idea that you say "If this training is organized like this, a much better result will be obtained"? At which point do you think it would be a nice touch?

Interviewee: I think there is a touch here: I believe that the purpose of the trainings should clearly be sustainability. The phenomenon that I usually see in trainings is that if there is not a person from a public institution in the training, that person usually tries to contact the companies in order to ensure their own commercial transformation. In fact, the main point here is that we need to clarify that the goal is sustainability. And I need to add this in the trainings: This should be conveyed to the industrialists in a clear and open way. Of course you can go into too much detail, but I think that this should be conveyed to the industrialists in a clear way without confusing or complicating it too much.

Interviewer: The same comment was made by a participant in another interview. He said, "Sometimes such jargons, such a language of communication is used that people run away from it, they are afraid of it."

Interviewee: So it's not supposed to do that.

Interviewer: It is actually a simple process during implementation: energy efficiency, waste management. But he said that the language of legislation, the technical language used can scare SMEs. I think you also think that the language of communication should be simple enough to catch the businesses. Is that right?

Interviewee: Yes, I think exactly the same thing. I think it should be conveyed in a coherent and clear way without complicating it, without losing the other person, without losing their focus.

Interviewer: Okay, our last question: Let's say a policy team is formed, assigned and told, "You will increase the knowledge, experience and implementation level of businesses on sustainability." What do you think would be the first thing these people should do?

Interviewee: What should they do? I can make a similar comment to the one I just made. They should not be money-oriented. This also applies to policy makers. I think they should focus on "How will it contribute to the country, to the nation, to humanity?" as the first item, without thinking about "How will it benefit us?".

Interviewer: Then you are saying this: First of all, our idea should be clear. In other words, the level of knowledge required to ensure the economic, environmental and social dimensions of sustainability should be determined. Also, people's goals and motivations need to be defined. They need to start by saying "This is my goal, this is my motivation". In other words, they should start by thinking about how to improve the capacity of SMEs without any commercial concerns and define their starting point in this way. Is that right?

Interviewee: Yes, yes. So if I were to make a recommendation to policy makers, I would say that, I would say that we need to have that as the first item.

Interviewer: It was a very pleasant conversation. Thank you very much Mr. X.

Interviewee: It was like that for me too. I even took notes. It created an awareness for me too. Thank you very much.

Interviewer: Hopefully, we will share the results of our work with you. See you soon.

02.05.2025 (6th interview)

Interviewer Welcome.

Interviewee 1: Welcome, thank you.

Interviewer My name is Yakup Inakac. First, I would like to give a brief information. This interview is being conducted within the scope of my master's test study at the University of Groningen. My aim is to understand how sustainability trainings are conducted for SMEs or other institutions in Türkiye and to evaluate this process within the framework of transformative learning theory. The interview will last approximately 45 or 60 minutes. The information you provide during the interview will be kept anonymous and will only be used for academic purposes. Would you mind if I take a voice recording?

Interviewee 2: Not for me.

Interviewee 1: No problem.

Interviewer: Then let's start with introductory questions. Could you briefly introduce yourself and your organization?

Interviewee 1: My name is X. I have been working at the X Development Agency for 4 years. Our area of responsibility is X1, X2 and X3. We are trying to support more development-oriented initiatives in this area. Both private sector and public organizations. Our priority areas are more tourism, we have result-oriented programs. In this context, we are determining our priority areas. Tourism, natural resources, building materials, beekeeping. We try to support more projects in these areas. Apart from that, we can continue with your questions. That's it in a nutshell.

Interviewer: Yes. Mr. X, tell us a little bit about yourself.

Interviewee 2: X. I have been working at the X Development Agency for 4 years. I changed 2 different units. Actually, I changed 3 different units. I started working at X, then I worked in the monitoring and evaluation unit for three years and for a week. I am in the planning and programming unit. Therefore, I have been involved in the monitoring wing of projects carried out with SMEs. This is what I can say.

Interviewer: Now, as I understand it, then we are talking about a regional organization, right? So it covers a region and has certain focus areas. In doing so, both public or other organizations and SMEs are served. I understand correctly, right?

Interviewee 1: Yes.

Interviewee 2: Yes.

Interviewer: Do these services include sustainability? Are there trainings, mentoring services, grant programs among the services you provide in this context? What is it? How would you describe your services?

Interviewee 1: Our technical support program, we usually publish this every year. This mostly covers mentoring, consultancy and training activities. We have support for both public and SMEs under this technical assistance program. If you ask about grants, we have not been able to make a grant program for SMEs for the last few years. Before that, we did not have a grant program, but we had a financial support program. We were mostly paying the loan costs of the loan they used, we had an indirect support in that way. I think in the earlier years of the agency, in the departments where we were not present, there were also grants. Private sector representatives would also benefit from grants. We are planning for this year, for example. We will have an interest-free loan support program. For SMEs. Digital transformation, sustainability, which you mentioned, are already emphasized in priority areas that we generally publish in our guides.

Interviewer: I see. Can you briefly explain this technical support program, how does the structure work? Because it includes sustainability and digital transformation among others. I mean, you receive an application, how is the application, if you introduce it very briefly.

Interviewee 1: We have our own system called KAİS. It is a system used by all development agencies and established by the Ministry of Industry from the center. Even though we all work regionally, we all use the same thing as a system, we use the system. We receive our applications here. Through KAİS, I have already mentioned technical support for both SMEs and Public Institutions. If we go through SMEs, if any SME wants to apply here, our previous moments are meat-dairy-agriculture, tourism, natural resources and building materials. SMEs operating in these areas can make their applications. The e-commerce system is a medium that especially women cooperatives or women business owners want to learn and use. For example, they make their applications from this field. They can say, "I want to receive an e-commerce training, or I want to build my social media in this way, I want to use the e-commerce method. I can also request the establishment of a system for this. We have support mechanisms for them through two different channels: training and consultancy. They can make their applications, state their demands, and explain their objectives in detail in this system. Then, as a result of our evaluation, if it is really related to our priority areas, if it is an application related to these emphases published in our guide, it is scored accordingly. Afterwards, we meet their demands as an agency, we procure services, we already receive their requests through technical specifications. If it is something that we can provide with our own agency facilities, because sometimes we can think of it as consultancy, for example, they want support in accessing financial resources. We want to write a project but we don't know how. As an agency, we can also provide a project writing training on this. If it is costless or if it is something that our agency cannot

afford, for example, they want to set up an e-commerce system. He wants to get a training on this. We can also meet their requests through a service procurement. This is how technical support works.

Interviewer: That is very interesting. As far as I know in KOSGEB, when a project is given or an application is made, if it is deserved, we actually expect it from the SME or the person who will receive the service. At the end of a certain period, the person submits the invoice and receipt to KOSGEB and receives a certain amount of support, but as far as I understand you, when you deem it appropriate, you do the service procurement, if you can afford it yourself, you cover it yourself, otherwise you outsource it, do I understand correctly?

Interviewee 1: Yes, because in many things, project writing or such an accounting training, for example, the relevant staff of the agency was able to provide a training before, there are examples. We usually provide project writing trainings. As an agency, we also procure services for those that are beyond our means. That is how we provide them. Yes, then it is different from KOSGEB.

Interviewer: I see. Okay, so now you can think in terms of the trainings that you have done under that technical assistance program or your own trainings outside of technical assistance, you can think in terms of both. Or as far as I know, you are now a partner in the European Enterprise Network Project. You are also carrying out activities within that scope. You can also think in terms of your entire institutional capacity. For example, can they also receive awareness-raising trainings, or is it necessary to receive direct technical support ? Or do you make awareness raising and information trainings with different decisions?

Interviewee 1: It can actually change from time to time. For example, this year we planned a program called "Key Solutions." In this program, we planned trainings especially for women and young entrepreneurs, let's call them our priority areas, our priority target group. We planned trainings for them. For example, we envisaged an artificial intelligence training, especially for young people and women. This one is about foreign trade, for example, and since there is usually a lot of demand for it, we decided to put it into a program. Of course, we haven't implemented it now, but we will probably implement it in the next few months. We can say these as awareness training. We will take certain business owners, women, for example, and we will provide a training on foreign trade. Or we will bring a few women business owners who are examples of very good practices and organize an activity such as an information seminar. We will do these this year. In the previous ones, there were probably different applications other than technical support. I am talking a little bit about the 4-year history. We have mostly covered such training and consultancy activities within the scope of technical support. But this year, for example, we will have trainings under the "Key Solutions" program, which we can call awareness trainings.

Interviewer: So are these organized online or do you do it face to face?

Interviewee 1: It will be face to face. These will be face to face. Face-to-face trainings are more useful. So it will be face to face.

Interviewer: I see. Well, let me put it this way. Within this technical support program, let's say the enterprise submitted a project. Do things like this happen, for example? We will also evaluate ourselves, a consultant will come or a trainer will come. They will measure our current capacity and give us this. Or it will analyze us. Does technical support include this kind of support? Or is it directly training and capacity building? In other words, is the current situation analysis of the enterprise also carried out in such programs?

Interviewee 1: Actually, what I said is like this, what I said was more like what I gave you as an example, but it can also be a topic you mentioned within the scope of a different counseling service, if it comes. Because in consultancy, it will also be necessary to reveal the current situation. By revealing the current situation of the enterprise, mentoring can be provided to them in the areas they want. If there is an application in this context, of course, it can be evaluated from technical support. But there were not many applications in this scope. In other words, it was on digitalization, but an application within the scope you mentioned can also benefit from technical support.

Interviewer: I see. So the scope of a consultancy could be to actually do a self-assessment of the business and draw a road map. Okay. You said that you have given many trainings. Let me ask you an impression question about the training. Do you see reactions that cause a questioning in an enterprise here? "How am I doing here, I am being given foreign trade training or sustainability training, I was never aware of these, I need to move forward." So it's a bit of an observational question. Do such internal questioning occur within the organization in the services you provide?

Interviewee 1: Mr. X gave training though. When I gave it, there were some public institutions, not SMEs. But were there SMEs when Mr. X gave the training?

Interviewee 2: There were teachers.

Interviewee 1: There were teachers and that was the Public, though.

Interviewer: It doesn't matter. What is important for me is that in these trainings, it is actually something that somehow shows an effectiveness. That is, the business starts to question itself. You know, sometimes it is online, some listen, some don't. Sometimes it is done on-site. So it does not leave an impact on businesses. Do you see this effect in the activities you do yourself? Can the business look at itself in this situation?

Interviewee 1: So like this...

Interviewer: You can look at it as a business, you can look at it as a teacher. The important thing is whether the education there causes a questioning in the target group.

Interviewee 2: For example, in the trainings we gave to teachers - trainings on European Union projects, artificial intelligence, etc. - we created a lot of awareness in them. In other words, they have realized that they can use artificial intelligence in certain areas, from kindergarten teachers to high school teachers, and that they can incorporate it into their trainings. However, when it comes to SMEs, the last serious training for SMEs that we participated in - together with Ms. X - was the EEN training. In fact, although it focused on a very serious and important issue, the interest of SMEs in this was a little weaker in general. That was also an on-site training. It was left in the air. Because you can imagine the X region. Especially the X region is the region with the lowest income rate in Türkiye. Therefore, businesses are generally small family businesses or single, that is, sole proprietorship businesses. They are very unlikely to be open to this kind of development.

Interviewer: I see. I get the same answers in some interviews. For example, some people say that the cash flow here is more important for the person. Or the payment is due.

Interviewee 2: Absolutely.

Interviewer:: The payment situation is more important. That is the first thought of the person. It is a little bit behind in terms of focusing on other things. Would you agree with this view?

Interviewee 2: I agree 100%. I have also worked as a manager in the private sector in this region, so the private sector is all about daily work. The number of factories in these 3 cities that say "let's put another stone on it, let's have a plan for next year" or "let's take ourselves one step further in this area" can be counted on the fingers of one hand. I am not even talking about small businesses. In fact, there is an interesting incident we experienced not long ago: There is the X Bazaar in X. If you walk around the X Bazaar, half of them are closed, half of them are in coffee shops, half of them are not at their businesses. There is no development in terms of business culture in that regard. Because there is no such thing, when you take the issue one step further and walk to them with issues such as sustainability, you cannot attract their attention at all this time.

Interviewer: They said two more things, I would like to get your opinion on them. There are some "follow up" questions. For example, they said: "Either he says, the legislation will force him; that is, the legal legislation, the obligation for a change that will force him" or "there will be a reward, a grant so that he can actually continue that initiative there." In other words, they say that it is difficult to mobilize without these two to start with. Is this true?

Interviewee 2: That is true, but there is also this: If you look at the current supports, the supports are far, far below the investments made. Therefore, as KOSGEB, you know, an entrepreneur needs to put almost

10 times more money on a support of 500 thousand liras, 1 million liras given by KOSGEB, so that he can achieve a tangible result. But one of the things we have seen and experienced is this: We have seen that a small support given there in financing supports causes the company to want to improve itself. We saw that the investment was brought forward by the company, which normally has no intention of doing anything, saying "there is such a support, let's take advantage of it".

Interviewer: I see

Interviewee 1: Money. Profit, more precisely. Of course, it's actually like that. The private sector works on profit and loss. At the point where it will make a loss, it withdraws itself, and at the point where it will make a profit, it can restructure. This is a bit in the nature of the private sector. Maybe is normal

Interviewer: Right. But they say. For example, in one of the interviews, I received another opinion about service providers - training, counseling, mentoring providers. They say: "The language is very foreign." For example, they say "circular economy", sir, "carbon footprint", some things are said, legislation is shown, sustainability reporting is 200 pages or so, the legislation of the European Union. They say that when these come together, that language scares them a little bit. What do you think about this comment?

Interviewee 2: We would agree with that. Because as I said, most of the businesses do not have a corporate identity. Since there is no corporate transformation - I mean, even if you go to the biggest enterprises in X - when you see that it is a family business and there are people who are not very expert in their own business, this time when you go to them with such terms, you will witness them saying, "What is this?". But if we look at the transformation, for example, the thing that mobilizes companies the most in green transformation is that they can install a solar energy system and reduce their bills. They will be able to sell it when needed. In the last 3-5 years, an incredible solar energy support has been given to all factories. I mean, KOSGEB also gave it, agencies also gave it. If this is what they can see, if they see the output, then they will definitely take action.

Interviewee 1: So it comes back to what you just said. It really does. For example, if there is a grant on this subject, if we emphasize and give a grant on green transformation, of course people think, "Oh, then, we can renew ourselves in this context". Let's say grants are motivation.

Interviewer: Well, isn't it more difficult to use solar energy in X than in the X1, where you get more sun?

Interviewee 2: Contrary to what you might think, it has nothing to do with the angle of incidence of the sun or the temperature. It has to do with the duration of sunshine, how much energy you produce. That's why, for example, X is one of the provinces in Türkiye that can get the most efficiency from solar energy.

Interviewer: That's very interesting.

Interviewee 2: Yes. That's why there can be serious... of course, when it is covered with snow in winter conditions, there can be problems. But there, too, there are very small, 1-2 kW in solar panels, you know, in the back windows of cars, you know, de-icer... With such defrosters, they can keep it at a certain temperature and prevent snow from accumulating on it. Then it works very efficiently.

Interviewer: Actually, this example is very good. When it is clearly said, "Your energy cost will decrease, replace this with this, this will be beneficial for you, and the state is supporting you for this investment," it actually serves efficiency. But it also speaks the language of the business. It is also convinced of this transformation.

Interviewee 2: Absolutely.

Interviewer Okay. Now in your events or services, do you offer solutions to SMEs... to SMEs with similar problems, or do you call them collectively? For example, you just mentioned some sectors. I mean, there are certain areas you focus on, right? I mean, you act according to SMEs experiencing similar challenges, right?

Interviewee 1: I mean like this... now, in line with the feedback we received from these technical support applications or the beneficiaries who came here, for example, we actually designed key solutions. Why? Because similar problems... for example, there was really a lack or a need for training on digital transformation among women business owners. Therefore, we thought that we would turn those sporadic requests into such an information training in a program. So we took it under a sub-heading under the key program. So of course, what happens sometimes? When problems come, plans can also be made for a group and accordingly.

Interviewer: I see. So, do you have any services that include things like providing businesses with action plans or supporting them with their action plans? Does it cover that?

Interviewee 1: Actually, we didn't do anything about it directly, but indirectly there was an application from the Provincial Directorate of Industry for technical support. I think it was a check-up for SMEs. They had a study to showcase their current situation. We indirectly supported them. In other words, there was such a study in the technical support applications. They prepared a report for them. Let's say an X-ray was taken on the situation of all these SMEs. We did not prepare it, but we supported them.

Interviewer: I see, but this is about "option research". Let me ask you this: For example, a two-year road map for a certain business or a group of businesses... Or for an individual business, "This should be your road map for one year on this issue," right?

Interviewee 1: Could it be, could it be, this is what you do, what you work with... It could be natural stone actually, right? It's about...

Interviewee 2: Oh, I am very sorry. It says one beneficiary.

Interviewee 1: Natural stone, we have a natural stone company in X, but X actually did a little bit more, you know, what you said, a full consultancy, mentoring thing. Maybe we can count him.

Interviewer: Was there an action plan there, Mr. X?

Interviewee 2: So, a program called the Enterprise Transformation Program was launched. This was intended to give a lifeline to companies that had been supported by the IPA program but were currently having problems in their functioning. Certain priorities were set for the companies in X1, X2 and X3. Some of these priorities were like a change of general manager and so on. We worked there for 3 months, first as a consultant to the board of directors. We guided the board of directors on what could be done. At the end of 3 months, the general manager was changed. In fact, since we couldn't find a general manager like the one we were looking for, I started working there as general manager for about a year, a little less than a year. In that process, we started implementing ERP programs, we changed the operation, we changed the calculation methods. In other words, while the factory had no idea about its expenses before us, "How much does a square meter of stone cost us? Directly and indirectly." We carried out a study in this way for about a year in total.

Interviewer: Now, is this something like a mentoring work for the enterprises that received an IPA project but could not execute it? Did I understand correctly?

Interviewee 2: It can be said, yes, it can be said.

Interviewer: I see, but there you were involved in the operation.

Interviewee 2: Sure, sure. We had to go all the way to the operation.

Interviewee 1: But at the moment, there is still an agency staff who supports us from outside. This is how he helps throughout Türkiye. So these can also be considered mentoring activities.

Interviewer: Very good. Let me ask about: Knowledge-skills acquisition, certification program... Do you directly provide any certificates within the scope of vocational training, or do you support the acquisition of certificates, are you an intermediary, or do you have such a practice?

Interviewee 1: We certify what we provide through agency staff. For example, we certified project writing trainings ourselves in this way. Again, there was an application for cost accounting; they wanted support in accounting. This service was also provided by the agency staff. We also certified them ourselves, that is, the agency provided them. In other services, of course, we have provided this certification through the institutions providing the service.

Interviewer: Now, in the technical support program, you said that we can provide the service through our own staff or we can outsource it. I am asking based on your own experience: For example, on sustainability - waste management, material selection, circular economy - do you use your own staff or do you outsource these services? What is your institutional capacity at this point?

Interviewee 1: We did not provide any training on waste management. None.

Interviewer: Energy management, for example. I mean, do you use your own staff for anything related to sustainability, or do you outsource?

Interviewee 2: We use our own staff. Regarding zero waste... you know, there is a Zero Waste Project led by X. We sort our waste accordingly. We do this with our own staff.

Interviewer: I see.

Interviewee 2: We do this with our own staff.

Interviewee 1: But for companies... you know, we apply this internally, that's different. But when we turn to companies, we actually provide many services for companies - especially SMEs - through outsourcing. As an agency, we often provide project writing trainings ourselves. But other than that, we generally outsource services.

Interviewee 2: Of course, in any field that requires expertise, we outsource services and provide training to companies in that way.

Interviewer: I see. Well, I would like to ask. Now I had an interview with the Model Factory. I don't know if there are any in X right now. There are 10 Model Factories in Türkiye. They provide consultancy and mentoring to enterprises on lean production. And they can't change their practices, for example, they can't go and change the enterprise collectively first. Of course, for example, in a place where 100 people work, changing the production area completely according to a certain method would put the business in difficulty. So they do a pilot project in a small place. After there is a change there, they expand the framework. How is it in your technical support practices? For example, after receiving this training, does the enterprise directly start implementing it in the whole enterprise, or does it do a pilot implementation? What would be your observations on this issue? In other words, is there a pilot implementation, or is the training directly implemented?

Interviewee 1: I mean we don't do much actually...

Interviewee 2: We don't get much feedback. Of course we don't. I mean, we don't get a very high level of feedback. However, we do not have a model implementation or a Model Factory situation. Since the companies have already applied to the agency to get the training or consultancy they need, they start

implementing it immediately after this support program or they cannot implement it. So there are actually two possibilities.

Interviewee 1: Honestly, we don't do an effectiveness analysis of technical support in a very professional sense. We don't really know what the effects are. But since it is a small place and similar enterprises apply to us again, maybe we can get it verbally. But we did not have a report. In other words, we don't have a report on how our technical support was finalized, what the impact was. It is only a little bit verbal.

Interviewer: At that point, there is no reporting at the point of monitoring the result after the service is provided.

Interviewee 1: I mean, we receive the reports after they are finished. Of course, the implementation is immediate, but this is reflected in the reports. But then what can they sustain in the long run? For example, can they really run e-commerce successfully? We don't have much feedback or reporting on this. We only receive feedback from the same companies we sometimes meet with, only verbally. But we do not report in a way to enter the archive of the agency.

Interviewee 2: This is more for the financial support program.

Interviewee 1: In the first place, when we get the final report, we get the first feedback from there. Yes, this system has been established, this has been done, this has been implemented. But honestly, we cannot follow how the sustainability or long term implementation is going.

Interviewer: I see, so what is, what is the upper limit of technical support?

Interviewee 1: The training for this year is 150 thousand TL (including VAT) and the consultancy activity is 400 thousand TL (including VAT).

Interviewer: I think it's a good number, I mean for the region.

Interviewee 1: Good.

Interviewer Okay. Now the questions about your organization and what the training actually covers are over. The next questions are just a few questions I have prepared to get your views on the general functioning in Türkiye. First of all, let me say this. Now, institutions are legal entities on their own, but effectiveness increases when there is cooperation with each other. For example, you can use the expert staff of another institution, or you can use the physical environment and infrastructure of a room. How do you evaluate this cooperation in your region? Do you think you work effectively with other public institutions, especially in terms of technical support, training, consultancy and guidance?

Interviewee 2: We work a little better with public institutions, especially in the technical support part. However, the period when we worked most closely with public institutions was during a European Union

project. There, four public institutions worked under our coordination. But if you are asking about the coordination between public institutions in general, there are already major problems there. There are problems in terms of legislation. There are problems in terms of reluctance. In general, public institutions approach it like this: "Don't make trouble for us, we are continuing with the current functioning. Don't introduce anything new." No matter how hard we push as an agency, we cannot get the necessary reaction from the other side. Sometimes the opposite happens. It is all about finding the person. Right now, for example, a new European Union project is about to be approved. It is a project with a very high limit, about 15-20 million Euros. This project is completely based on sustainability. On green agriculture and sustainability. There, for example, we are working in partnership with the Provincial Directorate of Agriculture, X District National Education and X.

Interviewer: Is this Horizon? Which one is it?

Interviewee 2: Via Horizon.

Interviewer: Horizon. The grant amount is also quite high.

Interviewee 2: Yes, yes, it's quite a big project. Hopefully, if it passes, we will start working on it. You can work jointly on such projects.

Interviewer: I realize this: For example, in European Union projects, consortium-oriented grants are given. In the Single Market Program, in which you are a partner...

Interviewee 1: In COSME.

Interviewer: Yes, in COSME. And also in Horizon. As far as I know, also in Erasmus. In Türkiye, we generally provide support on the basis of legal entities. It is the same in KOSGEB, it is the same in development agencies. Why do you think we don't give collaborative projects in Türkiye? Do you think it doesn't work for us? Can't we build trust?

Interviewee 2: In European Union projects, Turkish public institutions could make applications by forming a consortium together. Then they abolished this. It is said that there must be a foreign consortium partner and in some projects from Türkiye only one institution will be involved and the rest of the consortium members will be foreign. It is very clear why this is the case. When we look at COSME, it is very easy for them to see the inefficiency in COSME. Therefore, this inefficiency pushes them to change. In other words, Turkish public institutions cannot work actively among themselves. That is why they are making changes in the content of the programs. In the applications from Türkiye, there is only one Turkish public institution, maybe two at most. The rest of the members are from candidate countries or existing EU members. In fact, they put that foreign institution as a bit of a control mechanism.

Interviewer: There was a cooperation project, five enterprises came together and did a project. It lasted for a few years, then it was terminated. After a certain point, friends and relatives... Because the legal entity is different, those businesses are normally affiliated to one person, but they are seen as different businesses. Either they are structured in this way, or the partnership is dissolved as soon as the project ends, and everyone goes their own way. I guess I felt that there was no efficiency there, but what is your opinion?

Interviewee 2: In general, if there is a consortium partnership in Turkish public institutions, the probability of getting efficiency is very low.

Interviewer: It may also be due to bureaucracy.

Interviewee 2: Of course, we experienced this first-hand. We had a NEED project. Everything worked very well with Public Education, we had a good coordination, but we started to have problems because our legislation and the legislation of Public Education overlapped everywhere.

Interviewer: Is the same thing true for the chambers of commerce and industry? Because they don't really have a public structure. Regarding the project... In other words, in public institutions, effective cooperation cannot be carried out due to bureaucracy, legislation or not wanting additional work. Does this also apply to chambers of commerce and industry? There seems to be less bureaucracy or legislative constraints, but what is your observation? Have you had a project with a chamber of commerce and industry?

Interviewee 1: We are not partners, but we supported them. I think a bit like this: Everyone wants to be effective in their own field. They want their name to be in the forefront. They probably want their name to be at the forefront in their own activities. There may be such handicaps. There is already bureaucracy in public institutions in terms of cooperation. We are not flexible structures, there are very hard boundaries. Everyone has a different working style. It is a bit difficult to overcome these. It is a hierarchical system after all, it is difficult for the person at the lower level to take initiative. If there is to be cooperation, it has to come from above. I think it can be done very well, but it can be done if it comes from above, if some things are determined on a higher scale. I think it needs to be. There is confusion both for beneficiaries and SMEs. Who provides what support in which area? There are overlapping parts. There are gaps that do not overlap at all. Therefore, it would be much more useful and beneficial to work in cooperation. But as I said, a top-scale planning needs to be done first. There can often be conflicts and confusion regarding support mechanisms. People get confused. It is not clear who supports what. There was such a study in the last development plan: Unifying support mechanisms under a single roof. I think something like this is needed. At least it would make it easier for institutions to cooperate. Everything would be simpler and more useful.

Interviewer: Actually it's good that you brought it here. My next question was about the national strategy. We say sustainability, but businesses need to transform themselves in many areas such as digitalization and artificial intelligence. Knowledge and capacity development in these areas is a must. Do you think this requires a national strategy? Or should it be based on regional strategies? Because an SME in X1 is not the same as one in X2. Their needs are not the same. What kind of approach do you think would be more effective in this regard?

Interviewee 1: It should be regional. Really, the companies here and the companies in X are very different in every sense. A small touch may be very important for the SME here, but it may seem insignificant for the company in X. The structures are different, the distances to be covered are different. Therefore, it is necessary to work in a "tailor-made" way, that is, tailored to the SME. The structure here is different. For example, the structure of the X may be different. Different characteristics may emerge according to each region. We think that centralization should be completely removed.

Interviewee 2: Yes, completely regional.

Interviewee 1: Unifying support mechanisms under one roof is one thing in terms of simplification, but it would be wrong if the practices are the same for all regions. This is why development agencies exist: Different solutions, different touches for each region. It was born out of necessity.

Interviewer: I will say the same thing. I mean, you say it should be regional in terms of institutional identity, but don't you have a roof? How many development agencies are there in Türkiye?

Interviewee 2: There are 26 regions. There are 26 development agencies.

Interviewer: There are 26 development agencies. But do they have annual, 3-year, 5-year strategy documents or do you plan directly for your own region?

Interviewee 2: We have our own regional plans. But some programs are managed centrally, such as KOSGEB programs. That program is the same in X1, the same in X2, the same in X3. This is the general trend in the recent process: There is a shift from regional plans to central plans. Can I apologize and ask for 5 minutes of your time, X is writing.

Interviewer : We were already at the end.

Interviewee 1: There are really a lot of differences. There can be a shift towards a centralized structure from time to time in implementations. Some of our programs are centralized, but this is what should happen: Especially the priorities of our region can be different. Maybe it may be very simple, but even project writing trainings are very important for this region. Because even applications are a reason for experience. We are not very advanced in these matters. We do not work with very experienced people. That's why I attach great importance to awareness. It is very important to include these concepts in the

training. We need to focus more on the awareness part. For example, we talked about artificial intelligence. When we talk to Mr. X about artificial intelligence, people first say, "That's good, but how will I use it?" At least teachers understood how to use it because it was practiced in the training. Artificial intelligence is a very good system, but you need to concretize how to use it in practice. More training and awareness raising is important to understand this.

Interviewer: Thank you very much for your information. It was a very pleasant conversation. Thank you for participating and contributing, and if anything happens again... I will see you again.

Interviewee 1: I also wish you success with your thesis. I hope it turns out well.

Interviewer: Inshallah. Thank you.

02.05.2025 (7th interview)

Interviewer Welcome Mr. X.

Interviewee Hello.

Interviewer Hello. First of all, thank you very much for accepting our interview offer. Before we start our interview, I would like to give a brief information. This interview is being conducted within the scope of my master's thesis m at the University of Groningen. My aim is to understand how sustainability trainings for SMEs are conducted in Türkiye and to evaluate this process within the framework of Transformative Learning Theory. The interview will last approximately one hour. The information you provide during the interview will be kept anonymous and will only be used for academic purposes. Do you mind if I take a voice recording?

Interviewee: No.

Interviewer: Okay. Then can we start by introducing yourself and your organization?

Interviewee: Thank you. My name is X. I work at the Presidency for Supporting Small and Medium Sized Industrialists. I have been with this institution for about 35 years, and the last 20-25 years of that time have been spent in support of SMEs within the scope of European Union projects. We first started with the European Knowledge Centres Project of the 6th Framework Program, with KOSGEB's involvement in this project, and then under the Framework Programs, first with the CIP Program (Competitiveness and Innovation Programme), and then with the Single Market Program, which is now in its 18th year. If we consider the European Information Centers Project, this process reaches 21 years in total. In this process, we are continuing the support provided by the European Union for SMEs to cooperate, increase their employment and investments both within the EU borders and the European Economic Area - we can even say on a global level - with the consortiums we have established in Türkiye.

Interviewer: So, your institution is KOSGEB, an organization that provides services to SMEs, but you have been running a European Union project under the roof of KOSGEB for about twenty years. Are these projects formed as consortia?

Interviewee: Yes. It is a program that covers the whole geography of Türkiye. Generally, the participants of the projects are defined in the calls as non-profit organizations that support SMEs. Therefore, the institutions in the regions come together, declare in their project proposals that they will provide these services in these regions and submit their applications to the European Union. As a result of the evaluations, seven-year agreements are concluded for seven-year periods, which are the financial periods of the European Union - alternating with the project names I have mentioned. In these periods, by including the topics prioritized by the European Union in the projects, we are trying to ensure cooperation,

to be informed about current developments, and to provide SMEs with a more European-integrated, more international structure.

Interviewer: So which region in Türkiye does your region cover? Who are the partners in your consortium?

Interviewee: We are the consortium in X. To give information, there are 10 consortia in Türkiye under the European Business Network. As I said, this structure covers the whole of Türkiye. As one of the 10 consortia, we are working in the X Anatolia Region. These consortia are generally formed based on NUTS regions (regional development classifications). Our partners include X University Teknokent, X Chamber of Industry, X Teknopark from X and X Chamber of Industry from X. As KOSGEB X Directorate, we are the coordinating partner of this consortium. With all these partners, we are trying to offer business packages to SMEs according to the number of SMEs in the region and the weight of the sectors, with the analysis made at the proposal stage.

Interviewer: I see. You talked about a project you are currently running in the European Enterprise Network Project and the 7-year EU periods of these projects. You said that there are certain priorities in each period. What were the priorities in this most recent project? Was one of them sustainability, for example?

Interviewee: Yes, sustainability. Actually, sustainability has a much more retrospective process. In the previous period, in the COSME period, in the project that ended at the end of 2020, sustainability was one of the topics. In my opinion, the European Union attaches great importance to issues such as global warming. They have carried out studies on issues such as the temperature increase should not exceed two degrees in 50 years, and its effect on the ozone layer. Big budgets have been allocated for this. In connection with the understanding of sustainable economy, especially green transformation has come to the forefront. Of course, these studies take a long time. Finally, frameworks such as the 2050 target were formed. They decided that the question of how to achieve this should be approached not only by switching from carbon-based fuels to sustainable fuels, but also by policy change in all areas. 17 main sustainability themes were created. This seems a bit too detailed to me. You find it difficult to take this and transfer it to a simple business ; they often get confused. But where we are now, the European Union is adopting a sustainable approach to all issues. If we simplify this: A sustainable business (SME), a sustainable life is targeted. We are trying to explain the reflection of this on SMEs by highlighting the various initiatives offered by the European Union and now also by Türkiye. In addition to sustainability, digitalization has come to the fore in this recent period. After the recent wars and pandemic, an initiative such as "resilience", that is, companies becoming more resilient, came to the fore. In every call period, new topics that come to the fore are added to the call documents. In our proposals, we submit our projects by stating that we will transfer these new topics to SMEs. This is how the process proceeds.

Interviewer: I see, so what are their expectations? I mean, as Key Performance Indicators (KPIs), what kind of outputs does the European Union expect you to deliver? Are there specific numerical targets, mandatory indicators?

Interviewee: Now, of course, when you look at these European Union projects, they have formats similar to Horizon projects or an R&D project. They are not very complicated, but at the end of the day, performance indicators are also included in these projects. Some of them are project-specific indicators that may not be very clear from the outside, but their main purpose, as I said, is for companies to create employment, make investments, contribute to regional R&D capacity and ultimately become sustainable. In other words, they are expected to carry out production, export and trade activities with less damage to the environment. These are quite high targets. We arrive at simpler indicators that can contribute to achieving these goals. Probably all the organizations in the network similarly provide such intermediate outputs. The European Commission reports from this micro-level data, drawing macro-level impact conclusions. This is how reports are presented to the European Parliament and other institutions. From time to time, these results are published. But of course, in such projects around the world, they try to draw an impact conclusion from the data analyses made after the project is completed. How effective this is is a matter of debate.

Interviewer: I actually wanted to ask about that impact. I mean, do you provide data such as the number of SMEs you reached, the number of SMEs for which an action plan was prepared?

Interviewee: Of course, of course. I mean, these "lofty goals" I'm talking about are based on some indicators that don't have a very direct impact. Of course there are such indicators. But we don't have a goal to reach all SMEs in Türkiye. The budgets of the projects are not very high anyway. We indicate this at the proposal stage. We say that we have this much human resources, this much budget, we can work with this many enterprises. The European Union already has a certain scale in this regard. So they also know that "this can be done with this budget". Therefore, when you present your proposal in a meaningful structure, they accept it. The European Union never gives you a task like "you will inform all SMEs in Türkiye about this issue". We try to reach the right target group in the fastest and most effective way in line with our budget. As I said, the number of companies to be reached and the number of activities to be organized are of course included in the annual documents. However, the European Union no longer wants to focus on these numbers. Certain outputs are calculated with some simpler indicators. Afterwards, a report is presented to the higher committees, the European Commission or the Parliament with this data. This is my observation.

Interviewer: I see. So you have a limited budget, and with this budget you reach out to the number of businesses that you specify in your proposal and you offer them various services such as mentoring, training or collaboration. Do I understand correctly?

Interviewee: Yes, yes, that's exactly it. We have been continuing the project with the same concept for years. Only the emphasis changes periodically. Before, innovation was at the forefront, now sustainability or digitalization may come to the forefront. But the concept does not change. We also improve the practices over time. For example, instead of an approach like "let's make an announcement open to everyone, whoever comes," we now prioritize a certain group by doing a preliminary study in advance. Or we organize trainings in cooperation with certain institutions in line with their demands. After all, labor and budget are limited. Therefore, we want to maximize the impact.

Interviewer: I see. So, in fact, under this project offered by the European Union, you don't give grants directly to third parties. You organize the service or you provide it through a subcontractor. You provide services such as training, information, analysis. You seem to have a more flexible structure in terms of budget utilization. I guess there are no strict rules except for justifying the costs. Is that right?

Interviewee: Yes, yes. As you said. These are not big budgets anyway, but very detailed projects are prepared. How many people will work, how many trainings will be done, what will be done, everything is written. And as an important rule, we cannot give any direct financial support to SMEs. So we cannot make a special payment from our own budget. Our task is to transfer the topics covered by the call to SMEs through trainings, seminars, workshops. And also to introduce the cooperation tools offered by the network and make them benefit from them. We do not have the task to provide support for the financial issues of the companies. The budgets are only for us to organize these activities and cover our own costs.

Interviewer: I see, now you have described your organization and the project quite clearly. From now on I will ask you questions about the content of your services, not only in terms of training, but all the information meetings, workshops, analysis services, etc. These questions will be based on the ten steps in the Transformative Learning Theory. My aim is to understand if and how your services cover these steps. My first question is about awareness. Are there seminars, trainings, workshops to raise awareness in your services? For example, "What is the European Green Deal?", "What is the Paris Climate Agreement?". Do these take place within the scope of general information activities? If so, are they online or face-to-face? It can be considered as the stage where the first information is provided.

Interviewee: So there are definitely such things. But let me be clear about some things, we can do these kinds of activities. How we should do the project in the most effective way comes in front of us. So we draw a strategy for ourselves. Again, as we have been talking about from the beginning, there are certain issues. If you write them down, there will be, I don't know, 5-10 topics. These are already written on the website of the European Business Network. There are 10 topics that they have also accepted. And these 10 issues are not only the issues that the European Enterprise Network, the European Commission, the DCs or the parliament find special for us. They are fundamental issues that concern all SMEs. Let me tell you from my own point of view: In X, sometimes you receive information on the Green Deal from many

institutions that I am also registered with. I mean, sometimes you look at the Ministry of Industry, X University, X Chamber of Industry, KOSGEB... They can give big seminars on the same topic in the same week. Therefore, we don't get into the "let's raise awareness" business too much. Do we? We do. But you are doing one of the activities that all these institutions are doing. OK, maybe those at universities can do something for the academics and technopark companies in the middle. You can do something for smaller businesses, micro and small businesses. But chambers of industry also do this. Organized industrial zones also do this. Therefore, we are developing our own methods to use our limited budget more effectively. Maybe it's not like awareness, but we sometimes try to go a step further, a little more practical, "how can we get to that stage?". Sometimes this "resilience" issue I mentioned, that is, the resilience of companies... For example, what happened when there was a pandemic? All the restaurants suddenly didn't know what to do when the curfew came. This is a very new topic. Maybe ministries and NGOs have only recently gotten into this issue. Can awareness be raised on this? How effective will it be? We are discussing all of these within ourselves and thinking about how we can make a move here.

Interviewer: I mean, you can actually do it, but you don't prefer it. Because the training we call awareness is already abundant. We continue by directing our budget to companies that have certain capacity to implement it in the most effective way. But if there is a specific topic - for example, resilience - we can also evaluate this. This is how I understand it.

Interviewee: Yes, yes. So as you say, we have flexibility in these matters. We can decide the structure of the activity we are going to do. The European Union does not force us that much. There is no pressure like "you have to do this many seminars". As I said, we have indicators. As long as we reach them, they say "you can do as you like". If I were an organization not in X but in a smaller place, for example in X or X, and provided support there, maybe my strategy would be different. But in a center like X, where there are all the ministries, 19 universities, and many NGOs, we are trying to take on a different role by leaving such awareness-raising activities to other institutions. Maybe we are following a very different strategy as a European Business Network partner.

Interviewer: I understand, but you made a very good point. Here, I guess it is shaped a little bit according to the need. In other words, you are saying that another consortium may first think that awareness needs to be raised and then focus on this issue in X1 Anatolia, X2 Anatolia, for example. Do I understand correctly?

Interviewee: Yes, yes. This is already the spirit of the project. This is the approach of the European Union. It says: "In your local institutions, according to your own legislation, you may not be very flexible on some things. But these are the things that need to be done. Submit your proposal to me, do these things quickly and flexibly with the budget you give. Implement the activities in accordance with your target audience in your region. And report the results to me." This is a European Union project. It is based on

an international agreement. In line with the agreement between our organization and the European Union, we carry out these activities and transfer them to companies. As I said, they don't get involved in too many details. In other words, they don't say, "You switched to carbon footprint measurement without organizing an awareness event, how is that?" We already say this: "Three organizations have already organized awareness events before. These companies also participated in those events. I got the list of participating companies from those institutions. I got this list from the chamber of industry, for example. I sent them all an e-mail and told them that I am organizing such an event for the second stages . And thus, I am implementing the second stage through this project to a group that already knows the subject."

Interviewer: I see, then I would like to move on to the second stage. The first one is awareness, the second one is self-assessment. Are there any tools in your services where businesses can see their own situation, where they can evaluate themselves?

Interviewee: This is what we are thinking about. The issues that we are thinking about developing companies: again, as we have just talked about, whether it is sustainability, whether it is digitalization, whether it is innovation, whether it is innovation or internationalization. Let's even put the last thing, let's put fragility, resilience. All of these, in fact, when you get into them, they all have an evaluation. There are complicated ones and simple ones. Again, as I said, by using our own flexible structure, we do this kind of thing by agreeing with some professional consultants, professors, etc. who know this kind of work, for some companies, much more simplified evaluations, and for some companies that have passed a certain level, more complicated evaluations. We are trying to design this kind of process. As you may know, a company's sustainability assessment or digitalization assessment are long processes that a person who is an expert in this field should complete in 3 days or 5 days, in my opinion. As I said at the beginning, it is not very much for us to go into companies in such detail, both in terms of labor force and budget. It is not suitable for us. I mean, we don't have such a plan to spend 1 month on 5 companies. But what kind of thing do we have? After explaining the event a little bit, we can send the company to professional institutions that do this job, to institutions that will be detailed, there are many institutions. Some of these institutions can even do this with state support. We direct companies to them after they reach a certain stage. As I said, we have nothing like taking the digitalization of a company from A to Z, examining it and getting a result for it. When you look at it, there is no such timeframe in the project. What is the aim? Maybe to explain this to ten companies and direct 10 of them to the appropriate target there. To direct them that they can quickly solve their own digitalization and innovation problems with the support they will receive from here, with the professional help they will receive from here. .

Interviewer: So what happens then is that you have a simple tool. Businesses can evaluate themselves with some questions. It's not very comprehensive, but you can also direct them to comprehensive research, even if you don't do it.

Interviewee: Yes.

Interviewer: Now, after this evaluation comes a stage of questioning assumptions. When individuals, organizations or businesses evaluate themselves, some of them may question "Is my way of doing business right or wrong?". What is your observation? Have you seen such a tendency to question oneself, for example, in businesses that receive this self-assessment service? Did you see a desire for change? Or do they usually look at it a bit more financially? I mean, if they get the grant, do they question themselves? Or does it come into question if a legislation forces them? Because these issues were mentioned in many interviews. So the person says, "If he gets a grant, he will go this way. Or if the legislation forces him/her to do so." He says that having a low self-assessment does not usually lead to this path on its own. What would be your opinion on this assumption? In terms of the SMEs you serve?

Interviewee: So the other evaluation things are also true. This is especially the case in Türkiye, and I am sure it is also the case abroad. I see that there is not much of that kind of awareness in Türkiye. "Let's renew ourselves, let's keep our company going with various alternatives." Maybe that kind of culture is not very common among Turkish people, and due to the unstable economic situation in Türkiye for many years, most of the companies are focused on "How can we save the day?". In the meantime, maybe they are saving the day because of the work they do... I mean, you can see this in the companies that have somehow saved the day: "Oh yes, I followed this somehow, whether it was carbon emissions, this or that, or a digitalization transformation in the company. I followed this somehow, and I need to adapt my company to it gradually." Of course, there are those who think like this. But when you look at them, I can give an example: Companies working in the defense industry can somehow make such decisions more easily because the orders they will make for the next two years are predefined. But in companies that are more open to the market, especially in companies that have been late in catching up with such innovations in their time, such an approach by you instantly creates the following in the minds of the company: "How much will this cost me? How long will I be able to get back the labor and budget I spent on this transformation?" As I said, those inquiries definitely happen. Here, as I said, when we approach such groups as a result of the strategy we have established, it is immediately obvious. At this stage, at this speed, with various state supports, we can say to them, "Your sector will be included in this system within three years. You need to be careful. Your sector is not on the list now, but it will definitely be in five to six years. You should keep this in mind." We are trying to maintain this business with certain recommendations. Of course, everyone wants their company to be highly digital, highly sustainable and innovative, but there is always the thought: "Let's do so much, let's improve ourselves, but can we go bankrupt while improving ourselves?". Therefore, they are cautious here. This is quite understandable.

Interviewer: I see, now I would like to ask about: Co-awareness. This is the fourth stage of transformational learning. If similar participants are together, there can be a ground for dialog because they have the same problems. A group work can be done together, case sharing can emerge as common.

There is also a dialog among themselves. Do you have an approach of turning to similar businesses? Or do you reach out to those you can reach and give them to, in other words, do you have a selection process? Do you apply a strategy of concentrating on similar SMEs in this selection process?

Interviewee: Sure, I mean, as I said at the beginning, because we have been doing this for a long time, maybe in the first years it was like this: "We are organizing an efficient energy seminar. We found an energy efficiency lecturer from that university, he will come and talk. We send the information to all the companies in KOSGEB's database, and no matter who comes, whoever fills 60 people, okay, our capacity is full, we are closing down." We don't do that anymore. What is it? We will do digitalization, or as you said, we will do carbon emission or lean production efficiency. We can use various initiatives here. For example, what kind of information do we have in KOSGEB? At KOSGEB, we have the information of companies that submit R&D projects. We say: "If a company has given an R&D project, it produces an R&D product, maybe it has finished, passed or is continuing a prototype stage." Therefore, these companies can be a very comfortable target group for us in lean production or energy efficiency. We make announcements to them first. As I have been saying from the beginning, the budget, capacity and workforce of the events we organize are all limited. When you give a slightly heavy content training to 200 people, you cannot control it in a big hall. All of this has been established with experience. We need to find a target group, maybe in groups of 30, maximum 40 people. Then, with the data we have, maybe companies that have done R&D projects, maybe just the five priority sectors in sustainability, metal, glass, cement... I don't know, I'm just giving an example right now. We first invite companies from that sector, and then if there is a vacancy, we inform other companies. In other words, we select the companies we try to inform according to a certain strategy and ensure their participation.

Interviewer: I see, so it's a little bit because of your budget situation, a little bit because of your efficiency. I also see a more target-oriented approach here than the initial approach of inviting everyone. So I understand that special selection groups are also formed in this way. Now I want to come to options. Fifth situation: Option research. For example, an enterprise comes and meets with you. It gets information about the European Enterprise Network. When they come to you, do you offer them different options? Or do you tell them that they should focus on one area, or do you indicate that they can follow two or three different options? In other words, do you offer options, do you guide them by offering different alternatives in mentoring? What is your approach there?

Interviewee: So, as I said, the project - again I have to talk about the project - is not only about gathering companies and informing them about the priorities of the European Union or the priorities of Türkiye or the priorities of the world. This is just one of its many tasks. So we need to somehow complete all the other tasks. Our strategy is as follows: When companies want to utilize your services in some way or when they come to me saying "we want to know what this is", the first thing I look at is how willing the company is. If the company is willing, if it really wants to do something, you can already understand it in

a ten-minute conversation. You see the company's approach. Then you start with the first support you can give to the company. For example: "Your product has developed very well and has become marketable abroad." Then we can immediately move on to "how can we commercialize it". From your conversations during this process, if you think that the company will do this work faster through digitalization, you open that subject to the company. You say: "Look, we have such trainings, you can also participate in these." Another issue is that if you feel that the company has some limitations in terms of sustainability, you also give that warning: "Look, there are also these kinds of things, you can also participate in them". So, as I said, my first criterion is the company's desire before its internal structure. Because, as I said, spending time on a company that you can't bring to a conclusion, maybe you are taking away the rights of 4 companies that you can really benefit from. Therefore, this decision is more important. Because otherwise, both your time is wasted, the company's time is wasted, and 3-4 companies that can benefit from these services cannot benefit from these services.

Interviewer: But you make a very good point. I understand that it is interactive, I understand that it takes place in the form of one-on-one meetings. The business is touched one-on-one. And the business is directed to different services as a result of those interviews. I understand that options are offered. I wondered about this: For example, you did not mention the financial strength or the size of the enterprise. You mentioned the request as the first priority. Why is that? I mean, based on your experience, why the desire first? Do you think this motivation is very important?

Interviewee: No. The company already gets a standard briefing from you. There is always a standard briefing of 5-10 minutes. "What is the project? Why is there such a project? What kind of activities does it have? What possibilities does it have?" This is already explained. If you don't see that desire in the company, with 80-90% probability, the connection with that company ends. You look and see that the company has already come with the logic of "sign me up for a project from the European Union so that I can get a grant from there" or with an approach like "let's internationalize my products". The network already has posters like this left and right. As soon as they don't see this, you already understand that the company has no desire to deal with other issues. Even if it is financially very strong, even if it has an R&D group employing 15 engineers... Unless there is that desire, it is not possible to provide that service. But if you see a forward-looking light in a company that is trying to turn itself around with a European Union, TUBITAK or KOSGEB project with 3 engineers without making many sales yet, you are interested in it. You say: "Maybe if I find a connection from abroad, this company can save itself and move on to the second stage." Otherwise, it is a company that will most likely close down after its state-funded project ends. In other words, the desire there is what makes you decide how much support you will give to that company. We came across many examples of this. You see, the man is working on a lot of things, he listens to you. Maybe he is right: "I don't have time to waste with you. I am already moving forward with a plan." Others say: "I already have connections abroad. I'm doing this and that, I don't need

your support too much." Some don't understand at all: "By the time I understand you, I will have already lost something." But others say, "Okay." "It seems that if I spend some time with you, you will really support me. Then I will spend time with you." Because this is the most critical thing. I tell them about sustainability, digitalization, internationalization, innovation, resilience, collaboration, but the main burden is on the company. The company needs to take the time to understand and be convinced by itself so that this work is meaningful for me as well. After that, it needs to continue that work by coming to me from time to time and asking for support. I cannot spare extra time for the company. Because I need to reach 150 companies a year. I can allocate a total of two days for each company, so that's how it is. I cannot spare 10 days for a company. That company needs to be convinced of this at that moment and spend those 10 days of labor itself.

Interviewer: Very well said. But I would like to ask you this based on previous interviews. There was a comment like this: "The services we provide need to touch the decision makers. Sometimes we encounter situations like this in large enterprises: A man sends his engineer or an employee. But that person is not the person who will implement what is being told. Maybe he sees it as just a workload because he is not very interested in his salary. So they cannot bring about change." That's why they said that the real transformation starts in small businesses or when visionary partners come in person. Do you think it is important to reach decision makers with your services? If the big business only sends staff, how to overcome this problem?

Interviewee: Now of course this is a subject. I mean, you are basically right from both sides. You know, in the company, of course, if you talk to the decision maker, the boss, the manager, the manager, he was the one, you can overcome some things very quickly, but you cannot overcome some things. Therefore, no one says "our company is very bad in terms of business" about their own company. Because their own company says they have done it all. "The workers couldn't understand," maybe. "He" says, "we did this, this didn't work" and so on. There are various things. This is how we experience the bad part of this: You call the company, they send their engineer again. Some send their accountant. Or, I don't know, someone sends their intern. In other words, they have no idea about the subject and they don't even have any say in the company. The one who sends his engineer, if he can achieve a certain level of sincerity with the company, can sometimes very easily tell about the issues that are not working in the company. How do we do this? As I said, this is a method we try to implement ourselves. When we organize a seminar for 40-50 people, we distribute very simple questionnaires and get feedback from them. What is this? As I said, the companies that really want to do something are already clear from those questionnaires. Then, in a second stage, we call these companies again. This time not in a seminar format, but in a meeting format. Nothing new is explained here. This time only the companies are given the right to speak. Everyone talks about the problems in that subject, in their own workplace, and they talk about it in the presence of others. Therefore, something is shared there. In other words, they say "look, yes, we also

bought this program in digitalization, but we were locked in, we couldn't transfer it to the other side, it didn't work" and so on. "That happened for us too, we opened it like this, but we got stuck here" and so on. In an environment of discussion, in an environment of commiseration, then you get a certain thing. Even if there are bosses or authorized engineers involved, then maybe the boss of that company can be specially invited after the problem in that company is resolved. By inviting him and having a private conversation with him, you can say, "Maybe look, friend, as far as we understand, you are trying to make a certain development in your company by making a lot of expenses, but there are certain problems, it is not working. These can be solved in this way. Such and such a consultant can take care of your work in a week". As I said, sometimes meeting with the boss helps, sometimes it hurts. So people shut themselves down.

Interviewer: I see. Then sometimes there is a risk that as soon as you first hear about it, maybe there is a risk of taking an approach that will prevent that change from the very beginning. You say it can be positive, you say it can be negative. But I understand that if it is carried out with the employees, if the environment is well adjusted, it can be carried forward, yes. Now then I would like to move on to the action plan. Do you provide services where you provide participants with a roadmap, an action plan?

Interviewee: Can you elaborate? When you say action plan... I mean road map?

Interviewer: Like a one-year action plan like this?

Interviewee: I see. Now we can think of it in two ways. One is that there is a road map that is required of us within the scope of our project. It is a business plan that we prepare for that company within the scope of the project, for all the communication we have with the company. This is not something that will be very useful for the company. How can I put it? Here, we tell the company about digitalization, we tell them about cooperation. We give it various small tasks. Go and learn this from TÜBİTAK. Go and participate in the matchmaking event over there. Cooperate there, and so on. This is something related to us, a plan related to our European Business Network activities. I don't think it is of much interest to the company. Of course, they give us certain information. But as I just said, for example, in our activities on sustainability and these initiatives, if we provide support to the company at the mentoring stage -which, as I said, are very complex issues- we try to give them to professional professors who know this business. We ask them to prepare an action plan for those companies. Sometimes we also provide support in line with our experience. Therefore, they are like this: "Look, there are four problems in your company regarding sustainability. You can overcome these problems in this way. Maybe you can overcome two of them quickly with government support. You don't need to do anything about that in the short term, but you can solve it in the long term." You can call it a recommendation report or an action report or an action plan for the company in the form of a final report of the coaching service, mentoring service, etc. We give this, but we are not in a position to ask the company "what did you do?" after two months.

Interviewer: So this is certain, limited. I understand that it is one of the activities you can do for companies in line with your budget. Now I would like to move on to the next thing. Do you provide guidance at the point of certification, gaining knowledge and skills, or do you provide direct certification services, training, I don't know, something related to digitalization and the person gets a certificate from it?

Interviewee: No, I understand. No, I mean, again, personally speaking, I don't believe in all these certificates, I don't know, you go to an event, they give everyone a certificate at the end. They have no value for me. But there is something, I definitely recommend it, what is it? If you have a digitalization assessment done by this institution, this institution will give you a report as a result. Then, after you have been digitized in this way, you can get a certificate, a document accepted by the whole of Europe from this institution. It is already a professional thing as it is. We direct the company to it. Otherwise, we give pens to the people who attend our events so that they can write. Because the certificate we give would not have any validity anywhere. We are not that kind of institution.

Interviewer: I see, I wanted to ask, you mentioned the action plan. So, as I understand it, it's like a recommendation report, some recommendations that businesses can touch on 2-3 points and act in the most effective way. A recommendation report like "Use this fund, solve this problem". Does anything happen there, for example, "Do a pilot project on this issue"? Because for example, I met with Model Fabrika the other day. They said: "For example, we cannot change the whole production line in a 200-person factory with lean production. Because that enterprise has orders, production and flow." First, for example, we take only one line of production. We put it into service there as a pilot application. If the business owner sees something positive in a change here, we generalize it. Do you have such pilot implementation suggestions and studies? Or are those recommendation reports not that detailed?

Interviewee: No, I mean what is it? As I said, we didn't think about taking a job away, even if it was a pilot. As I said, in the second stage, we call the companies we have gathered to a meeting and have a certain discussion there. I think we did this only in digitalization. After that, we selected 5 of them in line with our budget and workforce and made company visits. There, as I just said, we examined the companies in a limited period of time - maybe 3-4 hours - with their engineers, owners, flow lines, machines, this and that, and expressed them in a simple report as "these and these things stand out at first glance in your company, deficiencies". Therefore, something like these are the deficiencies and these can be eliminated in this and that way. A pilot could be something like this here: Of course, since such companies are already registered in our system, we are in constant contact with them. Since they talk to KOSGEB for other supports, they all have experts. Therefore, if we receive news from this company after a certain period of time and receive a feedback such as "well, after your event, we corrected our lines in this way and solved this problem here ", maybe we can offer this kind of feedback to other companies as a pilot application. We can say, "Look, this company made such a move, this company solved this problem in this way".

Maybe what is it at work? Is it called "best practice"? Maybe not "best practice", maybe "success story." Our whole thing has become a success story. In the digitalization of the company - I don't know - the company increased its 10% employee system to 70%, or something like that, and it can be shown as an example to other companies. But as I said, many events are also organized. After sustainability is explained, a project implemented there is described as, I don't know, a success story. In our case, we didn't do a pilot project, we did something much simpler. What did we do? As I said, we invited them to the event, then we invited them to a second meeting, we learned about their needs, and then we selected a group of them and made company visits. This was a long process for us, which lasted for a month. If you can think of it as a pilot project, yes, it was a pilot project in our activities. We had a certain success. We modified it a little bit and did a second similar study on resilience. But to take a company and turn it into a pilot practice, as I said, it is a bit company-specific. We leave that to the company. If the company successfully reaches a certain point with its own efforts or with our guidance and support from other places, we can find that we have some support in this and we can tell this as a success story in other places.

Interviewer: Okay. The last two questions are questions that I would like to get answers based on your personal observations. First, I would like to ask a question about trust. You must have come across hundreds of businesses and start-ups. For example, when a business establishes a partnership abroad through a B2B activity and reaches a fund, or when it starts exporting in another way, or when it becomes a member of the European Business Network and sells a product there, does this cause a change in itself? Does it build confidence? And does this confidence lead to more - what should I say - proactive approaches? In other words, if a person achieves success, does it reflect positively on him/her? What would you say based on your observations?

Interviewee: I mean, as I said, it depends a little bit on the thing, a little bit on the luck of the process. A company comes and... So by trust, does he mean trust in me or trust in himself?

Interviewer: We are talking about self-confidence.

Interviewee: Confidence in yourself, huh. I mean, I don't think it's because of us. Anyway, if the company has confidence in itself, if it has confidence in its product, it is already successful in some way. I mean, it can both look for a partner for a European Union project and find it very easily, and if it also benefits from us here, of course, it comes to us again in the second activity it will do. They can say, "I am progressing very fast by using this here". As I said, we don't have much confidence. I think it is related to the company's own product, its own process. So "can I increase the company's self-confidence?" In fact, I offer a standard package to the company.

Interviewer: I asked this in the sense of, not in the sense of your influence, but for example, I sometimes encounter that if a person has received a KOSGEB fund, a TÜBİTAK fund, if they have succeeded once, they can be a little more proactive in seeking these avenues.

Interviewee: It's a little bit more like that, it doesn't seem so scary. As soon as he does it, as soon as he gets a certain benefit from it - and even if it's his first collaboration, his first project, his first - maybe I don't even want to say collaboration, but his first international business meeting, of course the second time he does it, it's very different. I mean, I always give an example: A company in X, a husband and wife are managing the company. The wife even retired from the public sector and joined the family firm. And when they came to me, they said: "I mean, the company is already working in some way, but I want to involve the company in European Union projects". And he had no idea about the subject: "How does this work?". Then, after participating in one or two events - of course, we keep in touch from time to time, he visits our organization from time to time - I mean, in 6-7 years, maybe 10 years, I should say 5-6 projects, he started to become the coordinator of the projects. He coordinates a 12-partner project from five countries. Therefore, he has now become the coordinator of European Union projects. How to run a project, how to behave with which partner, how to move a project from one place to another... And finally, in one of our conversations, he said: "We have stopped doing projects, we have moved on to various things on the commercialization of the products we make." In other words, when you look at his position 6-7 years after he first arrived, we have seen in a process that developed before our eyes that he has become a company that can enter into all kinds of international cooperation, projects, this and that. The same happens with other small companies. At first, they don't know how to talk about cooperation, but maybe in the fourth year, they become a company that defends its own rights like a professional company and sees the details. Maybe after actually doing one or two jobs... There were such examples. There were even companies that we took to matchmaking events abroad. In other words, while doing business, the man was trying to learn English. Five years later, I looked and he had distributors in six countries. So in a way, he trusts his product, he trusts himself, and he wants to do this job. It accelerates those kinds of things. But this is a natural process. I don't know how much we help companies in this process. It depends both on the person and on the motivation brought about by achieving that success. Various factors can be the reason for these changes. But I think the first factor, as I said, is the motivation of the company's own boss and employee. Secondly, the suitability of the product. After that, it goes on rapidly as 1-2-3.

Interviewer: I would like to ask one last question about the trainings, and then I will have a few questions about "How can the situation in Türkiye be improved in general?". And then we will finish. I received a few comments in the interviews, and I would like to know your opinion on that. They say that the trainer is important. For example, there was a comment that a boring trainer can reduce the efficiency of the activity. It was said that trainings that can be interactive and in which the participant can also participate can be useful. There was also a comment about the language of communication. In other words, when it comes to circular economy, or I don't know, different technical terms, it is more difficult to reach businesses. For example, with energy efficiency, it was just "make such and such a cost, get 10 thousand euros", something like "EEN energy". There were some comments that it would be more useful to scare them with that language if they were spoken in that language, that is, if they were told what they would

actually gain. What do you think, how should the trainer be? Should the language be really simple? Or are these not very important because the businesses we invite will already know these things, they are businesses at a certain level? What are your comments on this issue?

Interviewee: So now there is a problem like this. When you think like a university, all students are almost equal. What are they all? You can think of it as students who graduated from a high school, passed a certain exam, got a certain score and got into the same department. Or second year students, who have successfully completed the first year and come to the second year. Therefore, when you explain something to all of them in a certain format, they all understand it equally. Here, if the teacher is very experienced and explains something professionally, they understand it much better. If he explains it in a much more complicated and incomprehensible way, they understand it to a certain extent. But there is always equality in the group. Now it is not like that in SMEs. When you invite a group to a training, you cannot choose too much. In other words, you don't have the chance to say "let's go to those who have a budget of this much, employ this many people, have a boss who is this knowledgeable". Also, not all of them have the same person. As you said, some have a new engineer, some have an experienced engineer, some have a boss, some have someone else. Therefore, you should not set high expectations. You should not set a goal like "I will send 80% of the people who come here motivated". When you do, you are disappointed. The trainer is absolutely important. Trainers who go into too much numerical detail and legislation get lost after a while. People break off when they don't understand. If he says three more sentences while thinking about two sentences, you realize that he has lost it. The person listening is playing with their cell phone. Well, it is important, but as I said, we should not set expectations too high. In a training with many participants, if you are a trainer with the potential to create a movement in all of them, you are already a unique trainer. You have motivated those who know in a certain way, and you have taught something to those who don't know anything. So it is difficult to find such trainers. And when you find them, they are already aware of this. As I said, sometimes their time is busy, you cannot find them easily. For example, we gave a training on how companies should behave at international fairs. The person who gave the training had been to fairs abroad for years. He approached from such beautiful places that he never lost interest. Advice such as "When you go to China, don't eat from the buffet at the hotel in the evening, the next day you will probably get an upset stomach and you won't be able to walk around the fair". So these are very critical advice. But suddenly you see that everyone is listening attentively to the trainer. He catches other things behind his back, at moments of high perception, and gives them there too. They never lose attention. Of course these are professional trainers. The trainer is important, but as I said, you should not always have such high expectations in the training you give to such a group. We lower our expectations. We say, "If we can influence 15 people out of 50, it is a success for us."

Interviewer: Because there is no interference with the participant there either. Because as you said, all enterprises are different from each other. You said that some come with their engineers, some come by

themselves. Therefore, we will not keep the expectations high, but I understand that the role of the trainer is also important.

Interviewee: Yes, yes. I mean, if you do a much more detailed study, as I said, like a university course, if you bring companies that are very close to each other together and explain something to them somehow, of course you can increase the efficiency there. But as I said, there are many factors here. The process you will spend to catch such a group may not be suitable for you this time. At work, we try to get the most out of what we do as much as possible. As I said, there is an expectation within ourselves. Because if you keep your expectations high, this time your motivation drops. You say, "I spent so much time, I spent so much budget, but you look at the result; I was able to move three people out of 50." That creates a big loss of motivation in you. You need to find a balance somehow.

Interviewer: Lastly, I would like to ask about education. What is your opinion about online trainings? Do you think it is useful or can it be useful? I mean how is it as a tool?

Interviewee: Of course it is much more practical. In the face-to-face ones, it is necessary to host the people who come in somehow. There is nothing like that here, but my opinion is that there is a loss of half, maybe much more than the others. He can press a button, turn off the screen and do his other work. He can talk on the phone in between. He can also talk to his customer. So I think there is a little less efficiency. But what's the advantage? You can do it for 250 people instead of 50. Because you can increase the number. Maybe you can increase the number of successful people you reach by increasing the number of participants. Sir, there was no other option at the time, most of the trainings were done this way. But in my opinion, face-to-face trainings are always more effective. As I just said, the trainer is effective there. In other words, people can easily break away from the training there.

Interviewer: Okay, we have finished our education topic. Now I have a few questions in general, "How can it be developed better?". The first one is about cooperation. How do you think cooperation in Türkiye works in terms of training, consultancy, mentoring in developing the institutional capacity of SMEs? For example, as far as I know, you have cooperation protocols with your partners in the European Union Enterprise Network. But is there a systematic approach in other collaborations? For example, when you ask for an expert from an institution or want to use its physical infrastructure, does this cooperation work in Türkiye? How do you see it?

Interviewee: I think it works. I mean, you can go to any NGO, you can go to any state institution, you can go to any university - and we've been to many of them, we've done similar things - no one is like, "No, my friend, you can't come and tell such things to my members". Everyone is open to all kinds of things. Some are interested, they can increase the performance and impact of your training with their own contributions. Some may not be very effective just because "OK, let them come, tell them, let them go". But there is no problem in terms of cooperation. There is also something like this: We never say: "Those

who participate in our training should pay a participation fee to something, to the units". After all, they are free of charge. Therefore, no one has any reservations. It also goes to them as an activity. We have no problem with this. What kind of things can sometimes happen? Sometimes there can be problems with the ownership of the output of such an activity. "We gave this training, or KOSGEB gave this training, X gave this training". So sometimes there can be institutional conflicts over such meaningless things. We should tolerate this too. We say, "If you want it that way, so be it". The important thing is to reach SMEs.

Interviewer: Does the demand come from you, do they say, "Come and tell our members," or is it mutual?

Interviewee: Around 60% we say, "There is such a thing." What is around 40%? You provide this kind of service to an institution - I shouldn't say institution - an organized industrial zone, an association, a union. When there is a person within the organization that you provide that service to, who is related to another union, another association, another region, he or she can come and say, "Should we do the same in our region?". So you can move forward much more effectively. So I haven't said that so far. I said that when we select our companies, we bring them to a certain stage by eliminating them with certain criteria, but this is also a very effective method: What is it? When the textile manufacturers' association comes and says, "Can you organize such an event?", they invite all their members in line with our guidance. These are also effective events. Because the association, union or organization they are affiliated with invites them, because you are organizing an event for a certain sector, for a group at a certain level, you can adjust yourself accordingly. There is telling something to a group of people from many different sectors, and there is telling something to a group of people who are all textile manufacturers. We also have those kinds of things. So, as I said, maybe I didn't say it at the beginning, but we don't just say "Let's do a sustainability event" anymore. We say: "X Organized Industrial Zone, do you need a sustainability event?" They already have certain departments. "No," they say, "we already received such a training from the Ministry of Environment two years ago or last month." "Then they don't need it, but digitalization might," he says. "Okay," we say. "Then you organize it. You call the participants." So we have such collaborations with institutions and this makes our work easier.

Interviewer: But at the same time, other institutions and organizations -KOSGEB, TUBITAK, chambers- also carry out some activities for SMEs in line with their duties -KOSGEB, TUBITAK, chambers- these also carry out some activities for SMEs. Sometimes they overlap, sometimes they diverge, sometimes they cooperate. Some of them give grants, some of them provide training, etc. Also, the regions are different, the businesses and SMEs in the regions are different, their characteristics are different, their qualifications are different. Do you think there is a need for a coordinated strategy on a national scale to increase the institutional capacity of SMEs on these important themes - be it sustainability, digitalization or other issues - to increase their own institutional capacity, without giving money, just in terms of training, consultancy, mentoring Or does each institution already have its own tasks, its own projects; they

somehow do these services, do they work together? I mean, if you compare it with the current situation, could a national strategy be more effective?

Interviewee Absolutely. I mean, if this process is managed in a certain way by an upper board, it would be much more effective. But it is not something very easy. In other words, that supreme board should handle this work not in a way that makes it difficult, but with its own flexible structure, with a strategy that facilitates this work and prevents wasting time. So what is it? It can be done. If we can divide the issue of sustainability into - I don't know - five levels, such as level one, level two, level three, level four, and now the last level, if an institution can determine this, maybe this level definition can be emphasized in the activities to be organized by institutions. The Ministry of Environment would say: "I am opening a second level sustainability training." Then those who have already attended the first level can participate in it. Because every time you go to a training, sometimes you look - we also attend such trainings - starting from A and going from the most basic level to a certain point. You already have a capacity in such events. So after two hours, you probably lose your managers. Therefore, even if a superstructure gets this far - but these are not easy things - if we include all the trainings given all over the country, the state bureaucracy at the highest level, including the relevant institutions, nothing can be done. In other words, it can become a structure that starts to interfere even in your activity. But as I said, there is a great loss of labor and time. I mean, there is a possibility that you can attend five events and listen to the same thing five times, saying "I will talk about sustainability". But you can divide it into certain levels, what is the first level, what is the second level - these can be decided in a very simple way. Maybe people can be told in various ways what this level is. "Friends, look, these are three levels: sustainability, green transformation, digitalization..." Or they can be given names: beginner, intermediate level, advanced level. Managing these things from a higher level - maybe an advisory board. In other words, a structure that advises, "It would be more effective if you do it this way." Otherwise, as I said, it can become a bureaucratic obstacle. "You can't organize events on such issues without asking me." "Send me the content of the event you are going to organize and I will set a level for it"... Then it can become a dead end. But with some thought, I think a solution can be found.

Interviewer: I understand, but you made a good point. I mean, you said "level" here. Maybe the first level, SMEs should start with awareness. Maybe SMEs that have received awareness training, if they have received this training, can now move on to action plan, implementation, level 2, level 3. In other words, both the SME will need to be evaluated and accordingly, which SME will be given what kind of mentoring? Different mentoring? Action plan mentoring? In this way...

Interviewee: Some things, I mean they do it automatically by themselves. What is it? You organize a training on European Union projects or "What is the European Union" training. There, projects are also explained in general. Then you look at the European Union projects training. All projects are mentioned there. And then you look at the training on this project of this call for nanotechnology. Therefore, a man

who does not know any of these subjects does not go to it anyway. Because even if it is in Turkish, he feels like he is being told something in a foreign language. This happens automatically. But if there is a problem of SMEs in Türkiye that needs to be intervened much more quickly - if there is a problem of SMEs in Türkiye - maybe a ministry can make such a decision as a result of a seminar or a symposium. It can present something like, "It will be more effective for all institutions to do it this way from now on" and leave it at that.

Interviewer: But you say that it should be in a way that does not create bureaucracy, that it should not lock the work. So if you give it to an institution, that institution can lock the work.

Interviewee: The same thing happens to us sometimes. If there is an institution that says, "From now on, send all the projects to be submitted to the European Union to me first, so that I can read them," no one will submit a project because, "Am I going to deal with you?" Am I going to deal with you?" I am already presenting my project to the institution I am dealing with, so where are you going to interfere? Maybe I can give an example like this: On digitalization, on this digital hub, the ministry itself took the initiative and tried to do something. Maybe due to some shortcomings in their experience, I think they could not manage the work very well. And when they were so dominant, some of the other participating partners lost interest. "Where to sign, let's sign. Do it how you say you're going to do it, go away". As I said, when it is managed in a dominant way, it can have the opposite effect. But something like this can happen: As I said, a symposium is held on sustainability awareness, information training, whatever. As a result, a recommendation is made. After that, institutions can carry out various activities by taking those recommendations into account in their activities. Thus, it is not too binding.

Interviewer: I see. Well, there was a comment like this: For example, there is no problem with a national umbrella, but it should also be left to regional initiative. Because a one-size-fits-all solution would not be appropriate on a national scale. The sustainability level of an SME in Eastern Anatolia is not the same as that of an SME in Hatay or İzmir. The needs, practices and action plans there will be more differentiated. Maybe a few basic things can be determined and applied to the region... "Determine your target group, determine your main theme, let the chamber of commerce focus on this, let the technopark focus on that..." But it will not create too much bureaucracy.

Interviewee: Of course, of course. I mean, as I said, if you connect him directly to somewhere, he will probably want to control everything himself, because he has been given this task in the place where you connect him. That would be an obstacle. But as I just said, a recommendation to be prepared by scientists and experts who know this... That can be done maybe like this: Who regulates these things? There are universities, state institutions, associations, projects. This recommendation is sent to all these interlocutors. "Read this". We can even organize a big conference where the decisions of this advisory committee can be explained to these institutions. This is explained without boring anyone. Then people

say: "OK, if I am going to do an activity on sustainability, both in terms of my own organization, the projects I follow and my target audience, then I should follow the decisions of this advisory board to the maximum extent so that I can ensure coordination in the country."

Interviewer: I understand very well, but you also say that regionally the implementation can be shaped according to the needs of the region.

Interviewee: I'm sure that will be written in the final report of that symposium. I mean, "Here's how you can do it regionally." If you are going to do it in the same region, you can keep the level of it in different ways. Like I said, first level, medium level, high level. In other words, those who know this business will surely bring much different approaches to what I am saying now.

Interviewer: There was also a comment like this. Would you agree? There are too many strategy documents. For example, there are development plans, there is a university-industry cooperation strategy, KOSGEB has a 2025-2029 strategy, the other one has another strategy... In each of them, this issue is somehow included. Now, is it better to just take this subject and make it a strategy, or is it better to make it a subject within different strategies? There was a comment that such a dilemma arises.

Interviewee: At the end of the day, every organization has such activities within the framework of its own legislation, its own laws. Each institution has a strategy. But how many people read it? There is an action plan or I don't know, a realization report. I don't know how many people read it in the end. Maybe a chamber will take ownership of what I just said. I don't know, the Chamber of Engineers, the Chamber of Environmental Engineers could take such an initiative and write something like this. It may need to be a bit supra-institutional. How to do this? It would be more effective to ensure compliance with this through the Ministry. But these are very subtle things, balances. He may also be in the mood to say, "I'm going to write such an article and then I don't want anyone to hear about it". So they are sensitive issues. But this is a fact: There are 20 of the same event. You can't really understand what the content is until you attend. But maybe these are normal processes. I mean, you will attend the same event four times, so maybe you will finally understand the subject.

Interviewer: You are saying that there is something: There is inefficiency. It is necessary to provide a function that will somehow eliminate this inefficiency.

Interviewee: I mean, it would be nice if it was provided, but I didn't think about it too much. Maybe it is a normal inefficiency. I mean, you could say that it is normal to have such inefficiency. It's a bit philosophical, but... I mean, maybe this is a waste of time. I can also look the situation saying "I will make it efficient". Maybe this is the right thing to do. I don't know much, but at least from my own point of view, I see that I sometimes fall into repetition in the things I participate in.

Interviewer: I see. Maybe it can be piloted, I don't know. We just talked about pilot implementation... I mean, if a functioning, an action plan, a strategy is implemented in a region and if it is efficient, if there is no bureaucracy, if there is no repetition, if cooperation is ensured well, if the needs of SMEs are well identified and touched... Maybe by spreading it like that... I don't know, it just came to my mind.

Interviewee: In a certain way, if so many institutions are already working on this issue, we can think of it as a world policy. Surely, as time goes by, this system will work itself out. But as it does, it might be useful for institutions to have a guideline to guide them. So at least, as I said, "You can act like this here", this is important. Maybe those who provide these services can be trained. Like training of trainers, they can be informed in some way. As I said, there are already many things. There is no point in finding a new world or making a new invention here. These are systems that are already implemented all over the world: Training of trainers, pilot projects, various results, conference outputs, recommendation reports... These are things that happen all over the world. But at least in my city, I see something like this: Dozens of institutions give the same subject over and over again. They should, because what did we talk about? An effective education depends on the person. As you said, I don't know, there are maybe 200 thousand companies in X. Therefore, let 40-40 people give it gradually. That is also a solution. But of course, when you think about it, You think, "This would be more efficient, this would be more effective, there is a waste of time here, there is a financial waste here..." You think about these things. Of course, certain institutions can take the initiative. Those institutions can be ministries, associations. They can find solutions and methods. This would also be useful.

Interviewer Thank you very much Mr. X. It was a very pleasant conversation. I hope it will reflect very well on the thesis work. I wish you a good evening.

Interviewee: Good evening, thank you.

09.05.2025 (8th interview)

Interviewer: Welcome Mr. X.

Interviewee: Welcome Mr. Yakup, hello there.

Interviewer Hello, let me first give you a brief information about our interview. This interview is being conducted within the scope of my master's thesis at the University of Groningen. My aim is to understand how sustainability trainings for SMEs are conducted in Türkiye and to evaluate this process within the framework of Transformative Learning Theory. The interview will last a maximum of 45 minutes or 1 hour. The interview recordings will be kept anonymous and will only be used for academic purposes. Is there a problem if I take a voice recording?

Interviewee: No, no, you can record it.

Interviewer: Okay, so we can start by introducing yourself and your organization.

Interviewee: Okay. First of all, I wish you success in your work. I am Dr. X. First let me tell you about my education. I have a higher education. I studied economics at X University, did my master's degree, and completed my PhD at X University. My thesis topics have always been related to businesses; because of the institution I work for. In my doctoral and master's theses, I examined competition and hedging methods. At the end of 1998, I started working with KOSGEB. I am in my 26th year. I worked in many units of KOSGEB, both in the field and in the central organization. For this reason, I think I have a lot of experience both in the bureaucracy part and in the part related to businesses in the field. To give information about KOSGEB, KOSGEB, which stands for Small and Medium Enterprises Development and Support Administration, is an organization that carries out a public duty under our Ministry of Industry and Technology. Its target group is SMEs, i.e. small and medium-sized enterprises. Established in 1990, the organization has updated its support policies according to the conjuncture in the world and has tried to implement policies in line with the current situation. Therefore, as we will probably discuss in a moment, our policies and support programs are in parallel with the policies implemented by governments for international companies in the world. For this reason, we think that the institution I work for is an important institution in determining and supporting SME policy under the ministry in recent years, where we have started to see the results by conducting impact analysis on SMEs. We can move on to more specific issues. I can roughly describe it like this. It operates in 81 provinces. The service sector and the manufacturing sector constitute the main distinction. However, the organization, which started to produce policies for the manufacturing sector when it was established in 1990, has tried to serve a wider range by including the service sector in its definition after 2009. But if you ask where the real experience of the institution lies, it has a structure that carries out programs to disseminate the culture of entrepreneurship, to teach the R&D activities of enterprises in industrial production as a method, to create

this culture and to support exports; in other words, first to provide businesses with intellectual capital - more than money, to explain how to do business - and more recently, to access financial support. I don't know if this is enough, I can expand it further.

Interviewer: You are currently working as a field manager at KOSGEB, right?

Interviewee: Yes. In my 26 years of service, I first started as an expert in X. I was directly in the field. I worked in the KOSGEB service directorate in the organized industrial zone. Then I worked in the administrative building in X for 9 years. I learned the bureaucracy part there. Then, because I was not very satisfied, we have the X Directorate - again the organized industrial zone directorate. It is a big organized industry. I worked there as an expert for years. For the last 7 years, I have been working as the provincial director in X. I am in the field, implementing the policies determined in Ankara and providing feedback. We currently have a team of 15 people here.

Interviewer: I understand that your organization was established to support SMEs personally. What do your practices on the ground include? Do they include information, training, grants, etc.? Is sustainability also among the topics?

Interviewee: Let me put it this way. Now KOSGEB's motto is "to be an institution that can provide lean, accessible, digital and global services." Of course, first of all, in entrepreneurship and R&D, as I just mentioned, the first thing to create that culture is education and awareness. In most of our models, education has always been at the forefront in the 40 years we have been implementing them. There was always an emphasis on education, both in in-house in-service trainings - so that the staff could provide this service more efficiently - and in raising the awareness of the businesses that would receive this service in the field. Subsequently, since the problem of access to finance is the biggest problem of SMEs, especially in developing countries like ours, as in all SMEs, we started to implement support programs related to access to financing under the sub-heading of the ministry's policy. We have created interest-free loan support programs, which we call monetary grants and repayment on education. Of course, in the public sector, as you know, we have to do these in a certain standard and framework. We have targets within the framework of the development plan and the strategic plan of the organization. We have goals to achieve those goals. These goals also need to be measured. Therefore, in the last year, we have simplified and simplified a wide range of support programs. We have returned to a more meaningful support program. What is it, for example? The concept of digitalization of enterprises - which is a current issue in the world. Then support programs to improve their capacities and increase their resilience. With regard to sustainability, we have programs on understanding the concept of sustainability and the economic sustainability of enterprises, starting with environmental factors, and then social sustainability, which will bring their employees, who are their internal customers, to the forefront. With these programs, we try to both raise awareness and support the expenses that arise in the transformation they will make.

Interviewer: Now these were the questions I asked to understand your organization and you. Now I will try to understand the role of your services in transformative learning, so let me briefly inform you. This is a 10-step approach; it tries to move from awareness to action. You may not only think of it as training. Because as far as I know, KOSGEB is currently conducting mentoring activities by visiting businesses in the field. It also gives grants. It also organizes training and information meetings. Maybe you are also conducting other international projects. Considering all these, I will try to find out how you meet these steps. After this brief information, the first step is awareness. Now we can think in terms of sustainability or we can think in terms of your other focus. What services do you have to raise the awareness of businesses on these issues? Yes, the European Green Deal is important, the Paris Climate Agreement is important, or we need to increase energy efficiency on these issues... Do you have services and actions to raise awareness of businesses on such issues?

Interviewee: Yes, if I have to answer this question as follows: After the names of the programs to be implemented in line with the determined policy are determined, we make their promotional launches. In these launches, there are different support items depending on the program. So we don't do this: "We are announcing sustainability training, and our enterprises that want to receive it can request and benefit from this training program". But what do we do? We have a support program called "Management and Evaluation Support Program". There are three main titles under this program. Digital transformation evaluation analysis and road map support program related to digitalization services... In other words, when an enterprise wants to find out where it is in relation to digitalization, what stage it is at and what it needs to do, it can obtain a report to be prepared by DDX report researchers-consultants approved by TÜBİTAK. And KOSGEB provides support for this cost. But the main purpose is of course to encourage the business. In other words, "Where are you in digitalization?" One of the titles under this program is digitalization. The other is to get the YODA report, which we call "Lean Maturity Assessment Analysis"; we are trying to provide this service to the SME with our support program in this direction in order to get a YODA report as a whole in order to evaluate many topics such as energy efficiency, effective use of machines, how the personnel inside are managed, factory organization. The third title is sustainability reporting service. In other words, the company receives a report that determines where the company is in relation to this issue, the concept of sustainability; where it is in environmental, social and economic terms and what it needs to do... The highest support rate is currently 200 thousand TL. This is the amount of KOSGEB support that a company can receive for this service. And we expect this report to be in compliance with the Turkish Sustainability Reporting Standard, which was published in the Official Gazette in 2023, so we want it to be an officially valid report. Therefore, I guess this also falls under the scope of awareness. In other words, we do not organize direct training, but as KOSGEB, we are trying to strike the spark by identifying the needs and deficits that the enterprise will reveal by conducting a needs analysis and supporting a reporting that it can address. We also have a consortium here in a European Union project called "European Business Network". There are 10 consortia in Türkiye, we are one of

them. The most talked about issues in the European Union are concepts such as awareness, resilience, sustainability and digitalization. Through this European Union fund, we are able to turn these into training here. On top of the reporting I mentioned, we have the opportunity to have SMEs directly trained by experts - foreign or local, whoever it is - by finding that person and doing their preliminary work; rather than general participation open to everyone, we have the opportunity to provide direct training to SMEs from people and experts related to more specific, thematic issues, including topics that will include digitalization related to any metal processing, machining, which will include digitalization, which will cause data analysis. Thus, we think that we have completed a deficiency with the European Union project on KOSGEB. More precisely, it is actually not a deficiency; it turns into a package. In other words, we provide training through the European Union project, then we make them benefit from KOSGEB supports and enable them to go to reports, digitalization, YODA or sustainability reports to have a needs analysis done. Afterwards, we enable them to continue with whatever they need to do under those headings. I don't know, is it a bit complicated?

Interviewer: I understand it like this: there is awareness and there are tools that enable businesses to self-assess. While raising awareness, you are using another resource. On the one hand, you are directing enterprises to some of the tools offered by KOSGEB. Actually, this was good. The second stage was self-assessment. You actually answered both of them. In other words, I understand that there are actions to raise awareness, and there are tools for enterprises to evaluate themselves in terms of digitalization and green transformation. Well, let me ask an observation question: Some businesses have applied these pre-assessment tools in terms of digitalization and sustainability; you may know them. What kind of reactions do they give? Do they say, "Oh, I am very wrong here"? When they see the evaluation result in a business, does the reaction usually show that they know what they know, or is it an evaluation result that they are really surprised by? What would your observation be?

Interviewee: Actually, we observed both. I mean, let me put it this way: In the events we organize for training purposes, the participation has never fallen below 30; sometimes it goes up to 55, sometimes it stays in the forties. We have never organized an event below 30, which means that 30 different businesses take part in such events. Some of them, as I said, are companies that focus on more specific areas related to digitalization. Some of them come from mixed sectors to talk about sustainability. Those "some" are, for example, exporting businesses. These companies are aware of issues such as carbon emissions and carbon footprint in terms of feedback from the countries they export to, but they do not know what to do, they do not know where to start. We saw that they were having difficulties at this point and we directed them to the appropriate places. We saw that some of them were completely unaware of the issue. I mean, I don't remember if the deadline was 2030 or not, but there were some people who were not even aware that every exporting business would be penalized under taxation if it could not show its carbon footprint at a certain level. "I mean, is there such a thing?" and they also came to our directorate after the training

and said, "What can we do? This is very important for us. We want to host you in our organization." There were also companies that showed extreme interest. So this is a necessity of natural life. There are always some people who have a competitive structure; some people have a let's see, let's watch, then let's start. Therefore, depending on which of these characters the business owner has, the results can be different. But it was possible for us to see both of these situations. A person who hears it for the first time and says, "We should have started this already, we are so far behind, Mr. Manager. What can we do quickly?" or "What can we do? Or there are those who say, "We have come this far, but we need access to financing, we need a consultant who understands this business to manage the business. Can you provide us with an opening in these areas?" and seek more specific solutions.

Interviewer: I see, so now we have talked about mindfulness, we have talked about self-assessment of the business. Hypothetical questioning - we also talked about self-questioning. The next step is shared awareness. You also realize it in the industry, in the business world: Sometimes an enterprise uses a grant, and this is how this business becomes widespread in the organized industrial zone there. It spreads through peer learning, by learning from that person. Or sometimes an innovative solution, a digital solution is developed; you see, that solution starts to spread in the region or in that ecosystem. In that sense, peer learning is actually an important phenomenon. Now, do you bring businesses with similar challenges into interaction with each other? Or let me put it this way: Do you use SMEs that create success stories as a method to reach other businesses?

Interviewee: As a short answer, to open the answer: We get the biggest support from chambers of commerce and chambers of industry. We touch them in the first place. In other words, we contact the heads of the chambers and say, "We want to do such a study. The impact of this will spread within itself." According to the Turkish general cultural structure, we say to our friends who do not set out without seeing it, let us offer such an opportunity thanks to you. I focus more on the members of the board of directors in these chambers. There are usually 10-12 company owners in the board of directors. I especially say to the president, "First, we will do these works in your companies. We will start these works in the companies of your board members. If they see this, other companies in the industry will adopt these actions." Actually, this is a method of influencing each other, as you said. At least it allows it to spread very quickly within the same OIZ. When we do it in the chamber of commerce, we can get a quick response to a meeting, an event or a briefing within their own communication network. We are in a strong interaction with stakeholders, whether it is the notification of a meeting date or the rapid collection of a small survey. I shouldn't say "in action", but in interaction. As you said, some of them know their needs; they are very pleased as soon as we announce that title. Others are very pleased when the chairman of the chamber or the chairman of the council says, "Come, KOSGEB is organizing a very important event here. These are issues that will happen to all of us after a while. We need to start these." They join the process. Of course, this is a bit about Mr. Yakup, X. As you know, there are 81 provinces. There are provinces

with different effects on geography. Since we are a province in the X region, even though we are close to the X, some cycles are experienced in the center, as in a X Anatolian city. In other words, it is not possible to get the reactions in X1, X2 and X3 from these businesses at that speed. Maybe it may be necessary to explain a few times. Of course, there are also those who show a quick reflex like an X1 or X2 business. There are also businesses that are more difficult to convince, that we need to explain more. Therefore, I can say that seeing it from the other side, seeing that it is successful there - the neighbor, the other company acting - is effective.

Interviewer: Understood. Now I would like to move on to the topic of "option identification". As far as I understand, I interview with many organizations, there are many different options and opportunities in Türkiye. I mean, TUBITAK has some opportunities, development agencies have some opportunities, KOSGEB has some opportunities, model factories offer some services. Many institutions, organizations, chambers, stock exchanges, technopolises provide consultancy, training, mentoring, grants to businesses. But are these businesses aware of their options? Or when they come to you, if you cannot afford them, can you direct them to other institutions? What is your situation here?

Interviewee: Businesses are actually behaving a bit like ostriches; they have their heads buried and we realize that they are not aware of government grants or favorable credit opportunities in some areas. In Türkiye, there used to be a practice called "KÜSİ" (Public-University-Industry Cooperation). What were we doing? The Development Agency, the Provincial Directorate of Industry and KOSGEB would come together from time to time and visit facilities. With a delegation of 4-5 people, we would go to the enterprises we had identified and make explanations. I am telling this more specifically so that I can answer your question... There were companies that said, "This is the first time we see all five institutions of the state in front of us." This is a very good thing. This is a very good thing. The agency tells about its own activities, I tell about mine, the Directorate of Industry tells about their own supports that they can use. But we can say that there are almost no companies that say "I already knew about this and used it". Let me talk about another issue. Some companies do not prefer banks for access to finance. With the development of banking, those companies have begun to realize that there is an alternative to their own capital for financing needs. It seems that government supports need to be explained more. Companies generally know about the investment incentive program. Why? Because the Ministry has been providing exemptions for years, so this is very well known. Or they know about the fair supports, because they are familiar with them because they go to many fairs abroad. But other than that, they are not very familiar with supports related to digitalization and environmental transformation, such as "look, you can create a data set here and do big data analysis, eliminate your mistakes, increase your efficiency". We had a support program titled "circular economy" under the Green Industry Support Program. When we said "we provide you with funds " to enterprises that want to engage in a transformation related to waste, that want to increase their efficiency, they were very surprised. I mean, they know the general things, but more

specific support for digitalization, resilience, sustainability, etc. needs to be explained more. Also, no one comes and says "I need this". When we introduce ourselves, they say "huh, this is suitable for me" and things progress in that way.

Interviewer: I would like to move on to the "action plan". Although you shared a little bit. You said that we are directing some reporting. You said that businesses see their own situation in digitalization. After these reports, are businesses presented with a road map, an action plan, or is it only in the analysis?

Interviewee: Now it's like this: There are capacity building and digitalization support programs up to 20 million TL, which we call "reported support", which can first receive services from the Management Evaluation Support Program, which we call "YÖNDE", and then go to - in the form of loan interest support. There is also a 50 million support package for exports, which we call the "Global Development Support Program". In capacity building and digitalization supports, we absolutely require this digital roadmap and the "Lean Maturity Assessment Analysis" report, which we call YODA. The enterprise must obtain this report before applying for support. This means the following: The enterprise has had its needs analyzed and a road map drawn up. The expert has guided them on where to start, what to do, which expenditures to make, in which unit inside. As you know, these reports are detailed and each one contains 10-15 topics. After receiving the report, when he comes to the institution for support, among the expenditure items, we want him to receive the training package provided by these model factories, as in the case of capacity building. Out of that 20 million support, the package costs around 500 thousand liras. This means this: You have made the report, now we will follow the changes you need to make in this way. We are waiting for you to do it. For this, we allocate you a line item within that support program. This is the structure of the capacity building part. As for digitalization, we already evaluate the suitability of these support programs through a board. The enterprise that has received the digitalization road map report learns what it needs to do from production to supply chain, from inventory to sales-marketing and financing with a 34-page report. During the board, we ask these companies, "What activities are there? Have you really determined these expenditure items according to these activities?" Accordingly, we find it appropriate or not. So the analysis reports do not stay in the air. They need to be put into practice. We look at the expenditure items so that they can receive support. Those that are not suitable are rejected. In other words, in a way, we say "you have the report, now start this transformation". "Look, we support you, we provide state support."

Interviewer: I see. Can I put it this way: The business gets an analysis - whether it's about lean transformation, green transformation, digital transformation. In fact, these analyses are a prerequisite for using the support. And you evaluate that project: Has it been put into an action plan, have the expenditure items been written down? Therefore, actually making that action plan is like a prerequisite for using the grant. Do I understand correctly? Now I would like to ask this question: Do you have vocational

knowledge and skills acquisition activities such as knowledge, skills acquisition, certification? Or do you direct enterprises to other institutions in this regard?

Interviewee: We don't have any certification activities other than our entrepreneurship supports. There, we do something like a certificate of participation or achievement. Entrepreneurship trainings, which are a prerequisite for business development and business establishment support programs carried out electronically, must be taken. This is a video training of about 10-12 hours. From time to time, an exam is held before moving to the next stage. There are exams within its own question system, question set. When the training is completed, a certificate is given that the basic entrepreneurship training has been received. Apart from this, we do not have any certification work, but we can provide guidance. The fact that the company requests such services within the expenditure items in our project-based support program regarding the documents it needs is actually an indicator of awareness for us. In other words, it is a sign that the enterprise knows what it needs to do. Most of the time we look at the appropriateness of the expenditure items. If there is a document they need, we inform them where they can get it. But other than that, there is nothing else we do.

Interviewer: Yes. Now we are in the eighth stage. The stage here is actually the test stage, that is, the pilot application. I would like to ask about that, but let me ask my question like this: Now, as you know, digital transformation and lean transformation are not topics that can be applied to the enterprise at once. Because, for example, the enterprise has 200 employees, it has multiple lines, it may be difficult to change 7-8 lines at once - especially when there are pending products. Therefore, it may be a more rational method to apply it to one line and then expand it later. At least they can learn the results and act accordingly when applying it to other lines. Do you pay attention to this while encouraging these transformations, providing trainings, conducting analyses, or do you wait for the transformation to take place directly?

Interviewee: Actually, we are aware that the expectation of direct transformation depends on a process. That's why our shortest support program lasts 8 months; it has two periods. The reason why we ask for a report is for the business to understand that this process is not that simple. The expert who does that work first listens to the company while analyzing. "What do you want to do?" he asks. Most probably - because I read the reports but I have not been in the field with that consultant - when you ask "What do you want to do?", if the company answers "We want to change the production line", both the company knows how long it will take, and the consultant somehow explains how to do it. From the design as it should be, where the raw material will enter, where it will be packaged, etc. Therefore, the company already knows that this will not happen from today to tomorrow. If it doesn't know, the consultant is already telling it. As a result, as the institution that reads these reports and evaluates the applications of companies, we are also in a process of change. We predict that these things will not happen from today to tomorrow. But how do we understand this? The signs of this are now turning into official documents. We read the YODA report, we read the DDX report, we read the digitalization report. The man has put 15 headings there, with 2-3

sub-headings under each heading. All actors somehow know that this will not happen in such a short time. Who knows best? The consultant who comes to this company. Secondly, I think the company itself. Because he is the one who will bear the cost. He also knows what will happen to him, what is missing and what is too much. Thirdly, those of us who implement this support program - everyone from my expert to the manager who evaluates why we are providing this support, what purpose it will address... We are actually evolving, improving ourselves, learning. Therefore, to answer in one sentence: Everyone somehow knows or learns that transformation will not happen in one day.

Interviewer: I see. Now you have encountered hundreds, maybe thousands of SMEs throughout your career. So I would like to ask a question based on your observations. Now, if an enterprise has used public resources, accessed financing, done an EU project and somehow successfully completed it; does that build trust in them? Are they a bit more proactive than other enterprises in making such transformations? In other words, does this contribute in this sense?

Interviewee: It is definitely happening. Anyway, I just talked about entrepreneurial culture and R&D culture in the speech, it's a culture. So there is a starting level and there is a development. If companies don't know how to plan and program, they learn how to do this thanks to our support. They learn to budget, to create expenditure items, to set targets, to create activities to reach that target, and to follow up and report them. Therefore, the more they come to us, the more they improve. At least I know this: There are businesses that start with KOSGEB support, say "R&D is in TÜBİTAK", and then try to access international funding after doing two or three projects in TÜBİTAK. Therefore, the answer to your question is yes, it contributes to companies in a very positive way. We need to do more; I can easily say this as a public official.

Interviewer: Well, let's say the business has implemented a project. What is your observation in terms of permanence? Are they limiting these efforts only to the duration of the project, to the time it takes to get funding? Or does this breakthrough enable enterprises to transform on a broader scale and make lasting changes? How do you observe this issue?

Interviewee: Mr. Yakup, actually there are equivalents for this in the world. Impact assessment analysis needs to be done, Especially if you are in the public sector - and the private sector should also do this, if a budget is allocated and spent, the targets at the beginning of an event and the realizations at the end, maybe a year, two years later, what are the bigger impacts. I can easily say that until the last ten years, there was no such measurement of government incentives. KOSGEB is one of the first institutions to try to evaluate this. I was part of the working groups formed on this issue years ago - probably ten years ago. I have lived through a period in my life when I knew that impact assessment analysis should be done and worked with pleasure. We need to measure this. We need to include these methods in our support programs. The company should know that it will be measured, so that it adapts that culture. It should be

able to create a budget on its own - with or without KOSGEB - and see what to look for when it realizes a project. We can see that the financial support we provide in our recent programs such as entrepreneurship, R&D, SME Development Support Program (KOBİGEL) and Techno-Investment has reached the company's goal. Why? In these support programs, there is a structure we call the "completion board". Just as we have an evaluation board at the beginning of the project, we also have a "completion board" after the project is over to evaluate the outcome of the business. "What did you experience in this process? Why didn't you achieve this goal? What challenges did you face after developing the prototype?" And most importantly - the question we ask everyone the most - "Has this prototype been commercialized?" "Were you able to get a preliminary contract, any order agreements?" So we follow up at that point. And we attach great importance to this. We cannot know what we are doing if we cannot measure the effectiveness of the support.

Interviewer: We talked about many issues such as integration and trust building. My questions in the last part will be to get your thoughts on the general functioning in Türkiye. In this sense, I would like to ask the following: Now we generally call it "business sustainability education", but in fact it is transformational learning in a broader context. The ways of this can be mentoring, grants, training, etc. And as far as I observe, many ministries are involved in this. There is the Ministry of Energy, the Ministry of Environment, the Climate Change Presidency, the Ministry of Science, Industry and Technology. Many institutions and organizations have taken certain tasks and are carrying out these tasks. For example, the Ministry of Trade is carrying out the Green Deal process. I would like to ask this question: Does the fact that so many organizations are equipped with different tasks in this way cause confusion for SMEs? Secondly, does inter-institutional interaction and coordination work effectively? What is your observation?

Interviewee: So, if I have to say my opinion without binding the institution, I don't think there is an interaction. Why? Most recently there was a package where the Ministry of Agriculture announced that businesses that will do manufacturing or R&D in the field of agriculture can access financial support from the Ministry of Agriculture by creating a fund. It has been about two-three weeks, if I remember correctly. However, KOSGEB is an institution that has been under the Ministry of Industry for forty years, independent of TÜBİTAK, that is, an institution that has been trying to create a culture by trying to support not academic R&D, but R&D to be carried out by industrialists who will turn towards commercialization. This was taken away from us under the same ministry and given to TÜBİTAK in the last year. This is another issue. In other words, it feels like each ministry is putting on its own show in the midst of private affairs. There is no coordination. I think that all enterprises that will support industry and technology - whether it is agriculture, animal husbandry, machining, or something highly technical like software - should be managed by a single ministry. Because it is a waste of resources. Within the Ministry of Agriculture, it is not clear how many units there are to evaluate these issues economically. They mostly

work in the fields of agricultural diseases or animal husbandry. I think the economic model part of this work should be carried out by the Ministry of Trade or, in my opinion, directly by the Ministry of Industry and Technology. But today, even the Undersecretariat of Maritime Affairs has the authority to provide funds to enterprises that will carry out R&D in the maritime sector. I think these are disorganized and have less impact on the dissemination of the policy. Agricultural policy, issues such as making agricultural land more productive should of course be carried out by the Ministry of Agriculture. KOSGEB or the Ministry of Industry has no responsibility here. But I think KOSGEB should step in at the point where the farmer there can make his product more value-added, turn his milk into cheese, his cheese into better quality cheese, and KOSGEB should be the national address. I don't know, I could go on and on, but I think it shows my point of view. This is already what we call "specialization". It is an approach that has become widespread, established, theoretically studied and implemented in the world. It is theoretically accepted. Specialization should also be in state support. In other words, I think not every ministry should provide everything.

Interviewer: When we look at it, there is actually a huge amount of knowledge. I mean, every ministry, every institution is working on something within itself, there are great studies, etc. When you look at it from this point of view, it is an advantage: there is a lot of information. But on the other hand, since these studies are not coordinated, the same study is perhaps done twice. It also creates confusion for the beneficiaries. I have the impression that it can cause not knowing where to go. I don't know, what do you think?

Interviewee: Exactly, your point is very true.

Interviewer: Now I would like to talk about language. There was a comment: "When we talk to SMEs, we say circular economy, we say sustainability reporting, we say digital transformation, we say Industry 4.0... These concepts are very foreign to businesses. They may hesitate, they may be afraid to enter the process. Therefore, they may be late for transformation." Do you think this language should be simplified? Or is this kind of language mandatory for technical transformation? What would be your opinion on communication?

Interviewee: I think the right word is "communication". If what we mean by language is the Turkishization of English concepts, this can be worked on. It's not my field, I don't know, but I would like to say this: For example, digitalization, for example sustainability... The people who will explain these concepts must first internalize these concepts. You can convey a subject you know well to the other side in a simple way. In other words, if my expert has not internalized digitalization, how can he give examples to the business? The business can also see what is under this concept. I look at it a bit like this. The people who will transfer this work must first internalize this work. "Brother, if you want to make the time between the input and output of raw materials on the machines you produce faster, if you want to increase

production... You install sensors in these processes, you do data analysis. An engineer comes along and says: "Look, there's a loss of energy here, there's a loss of time here, the worker here is doing this... If you do this instead of that, you will increase the amount of production." That sensor, collecting and analyzing that data with software... When you explain this to the enterprise, they say, "Oh, this is digitalization." I don't know if I can explain it. I don't know if I can explain it, but if there is an employee who says we have digitalization support and says "we support sensor, computer, automation expenditures up to this amount", drinks his tea and gets up in 10 minutes, that would be very bad for us. In other words, it means that they have not understood and explained digitalization. At that point, I think that those who explain this business should have learned these concepts enough to reduce them to simple examples and explain them to the other party.

Interviewer: I got the same comment in my interview with X Model Fabrika, where he said: "Yes, the business is scared, but if you explain to the business in a language they can understand what they will gain and what this does, then they may say 'this is it' and take action." Your view is similar to this, but you added something else: You say that in order to explain it, the person providing the service needs to internalize it and know how to convey it. Right?

Interviewee: Yes, you said that. I think this is very important.

Interviewer Okay. Now there were some comments about the SME perspective. I would like to get your view. They say two things are important for the SME in this kind of transformational learning: If there is a regulatory obligation - if there is a threat that if you don't do this, you can't export, you can't move forward... If you do this, you will get grants, you will get support. It sounds a bit like a "carrot and stick" approach to me. But are these two elements, legislation and grants, really important? Do they constitute the first starting point for SME transformation?

Interviewee: Let me put it this way: I am a bit more inclined to go into the causality of things. Our businesses are trying to postpone some expenditures due to the economic structure in Türkiye. What do they say? "I don't want to spend money on anything that is not acute." Therefore, the practical public administrator who knows this says: "Look, you will get into trouble in terms of legislation. You need to prepare." In the same way, we say: "Look, there is a fund set aside for this. Come and apply for it." In other words, this is the rationale underlying the model you describe. The boss cannot explain to the general manager. The production manager cannot tell the head of the factory. And the boss says: "Don't make me incur any costs. When will this happen? 2030? That's six years away." You know what I mean? In very crude terms... We need to explain to companies that they can only prepare for this transformation in six years. It needs to be explained as a process that will take several years. First awareness, then training, then internalization, then implementation. In other words, it is not a matter of buying the machine today, putting it into operation and starting production. We need to explain this to the industrialists on the field.

Like raising awareness. Since we don't receive any premiums, when we present state support to businesses, they say, "This is for your benefit. You don't understand, brother. Look, you will be in a legislative bottleneck. There is a resource here. Come and use it." This is an approach that we can roughly describe as "Come and use it. But I think sociological and economic conditions underlie it. It is related to the realities of the country. The business owner, the boss ultimately does not want to find funds for non-acute expenditures. I can say it is because of that.

Interviewer: I see, so you say that's the reason. These tools are used as a practical approach in the public sector or in the chambers and exchanges that provide services.

Interviewee: Let me also add this. For example, we currently have loan interest support. The theme is digitalization, capacity building, global development. Maybe not next year. I have been working here for seven years. I have been in and out of many companies. "Mehmet Abi," I say, "look, there is such a resource at KOSGEB. You need this too. Okay, there will be problems like carbon footprint etc. in 2030, but why don't you use it when there is such a fund?" This is not a coercion or a threat, this opportunity may disappear. KOSGEB has such a resource, you may not. "I don't know how to define it, but it exists. Fill it while the water is flowing. KOSGEB changes its policy, two days later the message "this support is no longer available". Last year we had R&D support, this year we don't. If one day tomorrow KOSGEB does not give the support program related to digitalization and your need for digitalization emerges - and it exists now - we can put it in front of you with a report. Make a report for yourself. Make a digitalization road map report. You will see. When there are resources, it is necessary to use them. This is actually how we see the way of transferring state support to industrialists.

Interviewer: Now I would like to ask the last two questions Mr. X. I don't want to take too much of your time. The first one is this: I received a comment that it is important for a business owner to participate in such events. I would like to know your opinion on this subject. Because I received a comment like this: When an engineer attends an event, an information meeting or a training - about digitalization, sustainability - it may not yield results with an approach such as "If I do this, I will have more workload, the salary will remain the same, why should I do it?". But if the decision-maker of the business is influenced, if the manager, the owner is convinced of this transformation, then it becomes more permanent. But they sometimes cannot participate in such activities due to their workload. How do you think we can overcome this problem?

Interviewee: I absolutely agree with this statement. Even the employee's narration can be incomplete; they can even manipulate it. I don't want to offend them, but we have experienced situations where this has happened, because when I met with the boss separately after the meeting, I received feedback saying, "That's not how he told it to me." When employees attend, even if they don't want to manipulate, they may not fully understand the issue and may give incomplete information to the higher-ups. The solution

is this: As you say, it is not possible to organize meetings of 100-200 industrialists even in the industrial chamber. I have found a solution to this in my own city: I do a preliminary study on digitalization. I first get in touch with the companies that might be involved in digitalization and ask, "Would you participate in such an event?" The answer is usually positive. Then, on a common calendar, I do the informing myself rather than the staff, because we have the same effect; we experience what the industrialists experience. As I also feel, sometimes due to distraction or other reasons, my colleagues may be incomplete. They may skip the parts that need to be emphasized, or they may not be able to create an impact on the other side because they do not explain it as it is. In other words, my expert friend may not say, "Your costs will be reduced here." The other party may say, "What do I care?" But at the point of doing our job well, I go out with that energy and try to convey something to companies by empathizing. This is the solution I found. I prefer to make groups of ten to fifteen people and explain it myself. Of course, maybe this cannot be turned into an institutional policy, but at the end of the day, they want equivalence. In other words, "If the boss is coming, at least the provincial director should be there." Or if there is a new launch of digitalization from Ankara, a department head or general manager should come and explain it to the industrialists first-hand. In this way, we need to take actions that can attract bosses. This is what I am trying to do here.

Interviewer: That's actually very good. I mean your comment was important. You went beyond reaching out to the boss. You will reach out, but how will you reach out? As you said, if he doesn't send his own employees, then go to him, talk to him one-on-one, right?

Interviewee: Yes.

Interviewer: My last question will be about the national strategy, but I would like to ask it not in terms of sustainability education, but in terms of transformational learning of SMEs... I mean, covering digitalization, sustainability and all other issues... It was said that SMEs need a national strategy for all these transformational processes such as increasing their knowledge, analyzing themselves, drawing up action plans - apart from grants. Would you agree with this?

Interviewee: Actually, I think there should be a national policy in every field - in education, defense, foreign policy, industrialization. The most talked about topics - artificial intelligence, cryptocurrency, etc. - have entered into all applications. But the fact that we still do not have a clear policy or legislation in these areas both creates problems and leaves the door open for malicious intentions. The lack of legislation in the country causes other problems. But there is another thing I care about: Under national policies, maybe the public sector is trying to do this, but the reason why it may not work as expected may be regional differences. I think that each region should be evaluated according to its own potential and support programs should be created accordingly. is an example we have experienced: There was an "SME Development Support Program" under the heading of digitalization. In order to increase the capacities of SMEs, themes were determined, and the projects of the companies were evaluated and financed according

to these themes. This call was issued for three consecutive periods, always with the theme of digitalization, and was open to Türkiye as a whole. But if we think about it, in a country with 4 million enterprises, even though 500-600 thousand of them are manufacturers, only 1000-1500 applications were received. I think we could not run an effective support program. Why is that? Because we expected Industry 4.0 projects when the companies in Artvin, Hakkari, Bingöl were at industry level 2.5. And we could not transfer support to these provinces. When Artvin is at industry level 2.5, we should be able to say, "Let's direct automation, not digitalization". Let the man go from 2.5 to 3 first. In other words, regional distinctions should be taken into consideration. The main theme could be technology above: Artificial intelligence, integration into production systems. But the capacity of enterprises in the region to use artificial intelligence is not the same as in Izmir. If we constantly issue support programs to fund Izmir, Artvin will always lag behind. So how will we develop there? This needs to be taken into consideration. I think regional support policies should be differentiated into sub-headings under the main heading.

Interviewer: I see. Mr. X, it was a very pleasant conversation. Thank you very much for your contribution. I hope this study, this interview will lead to good things.

Interviewee: Thank you again. God willing, God willing. It was very nice. I also enjoyed our conversation. I hope it will contribute to your work. I wish you success. I hope you complete your work successfully. Mr. Yakup, I will always try to help you if you need to update or complete something afterwards. I wish you success.

Interviewer Thank you.

Interviewee: I wish you success. Thank you very much.

12.05.2025 (9th interview)

Interviewer: Ms. X, good morning. You are very welcome.

Interviewee: Hello, good morning. We are very welcome.

Interviewer: First of all, thank you for accepting our interview. I will give a brief introduction and then we will begin. This interview is part of my master's thesis at the University of Groningen. My aim is to understand how sustainability trainings for SMEs are conducted in Türkiye and to evaluate this process within the framework of Transformative Learning Theory. Our interview will last for a maximum of one hour. The information you provide during the interview will be kept anonymous and will only be used for academic purposes. Is there a problem with audio recording?

Interviewee: No, you can have it.

Interviewer: Well, then we can start by getting to know you and your organization.

Interviewee: Sure. I am X, a graduate of X University, Department of Environmental Engineering. I have been working as an environmental engineer at the Directorate of Environment and Climate Change of X Chamber of Industry for about 6 months. X Chamber of Industry, X for short, is a well-established professional organization representing the industrial companies in X, working to increase the competitiveness of its members and having more than 10,000 members.

Interviewer: Now most of these members of yours are SMEs, right?

Interviewee: Of course. The majority of our members are SMEs, that is, small and medium-sized enterprises. Therefore, SMEs are actually one of the most fundamental and prioritized stakeholders of our organization.

Interviewer: I see. So, what are the services that your chamber offers to your members in general? Do they include trainings? In terms of trainings, do you provide trainings on sustainability?

Interviewee: Actually, we are in close and continuous communication with our members and indirectly with SMEs. Through field visits, we both identify their needs and offer support mechanisms to develop solutions to the problems they face. At this point, especially as the Directorate of Environment, we act as a solution partner in a TÜBİTAK program, TÜBİTAK 1831 Green Innovation Technology and Mentoring Support program. In this framework, we apply a mentoring model that evaluates the current situation of enterprises with analysis tools and is especially exemplary. Thus, companies are supported to comply with both national and international legislation and to transition to greener production processes. In addition, we diversify our trainings in the form of trainings, seminars and panels. In addition to this mentoring program, our target audience is usually senior managers, factory managers or technical

employees responsible for environment and sustainability, engineers, people in the quality department. We give more importance to the seminar and panel format because we invite representatives from public and private organizations to these seminars. The events can be face-to-face or online. But we usually hold face-to-face events in X's assembly hall. There are both presentations and interactive question-and-answer sessions. In addition, thanks to the mentorship program, we also carry out field visits. There, we are in one-to-one contact, both listening to their problems and talking about our own projects. Here we try to help SMEs and of course our members.

Interviewer: I see. Then I understand that you are doing all this work, both with the training, seminar, panel and mentoring you provide, ultimately for the training and capacity building of enterprises. In this sense, I will ask some questions about their content. Now the theoretical framework of the thesis study I am conducting is Transformative Learning. There are 10 stages of this. I am actually trying to investigate to what extent these stages are met, where they are missing, or where institutions can work more effectively. Therefore, if we quickly go through this aspect, we can better understand the services you provide. First of all, awareness raising. In the trainings, seminars, panels or mentoring activities you provide, do you provide information about the obligations of this new era - the new era brought by sustainability? For example, there is the European Green Deal, the Paris Climate Agreement, there are legislative problems that businesses may face in the near future. Is there any content on these issues that will make them think, "This is important"?

Interviewee: Yes, in fact, we are constantly emphasizing that sustainability and especially green transformation issues related to the environment are an inevitable transformation area for these businesses. Both in our field visits and one-on-one meetings with them, as well as in the seminars and trainings we provide. In the panels and seminars we organize, we try to reveal the possible effects of international developments on SMEs with concrete data. For example, there is SKDM; exporter companies will be affected by this. We made a calculation. For example, there is the Industrial Emissions Regulation. Almost 6,000 out of 10,000 of our members will be directly affected by this regulation. In these speeches, we make explanations to them with concrete data based on the research we have done ourselves. Especially within the scope of the European Green Deal, we communicate intensively with exporter companies. For example, we say, "This SKDM will come into effect as of January 1, 2026. Yes, there was a voluntary work until this time, but after January 1, it will be mandatory. You are also subject to priority sectors. Therefore, you need to prepare." We explain, "We are here to help you avoid these additional taxes and to help you get to a better point in terms of both economic and green transformation." We talk about these things all the time. We explain how these economic situations can affect them. We are actually trying to create an awakening. Sustainability is no longer a choice, it has become a necessity. The companies that transform quickly will struggle more easily in the future. Others will have more difficulties. That's why

we try to ensure that they are constantly exposed to these events by constantly placing concrete data in the presentations or inviting experts in their field so that they can prepare in advance.

Interviewer: What does this SKDM stand for?

Interviewee: Carbon Regulatory Mechanism at the border. This is actually something that the European Union has put forward, so the European Union says: "Companies that export to me have to report to me their carbon footprint and how they are doing as of January 1, 2026." It wants quarterly reporting. Of course, this will have certain limits. There are priority companies; 5 sectors are currently affected. If a certain limit is exceeded or if carbon footprint reporting is not done, if there is a deficiency in reporting, they will be subject to a carbon tax. It is mentioned that these processes, especially commercial processes, will be in trouble.

Interviewer: I know that they have three separate emission reporting, Scope 1, Scope 2, Scope 3, but will they report on all three issues in the Border Carbon Regulation?

Interviewee: As far as I know, actually Scope 1 and Scope 2 are the mandatory ones. Because Scope 3 is a little bit more indirect emission; it is more difficult to calculate, especially because it is related to the supply chain. Right now it is already very difficult to collect data from the supply chain. In fact, this is the part that everyone struggles with. Therefore, Scope 3 is a bit more protracted. But for 1 and 2, this account is directly requested. But in the meantime, Omnibus has been published. They are constantly making changes. There is a constant update coming there as well. They say that they will try to provide convenience but I don't know to what extent they will provide convenience. Because it is constantly changing until 2026, I am not sure about that.

Interviewer: So in Omnibus, they will no longer provide sustainability reporting. More precisely, they increased the number of employees from 250 to 1000. But the deadline was probably extended there; it was moved from 2026 to 2028 or something like that. I see. I would like to ask you this. While I'm thinking, let me ask this first. Which are these 5 sectors?

Interviewee: Cement, electricity, hydrogen (just added), fertilizer, iron and steel, aluminum. I think I counted them all.

Interviewer: Got it, I've moved on to the second question: awareness followed by assessment. Now, do you have a tool for businesses to assess themselves in terms of sustainability? Do you offer this to SMEs?

Interviewee: Of course, we verbally encourage enterprises to go back and assess their situation, but this is not done with a self-assessment formula. But we have two analysis tools in this TÜBİTAK 1831 program. One of them is Image developed by the Ministry of Industry. It is called the digital transformation observation tool. The other is EKOREKA, developed by the Technology Development

Foundation of Türkiye. We have actually divided this into two: one for digital transformation and one for green transformation. This Image part is actually included in the package in our mentorship program. We visit there together with academics. There, companies evaluate themselves in terms of digital transformation. For example, he says: "What is the ratio of white collars to blue collars?", "What is the number of employees with PhDs?". In other words, there are a lot of questions that this company evaluates itself. Companies even give themselves points. For example, a company gave itself 3 points for R&D opportunities. It writes an explanation of this. Our experts go and talk to them and analyze them. Maybe the experts can give 5 points or 1 point, so first the company evaluates itself. Then the academics check again and offer an average score. In these seminars, for example, if the topic of energy efficiency is discussed in one of our seminars, questions such as "What is the status of energy efficiency in your own company, are there areas open to improvement?" are asked. But these questions are always asked verbally, through the conversation or question and answer session. So these questions, apart from Image, are always verbal outside of the TÜBİTAK program. We don't have any other form or evaluation tool. But for the companies that enter the TÜBİTAK program, we make an evaluation of how they are doing through Image, which is part of our package. There, we actually understand where they see themselves, but where they actually are.

Interviewer: Did you say IMIC in these TÜBİTAK initiatives?

Interviewee: Image. Actually you can think of Image as a picture.

Interviewer: Ha, Image. In short, is digitalization measured or green transformation?

Interviewee: There is also the green transformation part, but it is not exactly both. In other words, the situation of the company is evaluated in the focus of digitalization. Now there is a site visit in the tool we call EKOREKA. Again, the expert comes, looks at the situation, what can be done for green transformation, and a project proposal is presented. This happens within EKOREKA. This is the tool made by TTGV. The full name of Image is a long name, if not, I will check and send it to you. There, it is an area focused on digital transformation, digital and where the company evaluates itself. Human resources are also included in this. Various questions can also be asked, such as rates and gender distribution.

Interviewer: I see. What was it like with TTGV, the Technology Development Foundation of Türkiye? Eco...?

Interviewee: EKOREKA. EKO R-E-K-A.

Interviewer: We are making transcripts of these.

Interviewee: Of course, of course, I can forward the documents to you if necessary.

Interviewer: I'm ashamed to say, sometimes what is said in writing may not be fully understood, that's why I asked this question. Forgive us. So, I understand that you conduct assessments on both digital transformation and green transformation through TÜBİTAK and TTGV. I also understand that you encourage businesses in this regard by making the assessments verbally during seminars and panels. But I understand that the businesses included in this program are a limited number of your members.

Interviewee: Yes.

Interviewer: Okay. Now, you come across SMEs in this process. You also encounter those who are doing self-assessment. As a result of this questioning process, do they have transformations of emotions such as "I really need to take action, I'm so bad"? How would you evaluate this issue?

Interviewee: I actually go on a lot of field visits. Especially to introduce the TUBITAK program, and we are interested in questions such as what is the environmental situation of the companies, do they need anything. We make a general visit. We close one day of the week. It can be three companies or seven companies. This depends entirely on the program. There is a very sharp distinction in field visits. Some companies are aware. They have prepared in advance. Others don't care at all. There are those who say "I will close the factory if necessary, I cannot deal with the tax" or "I do not export to Europe". We are mostly trying to add our own network to this middle part. Because one side has already made its preparations, we cannot convince the other side. But the majority of them are undecided, and I realized this: We can really guide and convince people in our conversations. At that point, they say, "Yes, we cannot escape from this. We really need to do it." For example, let me give you an example, we visited a company. When we mentioned SKDM, they pasted a piece of paper on the board. They are actually their own customers... I can say that foreign customers make our job easier. Their own customers made a request. When we mentioned SKDM, they said there is such a thing. He opened it and showed it to us. We took the paper that the customer asked for and they printed out, and we sat down and explained it. Then they said, "Yes, we really need to do something." They are already constantly questioning themselves. But there are also those who give up because of economic conditions. There may also be those who say, "We have to start this work, let's start." I exclude those who are not interested, except for those who say, "We don't want it, we don't need it." We have witnessed to a great extent that they are constantly questioning themselves out loud. Indeed, they say that this sustainability work belongs not only to big businesses but also to SMEs. But there may be some who react harshly here, partly because of the cost and the difficulty of transformation.

Interviewer: I see. Now another topic: peer learning. I also observe from my own professional life that when an enterprise starts exporting, or when it uses an effective fund, or when it reaches an international fund, you see that the enterprise in that industrial site, in that organized industrial zone, may want to do the same thing. This is even how clusters can emerge. This is how success stories become widespread.

Therefore, businesses learn from each other. In your own programs and services, do you offer spaces or services where you bring together businesses that are experiencing the same difficulties and enable them to interact with each other?

Interviewee First the oral part and then the presentation part. Verbally, for example, we give information about the program, we talk about it. They ask us the following: "Which company has participated in your program? Can you give us an example?" We say: "We share this on LinkedIn, you can look at , but we are at this stage in this, that, that company." Since they have already received project acceptances, there is no problem in sharing their names. We share them. Some people say, "Oh, I am the supplier of this." Or when we say, "We are doing business with this company," that sense of trust is ensured. Because the companies are in the same organized industrial zone, they know each other and are familiar with each other's work. This creates a sense of trust. We have also had people say to us, "Company A has entered your program, we had a chat last time, I want to enter as Company B." Apart from this, we will have a panel at our face-to-face events. There will be a sector representative and people from public institutions as panelists. We also invited one of the leading companies from the cement sector so that they can share their own problems or experiences. In addition, you mentioned clusters; for example, there is a community of foundry industrialists. We talk to its senior management and ask them: "Can you share your experiences?" This is in the form of a question and answer. In that part, we have companies on our mailing list that we have worked with before and have examples of good practices. We also say to them: "We have such an event, we would be very pleased if you come." They come and share their experiences. We should not only think of this as a panelist. There is a coffee break. A lot of people are chatting on their feet, both networking and sharing their experiences. We have benefited a lot from this one-to-one interaction. Companies say, "If this one is doing it, let me do it too. This one has benefited, so can I." We try to implement this at every step, from verbal one-to-one conversations to panels and seminars. Because the industrialist's state of "taking an example" - "My neighbor is doing it, why shouldn't I do it? He has benefited, so can I." - is very high. That's why we try to appeal to them.

Interviewer: Okay, now you know that there are many institutions and organizations in Türkiye that provide services to SMEs. There is TUBITAK, KOSGEB, chambers, technocities, national-international projects, etc. Therefore, the enterprise can actually have many options. Sometimes it needs to obtain a certificate, sometimes it needs to turn to another fund instead of one fund. In your dialogues with enterprises, do you offer them options for sustainability?

Interviewee: I mean, we don't give direct instructions like "do this in this way". Our field visits take half an hour - forty minutes. During these visits, if a company does not have a SPP(Solar Power Plant), most companies install SPPs, we say, "You can also consider this". But under the TÜBİTAK program, experts come and examine you and see what can be done. You can proceed with their project proposals. When we go to , we are actually talking in a completely apocalyptic way. "You can do this, you can do that."

But we cannot know what can be done without a detailed analysis. So we do not make it as an official suggestion. It can be in the form of guidance to the program. Sometimes there are consultants we know and work with. We say, "There is such a company". But we never make a direct referral to a company. Because we are trying to serve 10,000 members in the same way. If we refer to a few companies, it would be unfair. That's why we only make suggestions by saying "This company is working on this subject, if you want to investigate". But as I said, this part is a bit more verbal. But within the scope of the program, specific to each company, each company has a different working model, different conditions, some have SPPs and some don't... Experts research and present project proposals. Before these project proposals, the company is interviewed: "Which area do you want to invest in, what do you have in mind?" A site visit is made and a project proposal is presented based on the common point between the two. But as I said, this is all about the consultant and mentoring part. What we do one-on-one is not a formal proposal. It is just a verbal information.

Interviewer: Is that what you say is under this project program?

Interviewee: Because project proposals are presented in the EKOREKA section. So the environmental engineer travels around. Whichever one from our consultant pool is matched, whichever one is suitable, this is a work they do.

Interviewer: There you say that sometimes there is a choice in the project.

Interviewee: Of course, of course. Anyway, there is not only one project, it can vary between three and six. In the last reports, five or six projects were always proposed...Whichever one the company wants to move forward with...They are given options saying, "You are in this situation, this can be done, there are these possibilities." But that is completely at the discretion of the company.

Interviewer: So, both within the scope of these programs and normally, do you provide action plan, roadmap services to businesses that are in particular need or have potential?

Interviewee: This always leads back to the TÜBİTAK program. But the main purpose there is to create a road map. There is a Ministry of Industry program, abbreviated as YDDP. It stands for: Green Transformation Support Program. It is a program that has been announced for a few months. It also says there: If companies make a minimum investment of 30 million TL - this can be land purchase or installation purchase, the scale is very wide - a grant of up to 50% is given depending on the success of the project. The rest is supported by a 2-year deferred loan in TL. It is actually a very advantageous program. But it also says there: You need to have a road map to apply for this. We can also call it an action plan. So you cannot apply for this program without a road map. The new grants have actually started to evolve towards this road map request. We also say: "In the first place, let the company be x-rayed and analyzed. Let's know how it is. Then project proposals should be presented." In the second

stage, 1831 can be entered for the second time, or there is 1832, again by TÜBİTAK. That is a bit more related to R&D. Or there is this program I call YDDP. With this roadmap, you can choose one of the six project proposals and apply to these programs. So what we call this action plan is actually drawn within the scope of the program. But it's not like, "Let's prepare an action plan, do this, do that." We can't direct the companies very directly. So, "Did we have a road map study on this issue? We are working on preparing a road map, would this be of interest to you?" This part is still verbal. But after the program is over, the companies that enter the program have this Image report, the EKOREKA report and the TÜBİTAK-approved road map format. Since this road map is approved by TÜBİTAK, they can apply directly to the 1832 program or the Ministry of Industry's program with this road map.

Interviewer: I see. Now I actually understand it like this: So there is an analysis study. That analysis study reveals the situation of the enterprise. More than one project can be presented in this analysis study. Those projects are then put into an action plan as a prerequisite for benefiting from the grant program.

Interviewee: Exactly.

Interviewer: Your own consultants do it, do I understand correctly?

Interviewee: Yes, I mean we were selected as a mentor by X. It created its own work packages, established its own pool of consultants and had all these studies approved by TÜBİTAK. Now the normal project is moving forward. Field visit, so there are two different field visits: one for Image and one for EKOREKA. There are two field visits related to the environment and digital transformation. Afterwards, the report format required by TÜBİTAK is prepared. This can be submitted directly to the application. In addition, since our package includes two months of analysis, a three-month report, a project proposal and a roadmap are presented to the company. This is completed at the end of three months, after the project is approved. I can say that the other process takes about 5-6 months. We have already had companies that have completed this process. They also received a project proposal. We even directed some of them to EEN Energy, a mini program of another European Union. If I remember correctly, 3 of our companies applied there on this occasion. So they can also use these reports in other programs. They can also evaluate the outputs they receive in different places.

Interviewer: Now, what you said is important, but I will try to understand it fully to clarify the framework. Is TUBITAK currently running three separate programs, 1831, 1832 and 1833? That's how I understand it.

Interviewee: Yes, yes.

Interviewer: I know that these are programs related to green transformation. Are there also pools of authorized consultants? Is there such a system?

Interviewee: Yes, it goes like this. We were selected as mentors, mentors were selected in the first phase. Now we opened a second call, again a mentor was selected. This mentor may be another consultancy firm. Each mentor establishes its own pool of mentors and submits its approval to TÜBİTAK.

Interviewer Okay.

Interviewee: So that's how it's progressing.

Interviewer: So, for example, are you a mentor as X Chamber of Industry?

Interviewee: Yes, we are mentors as X Chamber of Industry. We have our own pool of mentors.

Interviewer Is it mandatory for the mentor to create a mentor pool?

Interviewee: Of course, of course, yes.

Interviewer: I see, and then TUBITAK approves that pool of consultants, right?

Interviewee: Yes, all of them are approved by TÜBİTAK. For example, if we submitted 20 consultants, it approved 15 of them. It may not approve all of them.

Interviewer: I see, and then you became a mentor as X Chamber of Industry. You have a pool of 15 or 10 mentors. You had this approved by TÜBİTAK. Were these mentors then EKOREKA?

Interviewee Image and EKOREKA.

Interviewer: They apply the EKOREKA report, do the analysis, present their projects and proposals. After that, they draw up a road map. And this is a prerequisite for getting a grant from TÜBİTAK's programs. This is how I understand it.

Interviewee: Yes.

Interviewer Great. Now, in your chamber of industry, do you have certification programs for businesses in terms of gaining knowledge and skills? For example, how to calculate carbon, or do you have any other certification programs related to sustainability? Or is it in the form of panels, training, mentoring activities as you said?

Interviewee: We usually give certificates in trainings, but they are not TSE approved. The last time we had a very short, half-day training on carbon footprint calculation. It was a training given by X. We invited a trainer and had him explain it. We were given a certificate of participation there, but it was not in the form of a certificate. But within the scope of X's own capacity building activities, there is a "Green Collar" training currently being carried out in a development agency. Under our coordination, we are preparing a

long-term training program where they can receive a certificate approved by TSE. In the trainings so far, either we have received certificates or the members who came here were given certificates of participation.

Interviewer: Now, are the projects created by your consultants implemented directly, or are they first implemented as a pilot in some part of the enterprise? If you have information, you can answer. Because sometimes in an enterprise, for example, there are 200 employees, there are 8 production lines. Instead of changing all production lines at once, for example, digitalization is done on only one line and the results are checked. If a solar panel is to be installed, it is first installed on the roof of one of the 4 buildings. If the efficiency is obtained, it is applied to the others. In other words, are projects implemented with pilot applications in this way, or are they directly implemented in the whole enterprise? If you have any observations, could you share them?

Interviewee: TUBITAK is working entirely on a proposal. This has not been implemented yet. But X also has a Model Factory. There, lean transformation techniques are actually taught to companies. Two engineers come. There they work on "how to ensure efficiency". On the website of the X Model Factory, there are already data such as "what percentage of efficiency companies achieved". These studies are carried out in the model factory, but it is a place with its own structure. Yes, the X Model Factory is affiliated to us, but it is like a subsidiary. It has its own managers.

Interviewer: As a legal entity, like a member or a partner within X?

Interviewee: No, no, no, I mean it is affiliated to X. It is called X Model Factory. But they work a little more separately from our main building. Two representatives from companies come. They receive training there. It is quite a comprehensive training. They experiment there. Then they apply these techniques in their own companies. On the website of the X Model Factory, for example, "Company X achieved such and such percent efficiency in the following areas" is shared.

Interviewer: I understand. I have already interviewed with the X Model Factory, I am familiar with their process. First they do a pilot application, then they expand it. Now I would like to ask an observation question. You are in constant contact with businesses, you run such programs, projects, etc. There are successful ones among your members, and you even bring them together with others. Now, an enterprise may have used such funds, it may have realized such a transformation, and it may be ready for this point. Does trust develop in that company? Does it start to exhibit a more proactive approach? Does this actually become a turning point for itself? In other words, I would like to ask you if you observe such a development of trust in the enterprise.

Interviewee: It goes like this. In our project, for example, a company has finished the project, completed the six months you mentioned. Afterwards, TÜBİTAK asks them "Are you satisfied with X, are you satisfied with the mentoring service?" during the field visit. Happily, we received a very high satisfaction

rate. And with those companies, for example, that first company has already completed the project. It comes to all our events. X's one-to-one contact with them has also increased this year. In this way, we were able to say more sincerely, "There is such a program, Ms. Ayşe, I also sent you an e-mail. We worked very well with you, you said you were satisfied. Let's direct you to this one too, let's do this one too". We also invite them to events as "Ms. Ayşe, there is such an event, we are definitely waiting for you". In other words, as our sincerity increases, our one-to-one communication also increases. In this way, as I said, there was a TÜBİTAK project, the duration was very short. We immediately reached out to the companies that received the report and said, "You can take these parts and apply for this project." 2 or 3 companies, I don't remember the exact number, applied, but we didn't carry out the subsequent process. So actually, they are satisfied and we are satisfied. Because our relations have become a little tighter. Of course, it is usually the pioneer companies that come to this process. Because it is difficult to convince people at some point. But they also tell the people in their supply chain or their friends. Something like this happened once: A company entered the program, then they met with the owner of another company, and he mentioned it there. Then he came to us and said, "Ali Abi told me about this, I want to enter this program too." In other words, when there is a good example, those companies help us a lot in the following processes. As sincerity increases, they can call us more easily and we can provide more detailed information. I can say that it was beneficial both for them and for us.

Interviewer: So are these projects limited to the duration of the project in enterprises, or do enterprises actually integrate these practices after the project time is over? Because the programs are usually limited to the duration. Do you think enterprises really integrate the practices?

Interviewee: I mean, actually the projects of our first 5 companies have just finished. So I didn't have the opportunity to observe this, at least for our TÜBİTAK project. Because their reports just came in. Everything was completed in the last months. They are happy with the project proposals. They said, "Yes, we can realize it." But no company has reached that stage yet. As I said, I cannot give a clear answer to this, as the reports are very recent. We have not yet had the opportunity to observe them.

Interviewer: So far we have talked about training, consultancy, seminars, awareness, action plan, piloting, confidence building, etc. I would like to share with you a few interesting comments I got from previous interviews on these topics and ask for your opinion. The first one is that the language used is confusing, which scares SMEs. For example, we say "Carbon Regulation at the Border", we say "Lean Transformation", etc. It is stated that such expressions may cause SMEs to run away. Instead, there are comments that these expressions should be simplified and explained in a practical language such as "What does it gain if it does what?". What is your observation? Since you work one-on-one with SMEs, I would like to know your thoughts on this issue.

Interviewee: I agree with that 100%. Sometimes we try to make a memo out of a memo. Because it is not really understood. Sometimes there are parts that even we don't understand. For example, TUBITAK had a 40-page orientation guide for registration to a system. We said: "Industrialists won't read this." We reduced those 40 pages to 4 pages. We even told them: "We will help you, just give us the information." We connected through ENDDesk and helped them one-on-one by saying, "Write this here, write this here." We also say this when we meet with public institutions: "This may not be understood, there is a lot of technical information. We have to pass it through a filter while transferring it to the industrialists." If they are going to make presentations, we ask them to share their presentations in advance. There was a seminar last week. We asked all the trainers for their presentations and shared them with the participants. There, attention is paid to explain in a simpler way. Since they are already experts in their field, they are aware of the situation and pay attention. But if we share an announcement, the other side doesn't even have time to understand and evaluate it. Our main purpose is to serve our members. So let's collect that complicated information, simplify it, and present it in a way that is useful for them. For example, if there is a regulation on iron and steel, we share it with the relevant professional committees. We have professional committees. When there is something related to sectors such as the 30th or 32nd Quarries, we share it with the relevant professional groups through that committee. We attach great importance to this simplification. The industrialists already say: "We did not understand anything." And we say: "Calm down, we are here for this. We will help you."

Interviewer: So you both simplify it and ensure that it is communicated through the right channel.

Interviewee: Of course. Because there is so much mixed information. Everything is so new, so complicated. If we don't understand it, how can the people over there understand it? So we empathize with them and say, "How can we simplify and make it easier?"

Interviewer: I see. There was a second comment, and I would like to get your opinion on that. It goes like this: The main problem of SMEs is cash flow. The problem of the day is whether the check has arrived, whether it is due or not. Therefore, in order to achieve this transformation, in other words, in order to realize transformational learning, two things are required: The first is to scare the person with the stick of legislation. The second is to lure them with the carrot of grants. In other words, either an obligation will be imposed on the enterprise, or an opportunity will be offered. Otherwise, they cannot spare time for this transformation because they are busy with their daily work. Would you agree with this comment, or are we a bit biased against SMEs?

Interviewee: I actually agree and disagree, I will make a comment. Now, SMEs are right on this point: The income of a small enterprise and a medium-sized enterprise can be very different, the way of working can be very different. Now, when we say "SME", we put them all in the same category. But in fact, sometimes the gap between them is very wide. For example, a medium-sized enterprise that is close to

being large is not the same as a small enterprise at the micro level. We should not approach them in the same way. Maybe you will need it in the future. If you make preparations, you can proceed more easily." But we realized that sectors such as the foundry industry have no escape at this point. We approach them in two ways: "Look, good industrialist, this SKDM came on January 1, 2026. Yes, you will be directly affected by this. You may make a profit in the short term, but you will lose money in the long term. Come, make your preparations, don't lose money in the future." We also add: "Look, these issues have just started. SKDM is just coming. An emission trading system is being established. For example, grants are given more. "We always think that if something has just started, if there is a grant program, usually those who participate in the first place are more profitable. We noticed this very much in the solar energy (SPP) incentive of KOSGEB. Because companies say: "Ahmet entered in the first place, it was very profitable, he made SPP. We were late, the incentive decreased." Since they see this in smaller scale things, we can convince them. So we say: "Yes, there is a problem coming. Be prepared. But there is also an opportunity. You need to make good use of it. "We usually emphasize this: "The one who acts first is usually more profitable in these matters. "In other words, we offer them both the problem and the solution. Of course, it is up to the decision of the company, because the man says: "I have no money. This is not really an emergency for me. I prioritized another investment." We can't say anything either. But if things grow in the future, he says, "I'll think about it then." We try to be honest. After all, when there are some companies that need to be prioritized, we give them more priority, we guide them. Keep it in mind. If your conditions change, for example, if you want to export to Europe, if your market changes, then you can contact us." So we are being realistic.

Interviewer: I see. I see it like this: First of all, not all SMEs are the same. There are micro ones, there are almost big ones, there are institutionalized ones, there are non-institutionalized ones, there are ones that will be affected a lot by this legislation, there are ones that will be affected a little bit. Realistically, you are saying that sometimes grants and legal obligations are the tools that we have. Okay. Now I would like to ask one more comment. It was said that: Too many ministries, institutions and organizations are involved in this. For example, the Ministry of Trade is responsible for the Green Deal, there is the Ministry of Energy, there is the Ministry of Environment, there is the Climate Change Presidency, there is TUBITAK, there is KOSGEB... Each of them has different experts, each of them handles this issue differently.

Interviewee: There is no problem for us. Because we already know that we need to contact the Ministry of Trade for the SKDM, the Climate Change Presidency for the Climate Law, the Air Management Department in the Ministry of Environment for the Industrial Emissions Regulation. We are actually trying to gather them all together and convey them to the companies as "Look, this is the interlocutor for this issue". Sometimes this is also an opportunity for us. We increase our communication not only with the Ministry of Environment, but also with other ministries, because as you said, the issues are carried out by many different actors. There is no problem for us, but for the company, yes, there is. In one of our seminars, a company said: "I did not know that this was done by the Ministry of Trade." Companies

usually ask everything to the Ministry of Environment. In fact, sometimes when we go to visit the company, they say, "Are you here from the ministry now, are you going to do an audit?" We say, "No, we came from X, as the Directorate of Environment." When it comes to environmental issues, the Ministry of Environment comes directly to mind. There were people from the Ministry of Industry, there were people from the Ministry of Trade regarding the EU harmonization process, Green Deal and SKDM, and there were people from the Climate Presidency. We also realize that they all have common sections in their presentation slides, because at some point they serve the same subject. When they are already presenting, they say: "My chairman mentioned this part, I will be brief." They all refer to each other in their narration. When we listen to all these speeches together, there is a clarity in the minds of the participants, but there is confusion for companies that have never participated in these events or even seen them on social media. Companies that do not follow information such as this was visited, this was done on LinkedIn are still asking the Ministry of Environment about everything. The Ministry of Environment says, "No, this is not ours, go to the Ministry of Trade." They are confused. We are aware of this, we are trying to help. But I think the Ministry of Environment will continue to be asked "Can you help with SKDM?" for a long time.

Interviewer: I would think the same way, I empathize with the SMEs, they probably call the ministry that comes to their mind first. For you, you are already an expert. This is more opportunity for you and you can get information from more institutions on different subjects. You say that if the enterprises have attended your seminars a few times, they can understand, but it is difficult for outside institutions. I asked this question for this reason. Now let me actually come to that. In an interview I did with Mr. X, he said: "In the same week, four different institutions are giving four different webinars on the same topic. It's about carbon regulation at the border. I think, 'Didn't someone else address this?'" This leads to inefficiency in trainings and a loss of distance in awareness, so cooperation between institutions should be made more effective so that we don't talk about the same topic over and over again. My first question is: Do you think this could be a solution? Secondly, I would like to ask this: Can the public sector set up a matrix organization model, like a working group with experts from different ministries on a topic, and have them provide recommendations back to their ministries? You are not a public servant, but you know that there are eight different ministries, and they all work with their own organizational structures, but wouldn't it increase efficiency if different ministries came together for a specific project on a particular issue? I would like to know your personal observation on this confusion.

Interviewee: Yes, I'm new in business life. But from what I've seen so far, I can say this: Ministries don't like to work with each other. I mean, they don't get along very well. Really, in public institutions, even department heads sometimes have difficulty in coming together in an event. My personal opinion: It would be difficult for, say, the Ministry of Trade and the Ministry of Environment to establish a common platform and work together from there. Someone says, "Oh, look, X held an event, how nice, let's do it too." But the same people always come. We already bring them together: Ministry of Trade, Ministry of

Industry, Ministry of Environment. It was like that in the last event, it will be like that tomorrow. They already meet each other, they are in contact with each other. But when it comes to the organizational part, I don't think it will be very possible. But for example, X organizes an event, they all come. Then it is very nice. They all refer to each other in a nice way. In the last seminar, there were three slides in three different presentations. Because the topics are the same. They say, "Oh, they explained it very well, I'll be short." They pass each other around. This is very useful. They know each other's work. But I don't think they will work together as an organization. But if another institution organizes an event, all three of them come and explain. This is very efficient. I have personally seen that this is very efficient. The other - that is, the matrix structure - I don't think it works. The ministries are not very willing to do joint work. This is purely my own observation. But if someone calls them, they come and help. This is also very good. We are very pleased. Passing and transfer of information is really very effective.

Interviewer: My last question is about the trainer. I don't want to take up too much of your time. They say that the role of the trainer is important. If the participant loses interest, after 5-10 minutes in the seminar or training, he starts to be interested in the phone. But if the trainer can capture the interest, make the subject interesting, make it interactive - question-answer etc. - they say it can be more effective. Do you think the role of the trainer is important at this point? Is training of trainers important?

Interviewee: I think it's incredibly important. I mean, there are presentations that we can understand very clearly: "What a great presentation she gave!" There was even a head of department who came, I don't think there's a problem with me saying her name. X, you've probably seen her. She is the head of the EU Single Market Department at the Ministry of Trade. She participates in many speeches. She gave such a good speech, from her tone of voice to her command of the subject... That speech lasted almost an hour longer than we had planned, normally it would have taken half an hour. People were also interested, she gave detailed answers. We were very happy to invite her. But it's not only about knowledge. Presentation skills are also important. It's very important to explain the subject in a way that the other person can understand. In the end, what he explains is as much as we understand. People can get bored. It's not easy to sit for two hours and listen to a person giving information without moving. Trainers are important, but at the same time, the correct planning of the program is also important. For example, we are organizing an event. If we don't take a break for two hours and just put a presentation, no matter how well the trainer there explains, the efficiency decreases again. So it has to be systematic. Yes, the trainer's command of the subject is a factor, but it is also important to be able to explain, tone of voice, ask questions. Is there a question and answer session afterwards? Is there a coffee break? Really, even if you listen to the best TED talk three times in a row, you will get bored. But if I want to deliver this information to the industrialist, I need to change myself in a way that he will understand. In other words, institutions and individuals need to act accordingly. "Because our main goal is for them not to face these problems or to benefit from the grant. Therefore, all programs should be planned from their point of view. We send a questionnaire after the event: "Were you satisfied?", "Can we improve?", "What would you like from us?" We collect the

feedback from there so that the next training can be more efficient. For example, we held a seminar, but some participants perceived it as training: "It wasn't a training, it was a seminar." But we realized that there was a need for training. We immediately planned a training. We were satisfied with that speaker, we reach out to them again. We say, "We would like to host you again in another event." We keep in touch with them.

Interviewer: So Ms. X, are online trainings useful and if so, for which purpose do you think it would be more appropriate?

Interviewee: As someone who has studied in the pandemic for two years, I can say that online education reduces efficiency a lot. But there is also a point like this: We are in X1, we are based in X2. But the organized industrial zones are in X3, X4, X5. It is very difficult for these people to come and go here. Sometimes they say: "My whole day is gone, I can't take time off. Sometimes they say: "My whole day is gone, I can't take a day off." It takes an hour to travel, there is traffic. So online training can be more useful. Yes, face-to-face training is more efficient, but not all training has to be face-to-face. There are other factors as well. Yes, it is easier to be distracted in online training. On the one hand, everyone is working, doing business. But the information they get from there is also profit. It is important that they get something online, even half of it, rather than not coming at all. We need to pay attention to this when choosing a topic. For example, a subject related to SKDM should definitely be face-to-face so that there can be question-answer, interaction. But on a slightly softer subject, online training can be done for informational purposes. The industrialist does not get tired. The engineer there does not have to go running around. They may not all have vehicles. It is not possible to go to Temelli by public transportation. It is up to the initiative of the company, there may be an audit, there may be urgent work. The boss may not want to send his employee. So it may be possible to intersperse online training occasionally. But as I said, I found that online training is also useful depending on the subject.

Interviewer: I keep saying "my last question" but something else comes to mind. Please excuse me, it's really my last question. They say that the profile of the participant is also important. For example, an environmental engineer comes from a business, but he is not in a decision-making position regarding transformation. From his point of view, his salary remains the same, his responsibility increases. Why should he fully transfer this information to the management?

Interviewee: For example, if we are visiting a company, they ask us: "Who do you want to meet with?" If possible, we want to meet with a manager or a unit manager, because everyone says: "The workshop engineer says, "I will forward it to my manager." The manager says, "I will forward it to the senior management." As this sequence gets longer, the possibility of conveying the information in detail decreases, but if I talk one-on-one with the company owner, "What do you need? Look, this is the situation." But for example, there is an event, we have a panel. If the manager comes, he may see it as a waste of time. I find it logical for an engineer to come for face-to-face trainings. But if there will be a

field visit, if there will be a one-on-one meeting, it is more effective to meet with the company owner while going to X. Because the environmental engineer in that training may not tell his manager, but he can organize his own work according to this information. Of course, these things can change according to the profile of the company owner and the engineer. These things can also change according to the perspective of the work. But if there is a one-to-one visit, the manager should definitely be interviewed. If there is a training, if possible, people who know less, who are naive, such as an environmental engineer or quality manager, should attend. Because they should learn so that they can then say to others, "Look, I heard something like this, such a study can be done." So I think there is no right answer to this job. If shaping is done according to the situation, the highest efficiency can be obtained.

Interviewer: But you provided a very good perspective. After all, there is a field visit, one-on-one business is visited. You said that it may be important to reach the authority, the decision maker of the business there. You said that it may vary from person to person. And this is exactly what we call peer learning. If a business owner has made a transformation, he tells the other business owner about it. He does not go and tell the engineer. It can be reached from different sources. Thank you very much, Ms. X.

Interviewee What do you mean, with pleasure.

Interviewer: I hope that this meeting lead to good results, and I hope that we will have the opportunity to meet again at another time, and I thank you again.

Interviewee: If I can help you with anything else, you can contact me anytime.

12.05.2025 (10.interview)

Interviewer Welcome Ms. X.

Interviewee: Hello, welcome back.

Interviewer This interview is part of my master's thesis at the University of Groningen. My aim is to understand how sustainability trainings for SMEs are conducted in Türkiye and to evaluate this process within the framework of Transformative Learning Theory. Our interviews will last for a maximum of one hour. The information you provide during the interview will be kept anonymous and will only be used for academic purposes. Is there any problem with audio recording?

Interviewee: No.

Interviewer: Well, Ms. X, should we first get to know yourself and your organization?

Interviewee: Okay. I've been working at TUBITAK for about 18 years, 18 years in September. I started as an assistant specialist, and now I'm working as a senior specialist at the Academy. I'm in charge of the Directorate of Technology and Innovation Support Programs. This is the unit of TUBITAK that provides R&D support to the private sector. We have grant support programs. We carry out very intensive promotional activities related to these. We also have training and information meetings, but our main area of work is to support projects within the scope of grant support and to monitor the projects supported. I work in the biotechnology, agriculture, environment and food technologies group. I am a food engineer. I graduated from X Food Engineering, I also graduated from Chemical Engineering, and then I have a master's degree in Engineering Management, also from X. This is how I can introduce myself.

Interviewer: TUBITAK is an organization for businesses doing R&D. Aren't almost all of these SMEs?

Interviewee: Not all of them are SMEs. TUBITAK has different support programs. Each one has a different focus group. We have programs that are only for SMEs, but we also have programs that support large-scale organizations.

Interviewer: I see. So, is sustainability one of the focus areas of TUBITAK? Do you use education as a service tool within these?

Interviewee: Sustainability is like this... We set some priorities within our support programs. Green Deal issues are one of them. This is the European Union Green Deal issues. We evaluate the projects that we consider to fall within this scope with a scoring system. We evaluate them not under the name of "sustainability" but under Green Deal topics. As you know, these headings consist of five or six different sub-headings. Each of them has details. We give additional points to projects that fall under one of those headings. In other words, it is not directly mentioned as "sustainability", but this is how we prioritize. In

our training programs, we do not directly provide training on this subject. In other words, we do not have an activity such as "we provide such and such training on sustainability". Our trainings are more like introducing programs and project writing training. In other words, we do not have a subject-based training system that we plan according to technology or field of work. We do not provide training in this field.

Interviewer: I see. In other interviews they mentioned a program of yours. It was mentioned as 1831, 1832, 1833. Are these programs related to Green Transformation?

Interviewee: Green Transformation... That is a special study. We are conducting a project supported by the World Bank. KOSGEB is already one of the partners of this project. Türkiye Green Industry Project. It is coordinated by our Ministry of Industry and Technology. It is a 450 million dollar project. Its aim is to support all activities to ensure a sustainable green transformation in Türkiye. TÜBİTAK supports the R&D and innovation part of this project. KOSGEB, as you know, supports SMEs' solar energy investments and infrastructure improvements in the field of circular economy. The Ministry provides the overall coordination of the project. KOSGEB and TÜBİTAK are the implementing organizations. Each organization is tasked with the weight of work in its field of activity. In this context, we have three separate activities under the names 1831, 1832 and 1833. These are carried out within the scope of the Türkiye Green Industry Project. Perhaps 1831 may be the one that may be in your field of activity, because this is a special program for SMEs. Here, we provide a mentoring service to SMEs on green transformation. But we, as TÜBİTAK, do not provide this mentoring service directly. There are expert organizations that we cooperate with on this subject. We can say that we accredit the stakeholders who can provide this training. In other words, we determine who can provide this training from the beginning. We are currently working with 43 expert organizations.

Interviewer: Do they offer you a pool of advisors in these specialized organizations?

Interviewee: Yes, yes. Each of them has their own teams. Some of them work in energy, some of them work in recycling. They have teams of experts with the capacity to operate in different fields. There may be consultants within these teams, there may be experts within their own organizations. If you ask who these expert organizations can be; they can be NGOs, unions, associations, foundations, single engineer companies. We evaluate them according to their previous work in this field. The criterion we pay the most attention to is what kind of trainings they have provided in this field before, what kind of services they provide to the private sector. We identify expert organizations according to their experience in these areas. As I said, we currently have 43 expert organizations. They prepare joint projects with SMEs on behalf of TÜBİTAK. The project is the SME's project. The SME aims to address a problem it is experiencing in its current activities and to produce a solution. Whether this solution is an investment or an R&D-based study, a road map is determined. Expert organizations provide support at this point.

Interviewer: So, I was wondering...

Interviewee: We support the service procurement in that project. Under 1831, we do not pay directly to the SME. We pay the expert organization that provides this service on behalf of the SME. 90% of it is in the form of a grant, 10% is covered by the SME.

Interviewer: Why not directly to the SME, why did you feel the need to put an intermediary organization?

Interviewee: Because we don't provide the service directly. The intermediary organizations are the expert organizations that we work with, whose performance we measure, who provide the service. SME also does not carry out a direct study. The organizations that we provide support to need to do a direct background study. There is no such situation in 1831. The SME only analyzes its own situation. We pay this service to the expert organization on its behalf. Because when we pay, we also need to check its appropriateness. If we were to pay this fee directly to the SME, it would require a separate study to evaluate it, to measure how it has benefited and to assess its impact. But the expert organization can provide us with this information directly. We can get the information directly from the expert organization.

Interviewer: I see, he can provide us this information directly. I understand, Ms. X, that you do not provide additional training services directly on issues that fall under the scope of sustainability - for example, it could be Borderline Carbon Regulation, it could be something else, it could be lean transformation - but that you have other tools, that there are maybe dozens of these programs like 1831, , that sustainability plays a role in their preliminary assessments, and that through these tools you actually support a little more analysis and action plan work. I understand correctly, right? Then let me ask you like this: How many SMEs have benefited from this service so far? How many SMEs do you want to analyze within the scope of this project? And what does this analysis cover? Have you seen an example of an analysis? How does this analysis work?

Interviewee: Within the scope of this World Bank project, we had planned at the beginning of the project that around 4000-5000 SMEs would benefit from this service for the organizations that would receive 1831 support. The project lasted for about 1.5 years. Now, the first times of the project were a bit difficult. In other words, the transfer of money and the launch of the program did not happen immediately. After about a year, we opened our call to SMEs. So far, we have received more than 500 applications. We received around 500-550 applications, of which a very large proportion - around 80-90 percent - some SMEs that are not directly related to the work may have misunderstood our programs. By eliminating them, we provide support at a rate close to 90%. Currently, there are about 50-55 projects that have been completed as of today. In other words, the SME has now received this service from the expert organization and created its road map. We are now at the stage of evaluating the effectiveness of these completed projects. Did these 55 projects really achieve their goals and set a road map? We are now measuring this.

Interviewer: I see. Well, I tried to understand... I tried to understand the content of those analyses, is there a set of questions? What is asked? I mean, in the analysis, is the enterprise told "you are like this" with certain sets of questions? Or does a consultant go and prepare a report? How does it work?

Interviewee: First, the SME tells us why it is applying for this program, its purpose. It needs to address an existing problem. It needs to say, "There is an issue in my business that needs to be solved or reviewed regarding green transformation". For example, it could be the renewal of the production flow chart. In other words, it specifies what it wants to work on specifically at the beginning of the project. Together with the expert organization working in this field, they evaluate what can be done, how it can be improved, whether this problem can be solved. This is our expectation. It can also be an analysis study. In other words, taking the current photo of the organization is actually done at the beginning. We take a photo. Whether the problem is defined correctly... It may be talking about a problem in the production process, but when the expert organization goes, it can also determine that it is actually a problem caused by raw materials or supply. We expect a study on how to identify such a problem, determine its source and what can be done to solve it. This includes analyzes. If various analyzes are required, they may also be included.

Interviewer: I see. Well, let's talk about them. Can there be more than one solution proposal, can there be 3-4 separate projects for an SME?

Interviewee: Actually, we expect it not to happen. Each project has to target a basic problem like electricity, water, waste. If there is more than one problem and it will be solved in different ways, maybe there can be a second or third application. Because a company can apply to this program three times. It may also be necessary to work with different expert organizations. In other words, while one expert organization is an expert in energy, it may need to apply for a different project with another expert organization for environment or waste. Therefore, if it is not related to the same problem at the same time, we prefer to receive it as a new project application.

Interviewer: Well, for example, the issue of Carbon Regulation at the Border covers businesses in 4-5 sectors, as far as I understand from previous interviews. In terms of sustainability, 4-5 sectors are actually much more prominent for now, in terms of what they need to do. When you design support programs, you know that you assign different numbers at TÜBİTAK. When selecting them, are they selected according to SMEs with similar qualifications or are they open in general? Because I am asking this in terms of common awareness. In general, if an SME has a similar problem, interacting with another SME dealing with the same problem can increase its efficiency or learn from it. Do you have what we call "peer learning"? Do you bring together SMEs with similar problems? Do you make a question and answer selection? Or do you take similar SMEs into consideration when designing grant programs? Let me ask it like that.

Interviewee: We actually take this into account in our promotional meetings. For example, 1831-oriented, what we call this mentoring service... SMEs, I mean, what does this mean? Mentoring service is actually an awareness service for those who do not have any idea on this path, who do not know what to do, who are at the very beginning of the process. While promoting the program, we try to bring together organizations in this focus. In other words, we inform the program in this direction. When we hold an information meeting for the 1831 program, of course we do not invite large-scale organizations that have been doing R&D for years. As they ask each other questions during the meeting, the purpose of the program and who can benefit from it and how is better understood. We send invitations to organizations that are suitable for the target audience, not only for focus group meetings, but also for program promotions. In our meetings with CSOs, we also provide this information in advance. We say, "These people are the focus group of these programs". We try to reach them. We inform them gradually.

Interviewer: I understand. I would also like to understand this. You also have an organization called TÜSIDE.

Interviewee: TÜSIDE, yes.

Interviewer: Yes. For example, I heard of something called DDX. I heard that they are preparing a digital assessment tool and authorizing consultants to apply it. I wonder if they have such a plan for sustainability. Although you are not in that field...

Interviewee: TÜSIDE is a very big institute. Since I work in the presidency department, I don't know their projects and specific activities. I don't want to mislead you.

Interviewer: I understand, but as TÜBİTAK, knowledge is also produced there, right? Rather than grants.

Interviewee: Yes. Now you said "as TÜBİTAK", but don't think that I am interviewing or organizing a survey on behalf of TÜBİTAK. I am only giving information about X. X is the unit that provides grant support. But TÜBİTAK is also an institution that conducts R&D or directs the industry. It also has institutes like TÜSIDE. If you need detailed information in this context, it would be more appropriate to contact the relevant units of TÜBİTAK.

Interviewer: Okay, I understand. I mean, TÜBİTAK's X unit focuses on grant programs, but there are also structures in other units of the institution that create analysis tools, produce knowledge and R&D. That's how I understood it.

Interviewee: Sure, sure.

Interviewer: So, do you have certification programs at X or only grant programs?

Interviewee: No, we don't have certificate programs.

Interviewer: Or I understand that there is no such thing as a pilot project, right? For example, a project comes out, "let's implement this transformation in this unit of this enterprise, let's put it into practice". For example, you mentioned 1831. Can 1831 be implemented as a pilot in one unit of the enterprise, or does it have to be implemented in the whole enterprise? It can be implemented in one unit.

Interviewee: It depends on the implementation of the project. Yes, the organization itself draws that framework.

Interviewer: Is there an action plan in the project document?

Interviewee: Sure. We also ask about their plans on how they will implement the steps in the roadmap, which is the output of the project, going forward. So, step by step, let's say an investment plan was proposed in the roadmap. The expert organization made a suggestion that "it would be appropriate for you to invest in SPP(Solar Power Plant)". We also follow the evaluations about when this will be realized and whether it is realized or not.

Interviewer: So there is actually a plan in the projects.

Interviewee: Sure, sure. Every step is planned. These are 6-month projects. Small projects actually. But it is clear what will be done in each step. For example, how many times will the expert organization visit the SME? Will there be physical visits? We also see the methodology. When we receive the project proposal, we ask how this mentoring service will be provided, how it will be physically carried out, at what intervals the reporting will be done, all this methodology.

Interviewer: I understand. I would like to ask an observation question, not in the context of 1831, but in general. X is designing many support programs. For enterprises, does using this support program lead to a more proactive approach for the future? Do they get more efficient results in other applications compared to other enterprises?

Interviewee: I can't explain it numerically and statistically, I can't prove it right now. But I can say according to my own observations. The first project application of a company to X is very difficult. Because they are not familiar with the system. It does not know our working principles and system. At that stage, it has difficulties in the first application. But once integrated into the system, organizations will definitely try our different programs. Especially SMEs follow all our calls. They also wait for our information e-mails. And they follow our guidance accordingly. Therefore, I observe that SMEs, in particular, continue to try our different support programs once they enter the support system compared to corporate companies, as they can make decisions faster and prepare projects faster. Especially SMEs in serious need of support continue this process.

Interviewer: I see, I was asking as an observation anyway, I feel the same thing from my own experience. Do you have monitoring and evaluation for support programs? Is the effectiveness of the program measured afterwards?

Interviewee: We do not measure the effectiveness of the program ourselves, but program-based effectiveness evaluations have been done before. However, our evaluation of effectiveness may not be very objective. For this reason, different departments evaluated our support programs from time to time. Reports on this were also published. But we do the monitoring and evaluation of the projects. We also have this expectation: Since we, as X, support the private sector, we monitor whether the support we provide translates into commercial gains - in other words, a cash realization. We have commercialization monitoring processes. After the project support process is over, we monitor whether the grant support we provide under all our programs or the reimbursable support that we have recently started in cooperation with the World Bank, whether the product developed and the result of the project is commercially offered for sale, and whether the companies generate income from it. In other words, we monitor the project not only during the support period but also afterwards. This process is referred to as the "commercialization monitoring process". Because the main purpose of X is to obtain a commercial output and contribute to the national economy.

Interviewer: What are the results like?

Interviewee: We have a practice regarding this: If the company has commercialized the past support it received from X, it submits this with reports. But not only with a declaration, we ask them to document it with a report approved by a financial advisor for each sale. In new project applications, this situation brings additional points. In other words, organizations that commercialize the grant support they receive from X start more advantageous than other companies in new project applications. There are organizations that have turned almost every support they have received into commercial cash value. For this reason, companies are also aware of this. In other words, they know that they should not just take this project, make a prototype and put it on the shelf, and that new project applications are also affected by this. But especially our 1501 program is a very actively used program. It has been known since 1995. There are organizations that have a commercialization success score of around 30-40% from this program: One out of 10 projects or nine out of 10 projects are commercialized, this is not the same value for us. We rate this. We give much more additional points to those who commercialize a lot.

Interviewer: That's excellent. Do you use referees there as well to measure the level of commercialization? Or are referees only used at the application stage?

Interviewee: One of the referees, if the referee has a commercial experience, if the referee has a private sector experience, can follow this process. Some of our referees may remain very academic and may not want to be involved in the commercialization process. But usually we can also follow one of the monitors

in the monitoring process as a commercial monitor. Also, in some projects we assign a new monitor. In other words, if our lecturer is too academic and says "I cannot evaluate the commercialization performance of this", we follow this commercialization process with new monitors who have more private sector experience.

Interviewer: I see. By the way, just as a footnote. I like your referee system very much. You have been using it for a very long time in your support system.

Interviewee: In 1507, we have now started to use experts from KOSGEB as referees. Maybe you have also received some information.

Interviewer: I heard, I heard. There is already a cooperation between TÜBİTAK and KOSGEB. Let's open a parenthesis here. It was like a short break in the interview. I actually had a question about this issue of cooperation in the public sector. Let me ask it now, let's talk in that context. Now, I received a comment on sustainability, and similar statements were made in the interviews. The following is said: There are too many institutions and organizations. There is the Ministry of Energy, the Ministry of Environment. The Ministry of Trade handles the European Green Deal. There is the Climate Change Presidency. There is KOSGEB, TÜBİTAK, etc. Each of them is trying to explain these legislations. One is explaining the Carbon Regulation at the Border, the other one is saying let me give you money for green transformation. It is said that this creates confusion for the beneficiaries and causes some inefficiency. Because, for example, in Ankara, 4 different institutions can offer training programs on similar topics in the same week. Do you think this situation is normal? Or is it an issue that can be solved with more effective cooperation? I would like to ask as a personal observation, because your practice at X is always this: A grant program is designed according to priority. But what would be your opinion on this issue?

Interviewee: I actually find the companies right, because as you said, there are so many institutions and organizations producing programs. Some of them are very similar to each other, and some of them are a continuation of one another. Since we are in the business, we can more easily understand what is the purpose of the program, what is the scope of the support or training, which organizations can benefit. But organizations are usually after cash support, so they can interpret the information according to their own interests. I agree that this situation is complicated. However, I also observe that some organizations are trying to interpret the information in a way that will benefit them, either intentionally or unintentionally. We recently went to X for an event. As you said, the Ministry of Energy, the Ministry of Trade, us, the exporters' associations there, they were all there. Their members came. I tried to observe as an outsider, as an official of an organization. It is really very confusing at first glance. Everyone tells something. Money, application dates, legislation... There is talk of "green transformation", but it is difficult to understand who gives what. However, when we take a closer look, we see that the ministries are more involved in legislation, compliance and labeling/certification. As TÜBİTAK, we are only involved in

technology, innovation and R&D. We always emphasize that when investment starts where R&D ends - that is, when it comes to infrastructure improvement - TÜBİTAK should be out of the picture. For example, after the 1831-1832-1833 programs I described, the Ministry of Industry started to talk about the investment side of the business. In other words, when we look at the big picture, we try to build support in a sequential way. But we have difficulty in conveying this. It would be healthier if there was a superstructure that coordinates and owns this work. Each institution has a unit related to sustainability, but for example, if KOSGEB were to take ownership of this work for SMEs and if there could be guidance there, the effort spent would be more accurate. Because applications are made, documents are sent back and forth, but the results can be negative. This exhausts both the applicant and the evaluators. There is really confusion. Also, this process started very fast. I also saw that the Ministry of Trade is running a very similar program to ours. The programs are very similar, only the numbers they give are different. So maybe it would be better if there was a coordination unit that would provide guidance on sustainability. I don't know whether this would be under the Presidency or some other structure. But first of all, these supports and institutions should be promoted. If an information training could be organized to summarize the duties and supports of all ministries in a single slide, we could make a better effort.

Interviewer: That's actually what I wanted to ask. I mean, could there have been a national strategy or coordination? Someone made a comment on this: If something like an advisory board is formed, but there is a concern whether this will create a new bureaucracy. There may be discussions like "you will do it, I will do it". Because each institution has its own internal legislation. You know the state bureaucracy, and this may cause harmonization problems and conflicts. For this reason, there were some who said that it would be better if a softer structure, that is, an advisory board consisting of experts and academics, was established and this board would make recommendations to the institutions. What do you think the degree of this structure should be? In other words, should it directly delegate tasks? Or should there be a different structure?

Interviewee: When this question was asked, I thought about this: What if an organization that wants to apply for government support, no matter which ministry, watched a short information video before applying - like the mandatory trainings we receive as public employees through e-government. This video should include basic information such as which support is provided by which organization, what is its purpose, who can apply, etc.

Interviewer: I see, I see, I misunderstood. You suggested such a structure for orientation purposes in order to eliminate confusion on the part of the beneficiary. This is what I concluded from your previous comment: At first it seems very complicated, but when you focus a bit, you can understand who is doing what

Interviewee: But people who are in the business understand it more easily. It is very difficult for an SME to understand all the ministries. This is a very time-consuming process. That's why it would be more efficient if the organization that wants to apply for government support with such an organized, 10-15 minute training first watches this training and then decides which institution to apply to.

Interviewer: You say it would be better.

Interviewee: Yes, it can be good for organizations.

Interviewer: I see. There was another comment like this. Cash flow is important for SMEs, checks coming due, etc... How can you motivate an SME in terms of R&D, digitalization or sustainability if you really want to convince them to transform? They say that either there will be a stick of legislation - there will be an obligation - or there will be a carrot of grants - that is, if they get incentives, they will do it. Is the situation really that clear? I mean, is the transformation either through grants or legislation? Or are there SMEs that are really aware?

Interviewee: There are definitely SMEs that are aware. Especially those who export. But sometimes it is said that there will be laws, and then the process is prolonged. So I am not sure about its reliability. At the last meeting we had in X, we also talked to friends at the ministry. Dates such as sustainability reporting will be mandatory in 2026 and quotas will be imposed on exporting companies were given. Then it was discussed whether these dates could be stretched. When this happens, SMEs do not want to invest in vain. They say, "I would like to make this investment if I really have to face it." The decision-maker here is the ministry. As TÜBİTAK, I can say the following: If the problem to be solved is related to technology and R&D, it is already our job. But technology and R&D may not always be the solution. Those who are aware of this are already making this transformation in order to increase their market share and compete with their competitors, even without being obliged to do so. But I am not sure that companies that do not export to Europe and think that they will not be affected will actively engage in such an investment. For example, the textile sector is actually one of the sectors that will be most affected by this transformation.

Interviewer: There is also a situation like this, and frankly they are right at some point. There was the Omnibus Package, sustainability reporting was to be presented. It came out in the last months. It was increased from 250 employees to 1000 employees. It was to be introduced in 2026, it was postponed to 2028. The number of employees was suddenly increased, the European Union legislation changed, etc. In other words, when it is the same there, there are different discourses here... As the date approaches, there may be stretches.

Interviewee: A company knows that, that it can be stretched in some way. So I'm not sure if we can move at the speed we say we can.

Interviewer: I understand. I would like to ask about the role of the trainer, you do not organize trainings, but I am asking this as a personal observation. Sometimes it is stated that online trainings are inefficient, there should be on-site trainings, but in these trainings, there should be a certain number of participants. There were comments that if the trainer talks too technical, interest can be lost. Instead of online training, they said on-site training, the number of participants should not exceed a certain limit. According to these comments, what should be the role of the trainer here? What do you think about this?

Interviewee: I think for general trainings - that is, if there is not a very specific focus - the trainings can be online. Because not everyone is expected to grasp everything in detail in such trainings. It is more useful to have general framework, general approach trainings online. The more people you can reach, the better. Physically, a two-hour meeting takes everyone all day. This is both a financial burden and a loss in terms of time. But very specific topics - for example, carbon footprint calculation - can be done face-to-face instead of online. In face-to-face trainings, it must be like a workshop. In other words, there must be a method where everyone can be involved in the work. Because just listening and leaving loses its effect after half an hour and 45 minutes. That's why small and focused trainings should be shorter and face-to-face. Trainings that do not cover the whole day and are designed to keep everyone active - such as workshops - are more effective. But more general sustainability trainings can be online. When I look at the TÜBİTAK profile, we see that online trainings are beneficial. Because everyone can participate from any environment. Also, these trainings can be recorded. Participants can listen to this recording later and watch the parts they do not understand again, they can have the chance to listen and ask questions that they could not ask during the meeting. It is more useful in this respect. It is also very efficient in terms of the audience we are dealing with being informed and returning to us.

Interviewer: I would like to ask one more observation, you organize information meetings or online meetings about these grant programs, what is the profile of the participants in such meetings, do employees attend or business officials, decision makers?

Interviewee: Actually it can vary. In some companies, the owner of the organization directly participates. This is common in SMEs. But in companies with a corporate structure, for example, if there is an R&D director, a financial affairs officer, they participate with a team of two or three people. I'm talking about medium-sized companies. But in very small, micro SMEs, the owner of the company attends. Also, the level of ownership of the work is important. If there is a real need for support, consultant companies are also guiding. They also inform the organizations. Sometimes when we go - especially in our meetings with NGOs - if there are changes, we definitely inform them. For example, it happened with 1501. It was opened only to SMEs and closed to large companies. In such serious changes, we specifically state that participation is expected at the executive level, at least at the level of R&D manager.

Interviewer: I understand. I would like to ask one more question, it is important. You organize these grant programs, you hold meetings. SMEs participate here, sometimes employees also participate. So which one is more useful? Or does it depend on the situation? Because there was a comment like this: When the employee participates, he says "anyway, my salary does not increase, I will do this as an additional burden, why should I do it?" So it may be more useful to reach the owner of the business. I don't know, not to be unfair to the employees, but what do you think about this comment?

Interviewee: That comment has a point. Because employees, as you said, see this as extra work. They see it as "I'm going to deal with the TÜBİTAK project". That's why when we send information, we send it to both the organization official and the company responsible. So that the organization official is aware of these changes, and if he deems it important, he can also participate. We definitely include some small but important information in the automatically sent e-mails. So the situation you mentioned can happen. But I don't know if there were any comments from other participants on how to overcome this issue.

Interviewer: There was a comment that in technical meetings there can be engineer level participation, but in places like mentoring, enterprise visits - that is, when you go to the field - you need to deal directly with the enterprise, there can be a TÜBİTAK referee or an expert.

Interviewee: Yes, there are referee visits. In our projects, the referee must visit the company. He cannot write a report at his desk. We inform the organizations about this in advance. We say, "Someone at the executive level should be present to deal with our lecturer." The organizations pay great attention to this. We have never experienced any complaints. We have never had any complaints. None of our lecturers said, "I went, I couldn't find an interlocutor." We have never had a situation where only a junior employee was dealt with. In fact, if they have a technical advisor, we want him/her to attend the interview. We want the people who own the project to be there during the referee visits.

Interviewer: So you agree with that comment.

Interviewee: Yes, when TUBITAK comes, the organizations definitely send representatives from the highest level. They pay attention to this. Maybe we can observe it in this way because the awareness of the organizations doing R&D is a little higher, but the situation may be different in the projects on the KOSGEB side.

Interviewer: When we meet with those at KOSGEB, they make a similar observation. After all, grants are given. Having an official in front of the interlocutor is considered to be the most natural right in terms of the effectiveness of both service providers and information processes. I would also like to ask the following, let this be my last question: I observed something at TÜBİTAK. You work with entrepreneurs

on techno-entrepreneurship. You probably use technocities or something like an intermediary organization. I also see it in 1831, again, expert organizations are mentioned.

Interviewee: Yes.

Interviewer You are increasing this structure. Now TÜBİTAK is a centralized structure. They do not have directorates in the field. Is that why the expert organization structure is being established? Or do you think this method is more effective, in terms of being able to touch the region?

Interviewee: Actually, there are a few different things. TÜBİTAK provides convenience in terms of ease of implementation. Now, if we talk about entrepreneurship, we are talking about these practitioners. We started using them with entrepreneurship. There are a lot of applications, thousands of applications come. Of course, we do not have regional directorates like KOSGEB. We don't have a tool that each region can evaluate and send us sifted applications. We don't have a mechanism. All applications always come to a single unit. Since the number of entrepreneurs is also high, there are some very qualified ones among these applications, and there are some that are not. In other words, there are applications that are made with the eye of "what the heck will happen if I apply, I send two papers", and there are applications that are well prepared and labor-intensive. And we need to allocate the same time to all of them. Each stage is a separate workload. Since it is not possible for us to handle this workload, as the presidential unit, we use technology transfer offices in universities, which we call implementing organizations, at least in the field of entrepreneurship. We use them, and we see that more qualified applications actually reach TÜBİTAK. We can use our time more efficiently, we can allocate it for more accurate projects. Secondly, the technical contribution is higher in applications prepared through technology transfer offices, meaning that the technology transfer office's own competence is integrated into the project. For example, technology transfer offices may have areas of specialization within themselves. Some TTOs (technology transfer offices) can create a more competent staff related to health, some related to software engineering. We think that this contributes to the specialization of TTOs within themselves. In other words, as TÜBİTAK, rather than employing the expert staff who can provide this training within our own organization and spending time training them, using organizations that are already experts in this field reduces our workload, because we will have to receive training ourselves until we get to that stage. In addition, in terms of the number of applications, they are scattered all over Türkiye. As TÜBİTAK headquarters, we can only reach Ankara and its surroundings. Locally, each of these expert organizations comes from different provinces. This method is more efficient in terms of delivering the applications in those provinces to TÜBİTAK.

Interviewer: So, are you going to extend this expert organization structure to your other programs?

Interviewee: Not at the moment. Because the applications in our other programs are applications that need to be prepared a little bit more. There is no training content in these programs, there is no structure

such as mentoring service. There is a project, an R&D project being carried out and the company has to be directly involved. Although there are consultancy firms in the market, even if they prepare these documents, the content of the actual document must be prepared by the company itself in order for it to be a good project application. What is done by consultants, what is done through intermediaries, is a little more formalized and formatted, in Turkish terms, so I think it is more correct for the applications to be made by the organizations themselves, since our other programs are a little more technical in content. This is my personal opinion. But we have never discussed this within the organization.

Interviewer: Anyway, the other method relieves you a lot operationally. It seems to be a smart strategy that relieves you in terms of number, thank you very much, Ms. X.

Interviewee: Thank you. I hope it was useful for the study.

Interviewer: Of course, wouldn't that help? See you soon. Take care of yourselves.

Interviewee: You too, thank you.

APPENDIX F- Consent Form

INFORMED CONSENT FORM

Title study: "From Awareness to Action: Evaluating SME Sustainability Training in Turkey Through a Transformative Learning Framework"

Name participant:

Assessment

- I have read the information sheet and was able to ask any additional question to the researcher.
- I understand I may ask questions about the study at any time.
- I understand I have the right to withdraw from the study at any time without giving a reason.
- I understand that at any time I can refuse to answer any question without any consequences.
- I understand that I will not benefit directly from participating in this research.

Confidentiality and Data Use

- I understand that none of my individual information will be disclosed to anyone outside the study team and my name will not be published.
- I understand that the information provided will be used only for this research and publications directly related to this research project.
- I understand that data (consent forms, recordings, interview transcripts) will be retained on the Y-drive of the University of Groningen server for 5 years, in correspondence with the university GDPR legislation.

Future involvement

- I wish to receive a copy of the scientific output of the project.
- I consent to be re-contacted for participating in future studies.

Having read and understood all the above, I agree to participate in the research study: Yes

Date:

Signature

To be filled in by the researcher

- I declare that I have thoroughly informed the research participant about the research study and answered any remaining questions to the best of my knowledge.
- I agree that this person participates in the research study.

Date:

Signature