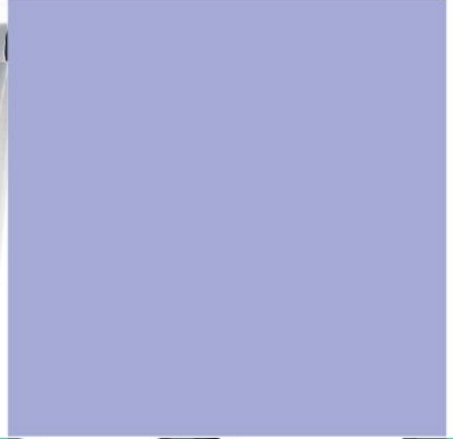
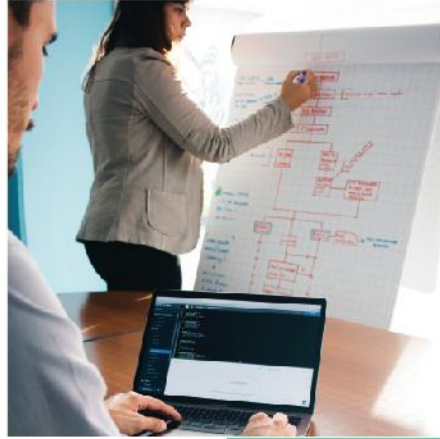
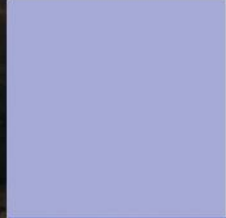




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EntreComp4Transition Assessment Tool

Self

A self-assessment tool for SMEs

Project Name	Building upon the EntreComp Framework for a green and digital transition
Project Acronym	EntreComp4Transition
Work Package	3
Document Title	Deliverable 3.2 – D12 Self Assessment Tool
Author(s)	TOBB

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JULY 2023

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EXECUTIVE SUMMARY

The twin green and digital transition is expected to bring benefits to all parts of the European society. However, for it to successfully happen, education, vocational education, and training (VET) providers, and businesses need to join forces. EU citizens are called upon to upskill and re-skill themselves in the domain of entrepreneurship, which will work together with digital and green skills to ensure they can contribute with sustainable solutions to a stronger and more resilient Europe. Citizens with skills in these areas are crucial to achieve EU policy goals such as the Green Deal or the EU Digital Strategy. Indeed, entrepreneurial skills – as described by the European Entrepreneurship Competence Framework, EntreComp – are the most important basic requirements to enable this change.

The [EntreComp4Transition](#) project aims to develop new, innovative, multidisciplinary approaches to teaching and learning, paving the way for the future “Green Transition Facilitator” by fostering an entrepreneurial mindset, facilitating co-creation, and ensuring recognition of learning outcomes. The project, co-funded by the European Union, is an alliance between SMEs (represented by the Chambers of Commerce), Higher Education/Vocational Education and Training (HE/VET) Institutions in 5 different country clusters: Austria, Belgium, Italy, Spain and Türkiye.

Activities include an **in-depth analysis of skills gaps**, the development of a **dual blended methodology** with innovative learning content delivered via a MOOC in line with ECVET and EQAVET frameworks, pilot sessions, a mobility scheme, and the creation of open badges to support Higher Education/Vocational Education and Training (HE/VET) and enable businesses to verify acquired competencies.

Underpinning these actions, the project will also produce a **sustainable Artificial Intelligence (AI)-based tool** to support companies in identifying skill gaps, to raise their competitiveness and to support them to adapt to the needs of the digital and green transition in Europe.

The purpose of this report is to present the Self Diagnosis Tool developed for Small and Medium-sized Enterprises (SMEs) to assess their digitalisation and sustainability maturity levels.

Inspired by the European frameworks of competences, DigiComp¹ and GreenComp², this user-friendly tool enables SMEs, particularly HR managers, to self-assess their competences, identify skill gaps, and receive tailor-made recommendations for improvement.

[The tool](#) will be integrated into the project website, available in multiple languages, and respects GDPR regulations.

¹ DigiComp – The Digital Competence Framework for Citizen provides a common understanding of what digital competence is [online] [The Digital Competence Framework for Citizens \(DigiComp\)](#).

² GreenComp – GreenComp is a reference framework for sustainability competencies [online] [The European sustainability competence framework \(GreenComp\)](#).

OBJECTIVE

The primary objective of the Self-Assessment Tool is to assess digitalisation and sustainability maturity levels among SMEs in the light of the DigiComp and GreenComp Framework of the European Commission.

It is important to note that the tool is not designed to assess specifically digital or sustainability skills of each employee. Rather, the objective is to understand whether SMEs have successfully integrated sustainability and digitalisation issues into their internal company culture and decision-making processes.

Keeping this in mind, the tool will be contributing to the following issues:

Facilitating Organisational-Level Assessments: The tool focuses on evaluating the overall readiness and sustainability practices of the SME as an organisation. By capturing responses at the organisational level, the tool provides a holistic view of the SME's digital and sustainability maturity, reflecting the collective efforts and practices of the entire company.

Through the assessment process, SMEs gain insights into the extent to which sustainability and digitalisation have become integral components of their organisational culture and strategic decision-making. The tool seeks to identify whether sustainability and digitalisation practices are deeply embedded within the SME's core values and mission.

Identifying Organizational Transformation: By understanding the level of integration of sustainability and digitalisation, SMEs can assess the success of their organisational transformation efforts. The tool's analysis reveals the progress made in fostering a culture that embraces sustainable practices and capitalises on digital opportunities to drive growth and competitiveness.

Identifying Skills Gap: The survey data reveals specific areas where SMEs may lack expertise in digitalisation and sustainability. Identifying these skill gaps helps focus training efforts, enabling SMEs to build a skilled workforce that can effectively navigate the digital landscape and integrate.

Identify Training Needs: One of the key-aims of the tool is to identify the training needs of SMEs. By understanding the areas where digitalisation and sustainability practices may require further enhancement, SMEs can prioritise training efforts to upskill their workforce effectively. This enables the transfer and embedding of sustainability and digitalisation issues into the company culture, ensuring long-term success and competitiveness.

Empowering Strategic Decision Making: The Self Diagnosis Tool empowers SMEs to make strategic decisions based on the assessment results. SMEs can identify areas of strength to leverage and areas for improvement to address, steering their efforts towards building a sustainable and digitally resilient future.

Driving Continuous Improvement: By providing personalised recommendations and resources, the tool encourages SMEs to embark on a journey of continuous improvement. The focus is on cultivating a culture of learning and adaptation, enabling SMEs to stay agile and responsive to evolving digital and sustainability landscapes.

Increase awareness of SMEs about available resources in the market: The tool provides SMEs with direct links to relevant EU-level and national resources, training programs, support mechanisms, and policy guidelines to facilitate easy access to tools and opportunities and support their need to progress on their transformative journey.

Putting DigiComp and GreenComp Framework of the European Commission into Practice: The tool is to operationalise the principles and insights of the DigiComp and GreenComp frameworks of the European Commission. By aligning the assessment criteria with these established frameworks, the tool effectively translates theoretical concepts into actionable practices, empowering SMEs to thrive in the digital and sustainable economy

METHODOLOGY

The development of the Self Diagnosis Tool involved a rigorous methodology to ensure its effectiveness and relevance for SMEs.

DigiComp and GreenComp Framework: These frameworks provided essential insights and served as the foundation for the assessment criteria of the EntreComp4Transition Self-Assessment Tool. These frameworks, designed by the European Union to assess digital and green competences respectively, were carefully studied and adapted to align with the unique context and requirements of SMEs.

Questionnaire Design: The development of the questionnaire was a meticulous process, involving multiple iterations and feedback from project partners. The aim of the consortium was to extract comprehensive information from SMEs with as few questions as possible, considering their time constraints. Questions were carefully crafted to address critical aspects of digitalisation and sustainability, ensuring that the tool could provide valuable insights without overwhelming respondents.

Likert Scale Utilisation: To ensure an easy and user-friendly response format, a Likert scale was chosen for the questionnaire. SMEs were presented with statements to which they could respond based on a five-point scale. This scale allowed SMEs to express their level of agreement or proficiency while ensuring consistency in responses.

Pilot Testing and Refinement: Before finalising the questions, a pilot testing phase was conducted with a few SMEs. The objective was to identify any potential issues in the questionnaire's clarity, usability, and overall functionality. Feedback received during this phase was diligently incorporated into the final version of the tool, ensuring its user-friendliness and effectiveness.

Maturity Score Calculation: To assess the digitalisation and sustainability maturity of SMEs, a scoring mechanism was developed. The Likert scale responses were assigned weights based on the self-ranking of importance/prioritisation provided by SMEs during onboarding. These weights, inspired by the DigiComp and GreenComp frameworks, reflected the relative significance of each aspect for SMEs' growth and development. The tool then aggregated the responses, applying the assigned weights to calculate a composite maturity score for sustainability and digitalisation, respectively.

User-Centric Design: The valuable perspectives of project partners enriched the tool's design, ensuring that it catered to the specific needs and expectations of SMEs. The user experience (UX) was a central focus in the tool's development. Feedback from project partners and potential SME users was actively sought and integrated into the tool's design, including the appearance of the online tool, choice of images, and fonts. The goal was to create a visually appealing and user-friendly interface that would encourage SMEs to engage with the tool seamlessly.

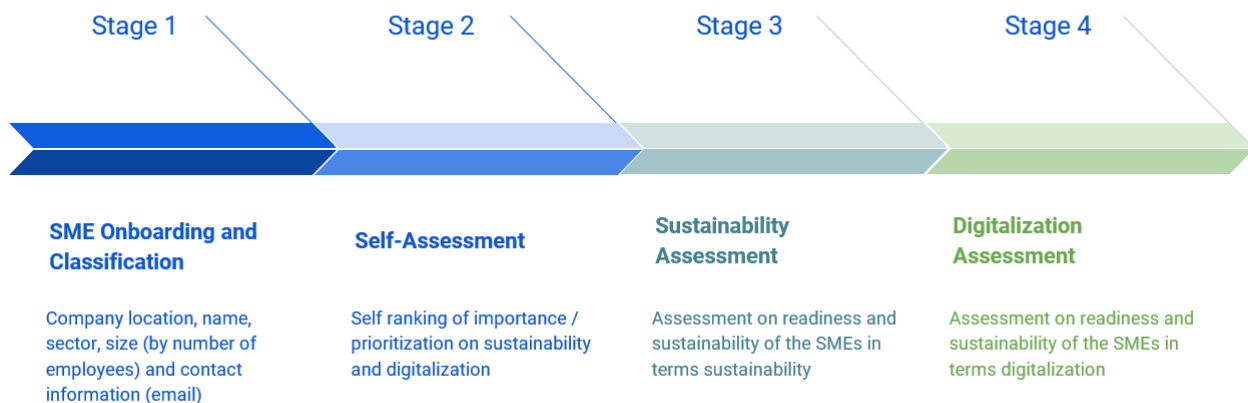
Accessibility: Recognising the diversity of SMEs in different countries of the project partner, special attention was given to ensure the tool's accessibility to all users. The online tool was designed to be responsive and compatible with various devices, including computers, tablets, and smartphones.

Multilingual Support: The tool is available in different languages, ensuring that SMEs can comfortably access it, reply to questions and comprehend the recommendations in their native languages. By breaking language barriers, the tool makes valuable resources accessible to SMEs across Europe, enabling them to leverage the full potential of the offered support mechanisms.

As a result, the tool's user-friendly interface ensures a seamless and efficient self-assessment process. The minimal number of questions streamlines the survey experience, saving SMEs valuable time and effort. The easy-to-understand rating system and clear explanations make the tool accessible to users with varying levels of technical expertise.

THE SELF-ASSESSMENT TOOL'S FLOW

Survey Structure Summary



SME Onboarding and Classification: The process begins with SME onboarding, where companies are classified based on their location, sector, and employee count. This classification allows for the grouping of SMEs with similar characteristics, enabling more targeted and customised assessments.

Self Ranking of Importance: Upon onboarding, SMEs are prompted to self-rank the importance and prioritisation of sustainability and digitalisation within their operations. This self-assessment allows SMEs to introspect and assign a weight to each aspect based on their specific business goals and objectives.

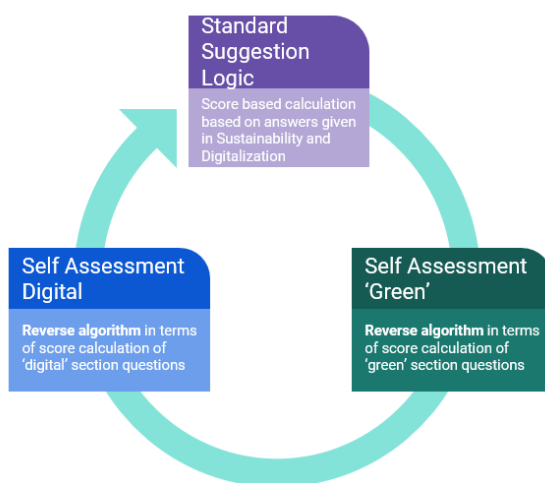
Digitalisation Assessment: In the digitalisation assessment phase, SMEs answer questions designed to gauge their digital transformation readiness. Areas of evaluation include the perceived importance of digital transformation, employee competencies in using digital tools and technologies, data analysis capabilities, collaboration skills, cybersecurity preparedness, and remote task management. Responses are again captured on a Likert scale, allowing respondents to express their level of agreement or proficiency, and used to calculate a digitalisation maturity score.

Sustainability Assessment: SMEs respond to a set of questions tailored to evaluate their sustainability maturity. This assessment encompasses various aspects, including understanding sustainability challenges, implementing sustainable decision-making frameworks, integrating sustainability into business operations, aligning practices with company values, fostering a culture of continuous learning, and managing resource consumption effectively.

Maturity Score Calculation: Responses are captured using a Likert scale derive a sustainability maturity score. The maturity score for both sustainability and digitalisation assessments is derived by assigning weights to each question based on the self-ranking of importance/prioritisation provided by the SME during onboarding. These weights reflect the relative significance of each aspect in the context of the SME's specific objectives. The tool then aggregates the responses, applying the assigned weights and Likert scale ratings to calculate a composite maturity score for sustainability and digitalisation, respectively.

Personalised/Tailor Made Recommendations and Resource Links: Based on the maturity scores and the analysis of responses, the Self Diagnosis Tool generates personalised recommendations for each respondent SME. These recommendations highlight specific areas for improvement and offer actionable insights to enhance sustainability and digitalisation practices. All the recommendations are based on DigiComp and GreenComp documents of the European Commission. Additionally, SMEs receive direct links to relevant EU-level and national resources, training programs, support mechanisms, and policy guidelines to facilitate easy access to the tools and support they need to progress on their transformative journey.

Effect of Self-Assessment on Suggestions



$$\begin{aligned}
 & \text{SSL Sustainability} / \%(100 - \text{SA Green Score}) * \text{Normalizing coefficient} \\
 & \quad + \\
 & \text{SSL Digitalization} / \%(10 - \text{SA Digital Score}) * \text{Normalizing coefficient} \\
 & \quad = \\
 & \text{Final Score}
 \end{aligned}$$

DATA SETs THAT WILL BE DERIVED FROM THE TOOL

Based on the survey results from the Self Diagnosis Tool for SMEs, the EntreComp4Transition project team can obtain valuable inferences and insights that will be recollected in a comprehensive report at the end of the project. Here are some of the inferences that can be derived from the survey results:

Digitalisation Maturity Analysis: An analysis of the responses to digitalisation-related question and a calculation of the average score for each question and overall digitalisation maturity score will be performed. This will lead to identify areas of strength and weaknesses of the participating SMEs in terms of digital transformation.

Sustainability Maturity Analysis: Similarly, an analysis of the responses to sustainability-related questions and calculation of the average score for each question and overall sustainability maturity score will be conducted. This will lead to identify areas where the participating SMEs are excelling and areas where there is room for improvement in sustainability practices.

Country-wise Comparison: The distribution of responses across different countries will be analysed, to understand the geographical reach of the survey and compare digital and sustainability maturity levels

among different countries to uncover regional trends and best practices. A cross-country comparison will be performed to uncover variations in digital and sustainability maturity levels across different countries. Any interested parties can use this data set in order to identify potential factors that contribute to higher maturity levels in certain countries and explore how these factors can be applied elsewhere.

Size-wise Comparison: The distribution of survey responses based on the size of SMEs (e.g., number of employees) to understand the representation of small, medium, and large SMEs can be examined. The digital and sustainability maturity levels among SMEs of different sizes can be compared to identify any size-specific challenges or opportunities.

Sector-wise Comparison: A cross-sectoral analysis to identify commonalities and differences in digital and sustainability maturity levels among different sectors will be conducted.

Correlation Analysis: Potential correlations between digitalisation and sustainability maturity scores can be explored. There will be the possibility to determine if companies that are more digitally mature also tend to exhibit better sustainability practices, and vice versa.

UTILISATION of THE SELF DIAGNOSIS TOOL RESULTS

Upon implementation and receipt of responses from SMEs, the Self Diagnosis Tool is expected to generate comprehensive data sets based on the replies. These data sets can be leveraged for various purposes, providing valuable insights to support SMEs in enhancing their competitiveness and sustainability practices.

The survey data is expected to reveal specific areas where SMEs may lack expertise in digitalisation and sustainability. Identifying these skill gaps helps focus training efforts, enabling SMEs to build a skilled workforce that can effectively navigate the digital landscape and integrate sustainable practices into their operations

By assessing the importance SMEs place on digital transformation and sustainability, the survey provides insights into their priorities. This understanding allows for the development of targeted policies and support mechanisms that align with the most pressing needs of SMEs.

Guidance for targeted interventions: Through cross-sectoral, cross-country, and cross-size comparisons, the EntreComp4Transition project team can provide valuable benchmarking insights for SMEs, policymakers, and stakeholders to understand variations in digitalisation and sustainability maturity levels. One can use this data and identify any patterns or trends that may be unique to specific sectors, size, or countries.

This information can guide targeted interventions and initiatives to support SMEs in improving their competencies, fostering innovation, and ultimately enhancing their competitiveness in the digital and sustainable economy

Design targeted training programs for SMEs: The data collected through the Self Diagnosis Tool offers valuable information on the digitalisation and sustainability competencies of SME employees. By analysing the responses, specific areas where employees may need additional training or upskilling can be identified. These insights can be utilised by educators/trainers to design targeted training programs and workshops, equipping SME employees with the necessary skills and knowledge to adapt to the ever-evolving digital landscape and embrace sustainable practices effectively.

Informing Policy Makers and Stakeholders: The aggregated survey results serve as a powerful resource for informing policy makers and stakeholders about the current state of digitalisation and sustainability practices among SMEs. Policymakers can gain a comprehensive understanding of the

challenges faced by SMEs in these domains, enabling them to develop targeted policies and support mechanisms to foster SME growth and innovation. By sharing the report with relevant stakeholders, such as Chambers of Commerce and Industry associations, collaborative efforts can be undertaken to enhance the overall competitiveness of SMEs on a regional and national scale.

THE FUTURE POTENTIAL OF THE TOOL

Assessing Progress Over Time

By conducting periodic surveys using the Self Diagnosis Tool, SMEs can track their progress in digitalisation and sustainability maturity. This data-driven approach enables SMEs to monitor their growth and adapt their strategies accordingly.

In conclusion, the Self Diagnosis Tool not only supports SMEs in assessing their digitalisation and sustainability maturity levels but also provides rich data sets that can be harnessed to develop training tools, inform policy decisions, and promote sustainable growth. Embracing the insights from the survey results, SMEs and stakeholders can collaboratively work towards building a resilient and competitive SME ecosystem in Europe.

Visibility and Easy Access to EU and National Resources

A significant advantage of the Self Diagnosis Tool is its ability to provide SMEs with easy access to EU-level and national resources. The personalised recommendations generated by the tool include direct links to a plethora of resources, trainings, support mechanisms, and initiatives available at both EU and national levels. These links can be updated and renewed regularly depending on the new trends.

EU-Level Resources: By collaborating with EU-level organizations and initiatives, the Self Diagnosis Tool connects SMEs to a wealth of resources designed to foster digitalisation and sustainability practices.

These resources may include EU Funding Programs, EU Digital Initiatives, Sustainability Frameworks. National-Level Resource, cognizing the diverse needs of SMEs across different countries, the tool provides customized links to national-level resources. These resources may include national training programs such as tailored training programs to enhance digital and sustainability competencies or local support networks such as access to local support networks and mentorship programs for SMEs.

[LINK to the tool](#)

CONCLUSION

The tool's value extends beyond individual SMEs, with the potential to support policymakers, chambers of commerce, and stakeholders in crafting data-driven policies and strategies that foster a resilient and sustainable SME ecosystem.

The Self Diagnosis Tool for SMEs emerges as a catalyst for empowerment and a game-changer in supporting SMEs' digitalisation and sustainability journeys. It has immense future potential. Beyond self-assessment and personalized recommendations, the tool facilitates easy access to EU-level and national resources, making valuable support mechanisms readily available to SMEs. By empowering SMEs with knowledge, skills, and linkages to relevant resources, the tool strengthens their competitiveness and sustainability, fostering a thriving SME ecosystem across Europe.

Looking ahead, one can aspire to deepen the tool's impact by increasing its outreach to SMEs across diverse sectors and countries. By collaborating with Chambers of Commerce and other stakeholders, we aim to extend the tool's accessibility and support SMEs in their digital and sustainable journey. In the spirit of continuous innovation, one can seek to integrate cutting-edge technologies and data analytics to further enrich the tool's capabilities. Harnessing the power of AI and machine learning will enable us to provide more accurate and personalized recommendations for SMEs, guiding them.

ANNEX- Set of Questions

Profile of SME	Which country is your company located in?					
	E-mail					
	What sector does your company belong to?	IT/Digital Construction	Manufacturing Logistic/Transportation	Services Finance	Education/Training Other	Agriculture
	How many employees work in your organization?	1-5	6-10	11-50	51-100	101-250
Competence area	Self-assessment Question	5	4	3	2	1
Digital	How would you rate the importance of digital transformation for your company?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using Digital Devices	How competent are your employees in using digital devices for work purposes and adapting to new digital tools and technologies?	Expert	Proficient	Intermediate	Beginner	Not at all
Information and Data Management	How competent are your employees in using digital tools to analyse and interpret data relevant to your business?	Expert	Proficient	Intermediate	Beginner	No
Communication and Collaboration	How competent are your employees in collaborating and communicating with others using digital tools (e.g., shared documents, project management)	Expert	Proficient	Intermediate	Beginner	No
Digital Content Creation	How competent are your employees in creating and editing digital content (e.g., images, videos) for business purposes?	Expert	Proficient	Intermediate	Beginner	No
Safety	Does your company have a plan in place to recover your data in case of a cybersecurity incident?	Yes, always	Yes, often	Yes, occasionally	Yes, rarely	Not at all
Problem-Solving	Is your company able to troubleshoot and fix basic hardware and software issues in your business?	Yes, Expert	Yes, Proficient	Yes, Intermediate	Yes, Beginner	No
Creativity	How often do your employees use digital tools to manage your team's tasks and projects remotely?	Always	Often	Occasionally	Rarely	Not at all
Digital Citizenship	Are you familiar with data privacy regulations, such as GDPR and intellectual property rights online?	Yes	No			

Green	<i>Topics/Priority Level</i>	Extremely important	Fairly important	Important	Slightly Important	Not at all important
		How would you rate the importance of sustainability (green) transformation for your company?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Competence area	Self-assessment Question	5	4	3	2	1
Knowledge of Sustainability	What is the level of understanding of your company about sustainability challenges and opportunities facing your sector?	Comprehensive	Good	Some	Limited	Not Considered
Sustainable Decision-making	Have you developed a decision-making framework that incorporates sustainability considerations?	Yes, well-structured, formal framework	Yes, we have a formal framework	In progress	We have an informal decision-making process	Not Considered
Sustainability innovation	Have you implemented any innovative solutions or practices to improve sustainability performance of your company?	Yes, a lot	Some	A few	No/Not yet	Not Considered
Leadership and Governance	Do you have effective governance structures in place to ensure sustainability is integrated into all aspects of your business?	Yes, Well-structured formal governance structures	Yes, Formal governance structures	In progress	We have an informal governance structure	Not Considered
Sustainability Integration:	Have you already integrated sustainability into your business operations, including your supply chain and procurement practices?	Yes, fully	Yes, mostly	Yes, Some	Yes, Few	Not Considered
Ethics and Values	Do you ensure that your sustainability practices align with your company's values and mission?	Yes, fully	Yes, mostly	Yes, Some	Yes, Few	None
Lifelong Learning and Reflection	Have you established a continuous learning culture where employees are encouraged to develop their sustainability knowledge and skills?	Yes, always	Yes, often	Yes, occasionally	Yes, rarely	No
Resource Management	What is the level of your company's strategy in place for managing your resource consumption, including energy, water, and materials?	Comprehensive	Good	Limited	No	Not Considered
Climate Action	How do you scale your company about identifying the risks and opportunities associated with climate change for your business?	Comprehensive	Partially	Basic	No	Not Considered



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