



**cross  
-re-  
tour**

# **Dynamic overview in Interactive Knowledge Platform**

Cross-Re-Tour Deliverable D3.2

An overview of cross-domain innovations for  
tourism SMEs



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### Acknowledgements

This deliverable was developed based on collective efforts from all partners of the Cross-re-tour consortium.

## Glossary and Abbreviations

<b>AAT</b>	Automated Assessment Tool
<b>AR</b>	Augmented Reality
<b>CRT</b>	Cross-Re-Tour
<b>EU</b>	European Union
<b>IoT</b>	Internet of Things
<b>KBA</b>	Key Business Area
<b>SMEs</b>	Small and medium-sized enterprises
<b>TBA</b>	Transversal Business Area
<b>TTP</b>	Tourism Transition Pathway policy document
<b>VR</b>	Virtual Reality
<b>WP</b>	Work Package

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# Executive Summary

This document serves as Deliverable D3.2 of [Cross-Re-Tour](#), a project funded by the European Union under the Single Market Programme.

It reports the outcomes of activities carried out within Work Package 3, particularly regarding the conducted 'Market Scan', which mapped existing tools, innovations, measures and solutions already successfully implemented in sectors other than tourism and that could be replicated and potentially scaled by tourism SMEs. The results of the Market Scan are included in this report.

A collective effort by partners led to the identification of 98 innovative solutions, spread across the 8 Cross-Re-Tour countries (Germany, The Netherlands, Latvia, Portugal, Spain, Montenegro, Slovenia and Malta), 6 relevant Key Business Areas (Water, Energy, Food, Plastic, Transport, Furniture & Equipment) and 3 Transversal Business Areas (Client Nudging, Staff Nudging, Sustainable & Inclusive Markets). These solutions have been included in 'Country Reports', offering an overview of the 'State of The Art on cross-domain open innovation for SMEs in tourism' in the 8 countries. Each Country Report includes an analysis of mapped innovations and context-based reflections on best practices, scalability and replicability of identified innovations, recommendations to SMEs regarding their green and digital transition and possible solutions at the political level.

Recommendations made to tourism SMEs regarding their green and digital transition show similarities across the countries, despite diverse contexts, innovation landscapes and priorities. To boost their green and digital transition, tourism SMEs are suggested to focus on strong collaboration, networking, workforce development, experimentation and incremental adoption of innovations. Collaboration with local universities, and innovation hubs can strengthen capabilities and foster a culture of innovation.

When thinking about possible solutions at the political level, recommendations emphasize the need for governmental support mechanisms (e.g. simplified access to funding, fiscal incentives, and grants to lower the financial barriers to innovation), the organization of capacity-building programmes encouraging experimentation, and fostering cross-domain collaboration through innovation hubs, networking events, and public-private partnerships, which are seen as effective ways to inspire SMEs to adopt proven solutions from other fields.

While [chapter 1](#) provides a general introduction and [chapter 2](#) clarifies methodological aspects and terminology, [chapter 3](#) includes [8 Country Reports](#), one for each Cross-Re-Tour country. Chapters 4 to 7 include lists of mapped innovations, organized based on different criteria ([Key Business and Transversal Areas](#), [current field of application](#), [SMEs' challenges](#) addressed by those solutions, [addressed topic of the Transition Pathway](#) policy document). [Chapter 8](#) provides a comprehensive, dynamic and interactive overview of mapped solutions, accessible through a so-called '[Interactive Innovations Matrix](#)' while [Chapter 9](#) offers a conclusive overview on the achieved results.

# 1. Introduction

Tourism is a cornerstone of Europe's economy, yet its long-term sustainability depends on the sector's ability to innovate and adapt. Amid growing challenges such as climate change, resource constraints, and digital transformation, tourism SMEs face increasing pressure to adopt sustainable practices. Since its inception, the Cross-Re-Tour project has sought to become a valuable partner to tourism SMEs across Europe, empowering them with tools and knowledge to enhance their resilience and competitiveness through a twin transition towards digital and green practices. To address these complex needs, the project has embraced a forward-thinking, cross-sectoral approach, bridging innovations from diverse industries to inspire transformation within the tourism sector.

After the activities of Cross-Re-Tour (CRT) WP2, focused on identifying and understanding the knowledge gaps and constraints that tourism SMEs face while transitioning to digital and green operations, the last step in the first "Re-Tour" phase took place in CRT WP3 (Cross-domain solutions mapping and SME diagnostics). The activities in this WP focused on conducting a 'Market Scan', mapping existing tools, innovations, measures and solutions already successfully implemented in other fields and sectors, and that could be replicated and potentially scaled by tourism SMEs. The results of the Market Scan are included in this report. This phase not only recognised opportunities for operational improvement but also emphasized the importance of tailored solutions to suit the unique challenges of SMEs. The market scan focused on six selected areas of business operations (water, energy, food, plastic, transport, and furniture and equipment), also referred to as 'Key Business Areas' (KBA) in this report, and 3 'Transversal Business Areas' (TBA), specifically client nudging, staff nudging and the ability to reach new sustainable & inclusive markets. CRT WP3 also offered tourism SMEs the opportunity to use the CRT AAT (Automated Assessment Tool), a diagnostic tool designed for this project, and that enabled SMEs to conduct a self-assessment of their readiness for green and digital innovation and their capacity to carry out operations in a sustainable way. A summary of the AAT results aggregate per country is also included in this report.

## 1.1. Consortium composition

Several partners across Europe are actively involved in the CRT project:

Consortium Partner (official name)	English Name	Short Name	Country
Stichting Breda University of Applied Sciences	Breda University of Applied Sciences	BUas	The Netherlands
ARCTUR Racunalniski Inzeniring d.o.o.	ARCTUR Computer Engineering	ARCTUR	Slovenia
Cambrà Oficial de Comerç Industria i Navegació de Barcelona	Barcelona Chamber of Commerce, Industry, Services and Navigation	CCB	Spain
Institut für Tourismus und Bäderforschung in Nordeuropa GmbH	Institute for Tourism Research in Northern Europe	NIT	Germany
Regionalna razvojna agencija za Bjelasicu, Komove i Prokletije	Regional Development Agency for Bjelasica, Komovi and Prokletije	RDA BKP	Montenegro
Latvijas Lauku tūrisma asociācija Lauku ceļotājs	Latvian Country Tourism Association 'Lauku ceļotājs'	CELOTAJS	Latvia

Malta Tourism Authority	Malta Tourism Authority	MTA	Malta
INOVA+ Innovation Services, S.A.	INOVA+ Innovation Services	INOVA+	Portugal

Moreover, ETOA (European Tourism association) is an associated partner of CRT.

## 1.2. Objectives and activities of WP3 and D3.2

This document serves as deliverable D3.2 of [Cross-Re-Tour](#), a project funded by the European Union under the Single Market Programme.

It reports the outcome of activities carried out within WP3, which had the following objectives:

- *Develop an extensive overview of SMEs on solutions and measures to digital and green challenges in other industries, for 6 areas of business operations as well as 2 transversal themes, in 8 countries;*
- *Provide SMEs with market intelligence and knowledge about cross-domain scalable innovation opportunities for different market segments;*
- *Communicate outcomes of the market scan in an online publication: "cross-domain innovation for tourism business operations: state of the art";*
- *Offer SMEs ways to self-assess their capacities and their potential for uptaking cross-domain solutions;*
- *Promote cross-domain innovation practices in the project territories;*
- *Boost international best practices exchange in open innovation for tourism.*

To achieve the intended objectives, the following actions were implemented, achieving the results specified below:

- M1-M4: BUAs (Work Package lead beneficiary) elaborated a 'Market Scan Guideline' to establish a common ground among partners regarding terminology, actions and steps necessary to achieve the agreed results. The document also included a scope definition, necessary templates and indications of categories for solution scanning. In M4 the document was made available to partners.
- M3-M8: BUAs and ARCTUR collaborated on the design of the CRT AAT, BUAs focusing on the content-related aspects (identification, selection and description of the indicators to be assessed) and ARCTUR providing the technical expertise to realize the digital tool and make it accessible to SMEs via an [online platform](#).
- M5-M14: CRT partners conducted the Market Scan, identifying already existing cross-domain solutions/innovations in the 8 countries of CRT partners. This led to the collection of data regarding 98 solutions/innovations.
- M9-M14: Data concerning the mapped solutions were examined by BUAs and summarized in tables, to keep track of the activity's progress and to provide a starting point for the analysis included in this report. Moreover, BUAs further elaborated the collected insights into an accessible and 'easy to understand' text for each of the mapped solutions, which was then sent to INOVA+ for publishing on a [dedicated section of the CRT website](#).

- M9-M13: CRT partners invited tourism SMEs they got in contact with during other project activities (e.g. Online Dialogues, Call for Challenges, informal talks, etc.) to use the CRT AAT and self assess their readiness for green and digital innovation and their capacity to carry out operations in a sustainable way. By the end of M14, 166 SMEs initiated the assessment, leading to 156 completed assessments. To maintain the integrity of the analysis, incomplete data sets (e.g. assessments with missing answers) were excluded from the analysis of this report and D3.1. CRT partners are still promoting and will keep promoting the use of CRT AAT to SMEs they will get in touch with along the rest of the project.
- M14-M15: BUAs analysed the mapped innovations/solutions to extract the necessary information to be visualized in an interactive matrix. In coordination with INOVA+ and with the contribution from all partners (country reports) the content of this report was finalized. D3.2 provides a dynamic overview that will also be made available on the CRT Knowledge Hub and it will be disseminated across different channels.

While CRT deliverable D3.1 focused on analysing the results of AAT self-assessments, deliverable D3.2 mostly reports the outcomes of the Market Scan, although the included country reports will also briefly summarise AAT results, aggregated per country.

### 1.3. How to navigate this document

Chapter 1 and 2 of this report contain a general [introduction](#) and some [methodological clarifications](#) regarding the process and the steps taken to produce the desired results and meet WP3 objectives.

Chapter 3 includes [8 Country Reports](#), one for each CRT country ([Germany](#), [Latvia](#), [Malta](#), [Montenegro](#), [Portugal](#), [Spain](#), [Slovenia](#), [The Netherlands](#)). Each of these reports starts with a comprehensive list and analysis of mapped innovations, followed by the identification of best practices among the mapped solutions, including country-based reflections on the scalability and replicability of the identified innovations, and concluding with recommendations to SMEs and possible solutions at the political level.

Chapters 4 to 7 provide access to comprehensive lists of mapped innovations, respectively organized based on [Key Business Areas and Transversal Business Areas](#) (chapter 4), [SMEs challenges that innovations should help to address](#) (chapter 5), [current fields of application of mapped innovations](#) (chapter 6) and associated [topic of the Transition Pathway policy document](#) (chapter 7).

[Chapter 8](#) provides a comprehensive, dynamic and interactive overview of mapped solutions, accessible through a so-called “[Interactive Innovations Matrix](#)”. This matrix offers a tool to interactively navigate among different categorizations of innovations mapped through the Market Scan. Each element of the matrix is clickable, offering a dynamic and interactive experience.

## 2. Methodology and terminology clarifications

Before extensively illustrating the results of the market scan, this chapter provides some methodological clarifications to help the reader understand how the market scan was designed and how the collected data have been interpreted, examined, analysed and reported.

### 2.1. Preparatory activities and terminology agreements

As mentioned in Chapter 1.2, a guideline document was agreed and made available as a tool to ensure common understanding regarding terminology, objectives and expected results. The document can be found in [Annex 1](#).

Among other clarifications, the guidelines specify how the identified solutions would be showcased online to SMEs, and communicated as practices, solutions and innovations representing 'sources of inspiration/ideas' for SMEs (potentially also beyond CRT), rather than (exclusively) for matchmaking purposes within Cross-Re-Tour. To support this approach, in certain situations, the term 'innovation' has been preferred instead of 'solution'. For simplicity, in relation to the Market Scan, the terms 'innovation' and 'solution' were used interchangeably within this report.

In terms of the mapping scope, it was agreed to maintain flexibility in addressing which sectors Cross-Re-Tour should focus on during the solution scan, allowing for adaptation to varying circumstances and contexts in each country. Larger organizations within the tourism industry will also be considered for the solution scan as the tourism industry itself faces silos and lack of exchange between sectors and actors.

To get a better understanding of the green and digital innovation landscape in each country, within and outside the tourism industry, partners agreed on the value of conducting country-based interviews with experts in these fields. These interviews revealed interesting insights on innovative sectors in the different countries and the challenges tourism SMEs face regarding digital and green transition.

#### **Terminology clarifications: Key and Transversal Business Areas**

The guidelines provided clarifications regarding specific terminology used in the market scan. The following definitions were adopted in regards to the 6 Key Business Areas (KBAs):

**Water:** all the business processes and practices concerning water procurement, distribution, purification, business and customers' consumption, appropriate treatment and disposal of wastewater.

**Energy:** all the business processes and practices concerning energy procurement, energy efficiency, transition to renewable energy sources, retrofitting interventions, and business and customers' energy consumption.

**Transport:** all the business processes and practices concerning business and customers' fuel consumption for transports, including the transition to less carbon-intensive transportation modes for employees and customers.

**Food:** all the business processes and practices concerning food sourcing/procurement, food supply chain management, food production, management and reduction of food waste produced by employees and customers.

**Plastic:** all the business processes and practices concerning the procurement and the use of goods and equipment partially or entirely made of plastic, plastic waste separation processes, and disposal of plastic waste.

**Furniture and equipment:** all the business processes and practices concerning the procurement, use, disposal and recycling of furniture and equipment used for the functioning of the business and to supply services to customers.

A terminology clarification of the considered Transversal Business Area (TBAs) was also provided:

**Staff nudging:** Strategies or interventions employed by SMEs to gently influence the decisions and behaviours of their employees, generating a change that creates an environmentally positive impact on one or more of the 6 key business areas defined above, basically altering non-sustainable behaviour in a predictable way without forbidding any current options.

**Client nudging:** Strategies or interventions employed by SMEs to gently influence the decisions and behaviours of their customers, generating a change that creates an environmentally positive impact on one or more of the 6 key business areas defined above, basically altering non-sustainable behaviour in a predictable way without forbidding any current options.

**Sustainable & Inclusive Markets:** Strategies or interventions employed by SMEs to improve their capability to effectively reach out, engage and offer services to new markets that represent meaningful segments and niches in terms of inclusivity, accessibility and sustainability (e.g., LGBTQ+ market, ecotourism, solutions for accessibility, etc.).

### **Terminology clarifications: Green and digital innovation**

The shared guideline also provided an indication regarding the scope of the innovations to be mapped, in terms of their 'green' and 'digital' features:

**Green innovations:** changes in the business operations and practices able to determine a reduction of the environmental impact of the business, creating a positive value for both the SME and the environment.

**Digital innovations:** changes in the business operations and processes, deriving from the adoption of digital technologies and determining improved processes and

services/products, including gains in terms of resource-usage efficiency, cost-reduction, reduced environmental impacts, and access to new markets.

In the context of the market scan, we refer to 'green' or 'digital' solution as any digital or green innovation (adopted outside of the tourism domain or by large tourism organizations) that could reasonably be adjusted and/or adopted by tourism SMEs, potentially allowing them to achieve one or more of the following results (see also figure below):

- improve the environmental sustainability of their business operations in one or more of the 6 key business areas;
- improve their capability to effectively reach out, engage and offer services to new markets that represent meaningful segments and niches in terms of inclusivity, accessibility and sustainability (e.g., LGBTQ+ market, ecotourism, solutions for accessibility, etc.);
- nudging clients or staff as a strategy to get to one (or both) of the two results above.

Further steps in the Cross-Re-Tour project highlighted the variation of innovations and solutions interpretations across participating countries, determining the need to further develop a comprehensive definition of innovation, to capture these differences, align on a shared definition and to communicate to stakeholders:

*'Innovation under Cross-Re-Tour is understood as the operational advancements of SMEs within the tourism ecosystem, focusing on feasible, lasting, and impactful sustainable (instead of revenue or profit) driven changes for the organization. Thus, the lasting impact on organizational level stands central, rather than the creation of new / non-existing / revolutionary solutions for the industry as a whole. Being a service-oriented industry, disruptive technological innovation is often beyond the capabilities and purpose of SMEs.*

*Furthermore, we consider innovation as being contextual. Solutions that might be widely used in the tourism ecosystem in one country might still be considered innovative in another country or region.*

*Examples of innovation under Cross-Re-Tour are the acceleration of sustainable goods and services, improvement of operational and organizational processes, skills and capacity building and/or business model transformations. Ideally these innovations should trigger the further acceleration and actions of sustainable modes of operation within the organization.'*

### **Data collection:**

Besides the guideline document, a template to collect specific information about the mapped solution was provided, to ensure a uniform, complete and comparable data collection. The template can be found in [Annex 2](#), and includes sections regarding:

- General information (country, provider, description, etc.);
- 'Green' and 'Digital' impacts on business operations;



- Key and Transversal Business Area/s that can be associated with the solutions;
- Expected value for the SMEs (benefits, impacts on costs, revenues, market opportunities and customer experience) and implementation requirements;
- Informed assessment of the solutions' novelty, impact and complexity of adoption;
- Reflections on scalability and replicability.

## 2.2. Online publication

Data concerning the mapped solutions, which were collected by partners using the above-mentioned template, were published online in the dedicated [Market Scan section of the CRT website](#), according to the format shown in [Annex 4](#). This resulted in the 98 mapped innovations, each with their own dedicated webpage summarizing:

- What the innovation is about, in its current application;
- What are the expected benefits for a tourism SME adopting it;
- What are other relevant aspects to take into consideration (e.g. costs, limitations, requirements, etc.);
- Website of the innovator/provider, where more information can be accessed.

## 2.3. Analysis and reporting

In order to provide the intended output and visualize the results in a interactive and dynamic matrix, each mapped innovation had to be associated with one or more categories in regard to a series of different indicators or aspects. Here are some methodological clarifications on how these categories have been defined and attributed.

### **Key Business Areas (KBA) and Transversal Business Areas (TBA)**

These categories are relevant for the entire project:

- KBA: Water, Energy, Transport, Food, Plastic, Furniture & Equipment;
- TBA: Client nudging, Staff nudging, Sustainable & Inclusive markets;

A terminology clarification of those areas is provided in chapter 2.1. It must be considered that one innovation can be associated with more KBA/TBA. [Chapter 4](#) provides a list of all the mapped innovations associated with a certain KBA or TBA.

### **SMEs Challenges**

The construction of the Interactive Innovation Matrix also requires associating the mapped innovations with the SMEs' challenges they might be able to address. In order to define the set of SMEs challenges to be considered, the content of CRT-WP2 [D2.2](#) was taken into consideration. D2.2 identified a variety of different challenges tourism SMEs face regarding the green and digital transition, in relation to the Key Business Areas relevant to CRT. All these challenges were reviewed

and merged into 10 comprehensive categories that were then associated with the mapped innovations. Here below is the set of considered challenges. [Annex 5](#) provides a detailed description of each challenge. Those descriptions were used as a reference when associating mapped innovations to the SMEs challenges they might help to address. The reader is invited to read those descriptions in the annex to avoid terminological misunderstandings or misinterpretations.

- Resource efficiency
- Adopting circularity
- Waste management
- Innovation knowledge-gap
- Technical capacity
- Real-Time monitoring
- Price/Quality balance
- High investments
- Client nudging
- Staff nudging

It must be considered that one innovation can be associated with more than one challenge. As clear from the lists above, both client nudging and staff nudging might be seen as duplications of the respective Transversal Business Areas. Nevertheless, in the context of the current analysis, both categories represent important business areas considered by CRT, but also clear and evident challenges SMEs face when trying to embrace digital and green transition. Therefore, the duplication is only apparent. Certainly, it should be expected that an innovation classified as 'Client Nudging' in terms of TBA should also be associated with 'Client Nudging' as a relevant SMEs challenge.

[Chapter 5](#) provides a list of all the mapped innovations associated with a certain SMEs' challenge.

### **Current Fields of Application**

While reviewing the templates, which were filled in by partners with information about mapped innovations, a content analysis of the provided data was performed. This, together with the analysis of the providers' websites and other source of information, allowed to establish the following fields and sectors where the mapped innovations have already been successfully implemented:

- Property Management
- Construction & Building
- Manufacturing
- Logistics & Transportation
- Retail & Consumer Goods
- Agriculture & Forestry
- IT & Digital Services
- Furniture & Design
- Human Resources & Training
- Health & Sanitation

- Food & Beverage Industry
- Events & Entertainment
- Medium-Large Accommodation

It must be considered that one innovation can be associated with more than one field of application. [Chapter 6](#) provides a list of all the mapped innovations associated with a specific field of application.

### **Innovation scope: Green vs Green & Digital**

Innovations have also been classified based on the 'innovation's scope', distinguishing between solutions only focusing on green innovation (and therefore mostly having a 'green' impact on SMEs business operations) and innovation including both green and digital innovation (and therefore having both 'green' and 'digital' impact on SMEs business operations). It must be considered that one innovation can be associated with only one of these categories (G vs G&D).

### **Transition Pathway topic**

Mapped innovations have also been associated with one or more topic/s of the [Tourism Transition Pathway](#) (TTP) policy document. Here below is a list of the considered topics. A more detailed description can be found in [Annex 6](#).

- Topic 6: Sustainable mobility;
- Topic 7: Circularity of tourism services;
- Topic 8: Green transition of tourism companies and SMEs;
- Topic 9: Data-driven tourism services;
- Topic 10: Improving the availability of online information on tourism offer;
- Topic 12: Research and innovation projects and pilots on circular and climate friendly tourism;
- Topic 13: Promoting the use of the PEF and OEF methodology and the development sectorial category rules for the tourism ecosystem;
- Topic 15: R&I for digital tools and services in tourism;
- Topic 16: Support for digitalisation of tourism SMEs and destinations;
- Topic 19: Awareness raising on skills needs for twin transition in tourism;
- Topic 20: Awareness raising on changes in tourism demand and the opportunities of twin transition for tourism.

[Chapter 7](#) provides a list of all the mapped innovations associated to a certain Tourism Transition Pathway topic.

### **Innovations' informed assessment**

Based on the data and insights collected by partners and the provider's website, an informed assessment (Medium-Low vs Medium-High) of each innovation has been carried out, in terms of:

- Level of novelty, in the context of the tourism industry in a specific country
- Expected impact on the sustainability of SMEs' business operations
- The complexity of its implementation
- Comprehensive level of scalability, adaptability and replicability

A dichotomic assessment (Medium-Low vs Medium-High) has been preferred to other scales, in order to have a holistic assessment and push for a clear stance.

[Annex 7](#) includes a more detailed description of the embraced concepts of novelty, impact, complexity. In the context of the conducted market scan, the concepts of innovation scalability and replicability are also important:

**Scalability of green and digital innovations:** Scalability refers to the ability of a digital or green innovation to grow in size, scope, or impact while maintaining its efficiency and effectiveness. For tourism SMEs, a scalable solution can adapt to increased demand, a larger customer base, or expanded operations without requiring disproportionate additional resources and costs, while maintaining its effectiveness, quality, and performance.

**Replicability of green and digital innovations:** Replicability refers to the ability to reproduce or transfer a digital or green innovation across different contexts, businesses, or geographic locations while maintaining its effectiveness. Key factors include its adaptability, complexity, and dependence on external conditions. Innovations are more replicable when they are simple, well-documented, and adaptable to local contexts.

More extensive clarifications are included in [Annex 7](#). The reader is invited to read those descriptions to avoid terminological misinterpretations.

### 3. Country Reports

This chapter reports the outcome of the Cross-domain solutions mapping conducted in the CRT countries. It resulted in the collection of information and insights about 98 mapped innovations, distributed among the 8 countries. These innovations have been identified, summarized, and made publicly available on the [CRT Website](#). A detailed analysis and interpretation of the collected data has been performed as well, allowing to provide 8 'Country Reports'. This offers an interesting publication on the 'State of The Art on cross-domain open innovation for SMEs in tourism'.

Each Country Report provides insights through the following sections:

- **Country Table of innovations:** A comprehensive table listing all the solutions/innovations mapped in that country. By clicking on the name of each innovation, the reader can access a dedicated webpage on the CRT website, containing more information and details about that specific innovation. Moreover, for each innovation the table indicates:
  - The solution/innovation provider;
  - The Key Business Areas (KBAs) and Transversal Business Areas (TBAs) that are associated with that innovation;
  - The innovation scope, distinguishing between solutions only focusing on green innovation and the ones including both green and digital aspects;
  - The current fields of application, meaning the indication of the fields and sectors in which that innovation has already been successfully implemented. A certain field mentioned here multiple times doesn't necessarily indicate a high innovativeness level of that sector in a certain country. It only indicates that mapped innovations have frequently been applied in that field;
  - The SMEs' challenges the innovation should help to address. The set of possible challenges included in this analysis has been elaborated based on the outcome of CRT WP2 activities and results, such as the Online Dialogue;
  - The topics indicated in the Transition Pathway (TTP) policy document that can be associated with a specific solution, based on an informed interpretation of the innovation features and objectives;
  - An informed assessment (Medium-Low vs Medium-High) of the innovation in terms of:
    - Level of novelty within the tourism industry (NOV)
    - Impact on the sustainability of SMEs business operations (IMP)
    - Complexity of its implementation (COM)
    - Scalability, adaptability and replicability (SAR)
- **Local Context and Key Features:** General overview of the innovation landscape and context of the Country, with a focus on tourism businesses and including insights from interviews conducted with experts.

- **Key Features:** Analysis of the set of mapped innovations, in terms of KBA, addressed challenges, fields of application, TTP topics, and assessed level of novelty, impact, complexity, scalability and replicability.
- **Best Practices:** By taking into consideration the outcomes of interviews with experts, the Online Dialogue, the responses to the Call for Challenges and informal conversations with SMEs, some of the mapped innovations have been identified as best practices, in the specific context of the Country. Those innovations are shortly described and the reader can interactively click on the mentioned innovations, accessing a dedicated webpage on the CRT website, containing more information and details about that specific innovation.
- **Potential for Replicability and Scalability:** Based on an informed interpretation of the innovation features and implementation requirements, and considering the definitions included in [Annex 7](#), the set of mapped innovations was considered and further reflections were developed, regarding their scalability and replicability by tourism SMEs in the Country.
- **AAT Self-Assessment insights:** The aggregate results of the CRT AAT completed by SMEs in the country are reported and visualised through a chart illustrating the self-assessed current situation, in relation to a set of indicators organized into 3 macro areas and 2 sub-topics for each macro-area. Some descriptive insights identify the best-performing areas on a country-basis and expected future developments.
- **Recommendations for SMEs:** By taking into consideration the insights that emerged from the previous sections and including interviews with experts, Online Dialogue, outcomes from the Call for Challenges and informal conversations with SMEs, recommendations to SMEs are given on how to boost their cross-domain innovation capabilities.
- **Solutions at the political level:** By taking into consideration the insights that emerged from the previous sections, general recommendations to policymakers and local/national governments are given.

To directly access the report of a specific country, the reader can click on the following links: [Germany](#), [Latvia](#), [Malta](#), [Montenegro](#), [Portugal](#), [Slovenia](#), [Spain](#), [The Netherlands](#).

### 3.1. Country Report Germany

Mapped Innovations/Solutions	Innovator/ Provider	CRT Key & Transversal Business Areas	Scope	Current Fields of Application	Addressed SMEs Challenges	TTP Topics	NOV	IMP	COM	SAR
Using 'gaming' to enhance HR practices	lvup!HR	Staff Nudging	G & D	Human Resources & Training IT & Digital Services	Innovation knowledge-gap Staff nudging Technical capacity	16, 19, 20	M-H	M-H	M-L	M-L
Property Management System for Holiday Homes	vOFFICE	Staff Nudging Client Nudging	G & D	Property Management IT & Digital Services	Resource efficiency Real-Time monitoring Staff nudging	9, 16	M-L	M-L	M-L	M-H
Sustainability Management Platform to maximise hotels' resource savings	Avanera	Water Energy Staff Nudging	G & D	Property Management IT & Digital Services ML Accommodations	Resource efficiency Real-Time monitoring Staff nudging	9, 16	M-L	M-H	M-L	M-H
Kitchen Cooking Robotics: A fully autonomous kitchen ecosystem	CIRCUS Group	Food Furniture & Equipment	G & D	Food & Beverage Industry	Resource efficiency Waste management	7, 9, 16	M-H	M-H	M-H	M-L
Implementing a 'Cradle to Cradle' design concept	Braungart EPEA	Plastic Furniture & Equipment	G	Construction & Building Furniture & Design Manufacturing	Adopting circularity Waste management Innovation knowledge-gap Technical capacity	7, 8, 19	M-H	M-H	M-H	M-L
Best practices to reduce food waste	United Against Waste	Food Staff Nudging	G	Human Resources & Training Food & Beverage Industry	Technical capacity Waste management High investments Staff nudging	8, 12, 20	M-L	M-H	M-L	M-H
SDG-Scouts Training employees on sustainability	B.A.U.M.	Staff Nudging	G	Human Resources & Training	Innovation knowledge-gap Technical capacity Staff nudging	8, 19, 20	M-H	M-H	M-L	M-H
ReCup: an integrated network for reusable cups and bowls	reCup	Plastic Sustainable & Inclusive M. Client Nudging	G & D	Food & Beverage Industry	Adopting circularity Waste management High investments Client nudging	7, 9, 10, 16	M-L	M-H	M-L	M-H
Circular Living: a climate-friendly hotel room concept	Fritz Schlecht	Furniture & Equipment Plastic Energy	G	Furniture & Design Construction & Building ML Accommodations	Adopting circularity Resource efficiency Waste management Technical capacity	7, 12	M-H	M-L	M-H	M-L
Self-sufficient stationary eco-toilets	EcoToiletten	Water Energy	G	Health & Sanitation Events & Entertainment Property Management	Resource efficiency Adopting circularity Waste management High investments	7, 20	M-H	M-L	M-L	M-H
Using seaweed as insulation material	Seegrashandel	Energy Furniture & Equipment	G	Construction & Building	Adopting circularity Waste management Technical capacity	7, 12	M-H	M-L	M-L	M-L
Eco-friendly seaweed pillows	Strandmanufaktur	Furniture & Equipment	G	Furniture & Design Retail & Consumer Goods	Adopting circularity Waste management	7, 12, 20	M-H	M-L	M-L	M-L

Table 3.1: Market Scan Overview - Germany

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Table 3.1 (above) provides a comprehensive overview of innovations mapped in Germany. For each innovation, the right part of the table indicates the associated topic of the Transition Pathway (TTP) policy document and the assessed level (Medium-High vs. Medium-Low) for its novelty within the tourism industry (NOV), its expected impact on the sustainability of SME business operations (IMP), the complexity of its implementation (COM), and an overall evaluation regarding scalability, adaptability, and replicability (SAR) for tourism SMEs.

### 3.1.1. Local context and key features

Expert interviews have revealed that tourism SMEs in northern regions of Germany face significant barriers to green and digital innovation. Sustainability efforts are often hindered by high energy costs, regulatory complexities, and limited time and knowledge, with only 5% of tourists and SMEs actively prioritizing it. Bureaucracy further complicates these challenges, making it particularly difficult for innovative new ideas and start-ups to gain traction. Similarly, digitalization remains underdeveloped due to sector fragmentation, weak networks, and the absence of strong umbrella organizations driving change.

Many SMEs lack strategic planning, professional management, and an interest in innovation, often perceiving AI and other tools as burdens rather than opportunities. This results in a reactive approach, with decisions often made too late. Nonetheless, exceptions of course exist, with some innovative start-ups and creative ideas showcasing the sector’s potential.

Success in the field of business innovation requires addressing these structural issues and moving towards an organizational culture based on experimentation and integrative thinking. At SMEs level, fostering professional leadership, networking opportunities and staff motivation can facilitate this process.

When considering the innovation landscape in Germany, sectors that seem to be more advanced than others are mobility, energy and spatial planning.

### Key features of the mapped solutions & innovations

Key Business Area	
Water	2
Energy	4
Transport	0
Food	2
Plastic	3
Furniture & Equipment	5
Transversal Business Area	
Staff Nudging	5
Client Nudging	2
Sustainable & Inclusive Markets	1

Table 3.2: Frequencies of mapped innovations across KBA and TBA (Germany)

Table 3.2 shows the frequencies of innovations mapped in Germany across the different CRT Key Business Areas (KBA) and Transversal Business Areas (TBA). The same innovation can be associated with more than one KBA/TBA, therefore contributing to more of the frequencies indicated in the table. Furniture and Equipment (5) and Energy (4) are the most represented KBAs, followed by Plastic (3), Water (2) and Food (2). In terms of TBA, Staff Nudging is the most represented, with 5 innovations relevant for this category. Only one innovation seems to



facilitate SMEs in reaching out to sustainable and inclusive markets.

When considering the current field of application of the considered innovations, Table 3.3 shows that Construction & Building, Furniture & Design, and Food and Beverage Industry are the most represented sectors. Despite some fields not even represented, such as Logistics & Transportation and Agriculture & Forestry, overall the mapped innovations come from a wide variety of different areas, including also fields such as retail, manufacturing or health & sanitation. The variety of current fields of application for the mapped innovations is particularly valuable for tourism SMEs interested in Cross-Domain innovation.

Current Application	
Property Management	1
Construction & Building	3
Manufacturing	1
Logistics & Transportation	0
Retail & Consumer Goods	1
Agriculture & Forestry	0
IT & Digital Services	0
Furniture & Design	3
Human Resources & Training	2
Health & Sanitation	1
Food & Beverage Industry	3
ML Accommodations	1
Events & Entertainment	1

Table 3.3: Frequencies of mapped innovations across current fields of application (Germany)

Challenge	
Resource efficiency	5
Adopting circularity	6
Waste management	8
Innovation knowledge-gap	3
Technical capacity	6
Real-Time monitoring	2
Price/Quality balance	1
High investments	3
Client nudging	1
Staff nudging	5

Table 3.4: Frequencies of mapped innovations across SMEs' challenges (Germany)

While comparing the mapped innovations with the challenges expressed by German SMEs (Table 3.4), the innovations seems to be particularly helpful in addressing waste management and providing technical capacity to SMEs to support the green and digital transition. Coherently, many innovations can also support SMEs in adopting circularity principles in their business operations. The market scan also points out several innovations that might allow SMEs to use resources more efficiently and to nudge staff towards sustainability.

Table 3.6 below on the left shows a slight prevalence of solutions for green innovations compared to the ones including both green and digital features.

Green / Digital	
G & D	5
G	7

Table 3.6: Innovations' scope (Germany)

Table 3.5 on the right illustrates how the considered innovations can be associated with many of the topics outlined in the Tourism Transition Pathway policy document, especially in relation to topic 7 (circularity of tourism services) and topic 16 (support for digitalization of tourism SMEs and destinations).

Below, Table 3.7 shows the distribution of innovations in terms of assessed level of novelty for the tourism industry (prevalence of innovations assessed as having a Medium-High level of novelty), expected impact of innovations on the sustainability of

TP Topic	
Topic 6	0
Topic 7	7
Topic 8	3
Topic 9	4
Topic 10	1
Topic 12	4
Topic 13	0
Topic 15	0
Topic 16	5
Topic 19	3
Topic 20	5

Table 3.5 Frequencies of mapped innovations across TTP topics (Germany)

business operations (prevalence of innovations with a Medium-high impact) and estimated level of complexity of their implementation (prevalence of Medium-low).

	Assessed level of			
	Novelty	Impact	Complexity	S&R
M-L	4	5	9	6
M-H	8	7	3	6

Table 3.7. Distribution of innovations across assessed criteria (Germany)

In terms of scalability and replicability of the considered innovations, they are equally distributed between Medium-High and Medium-Low levels of replicability and scalability.

### 3.1.2. Best Practices

The Online Dialogue revealed that many German SMEs in the accommodation sector struggle to implement consistent water and energy-saving measures, largely due to insufficient monitoring and knowledge on standardizing these practices across diverse product portfolios. The innovation [Sustainability Management Platform to maximise hotels' resource savings](#) introduced by Avanera, tackles this challenge, allowing for consistent water and energy-saving measures, offering a platform that analyses data, identifies key action areas, and recommends tailored solutions. This helps companies standardize sustainability practices and bridge gaps in terms of monitoring needs and lack of technical knowledge, allowing them to overcome significant difficulties. Despite being mostly implemented by larger accommodation providers, it can be an interesting solutions for SMEs as well.

Another challenge that emerged from the Online Dialogue as well as from the data collected through the Call for Challenges and through direct talks with SMEs, is the struggle to find and keep employees who are truly committed to sustainable operations in their work ethic and professional approach. The B.A.U.M. project [SDG-Scouts - Training employees on sustainability](#) enables employees without prior knowledge to become aware and informed about the sustainability potential regarding the company's operations, based on the framework of the 17 Sustainable Development Goals, encouraging and supporting concrete improvements. When it comes to recruiting employees who are truly committed to sustainability, the innovative approach offered by Ivlup!HR, [Using gaming to enhance HR practices](#), can also produce interesting results. Candidates, when in a competitive gaming environment, tend to show true character traits that might not surface in a traditional job interview. Therefore, gaming-based assessments can help in identifying candidates whose values better align with the company's sustainability goals and the ones who are more likely to be able to lead the green and digital transition of the business.

### 3.1.3. Potential for scalability and replicability

Most of the mapped solutions in Germany are easily replicable and scalable, although some present specific characteristics and features that might reduce their replicability and scalability. For example, the innovations [Kitchen Cooking](#)

**Robotics: A fully autonomous kitchen ecosystem** and **Circular Living: a climate-friendly hotel room concept** are associated with quite high initial investments, so they might not be easily scalable by all SMEs, especially the ones with financial constraints. The solutions **Using seaweed as insulation material** and **Eco-friendly seaweed pillows** are only applicable for coastal destinations where seaweed is present and where it is legal to harvest sea weed, which is not the case in every country. This makes sometimes impossible to replicate them.

Some solutions, such as the one developed by Ivlup!HR **Using gaming to enhance HR practices** need some 'outside of the box' style of thinking to really express their potential for tourism SMEs and require specific adaptations to the context and the objectives of the specific SMEs, therefore their replication might not be so straightforward. Others, such as **Implementing a Cradle to Cradle design concept** can require substantial changes in the organizational culture and vision, therefore they might not be immediately replicable.

### 3.1.4. AAT Self-Assessment insights

The CRT AAT platform was used by 20 German SMEs, self-assessing their current and future (expected) situation in relation to a set of indicators organized in 3 macro areas and 2 sub-topics for each macro-area:

- Readiness for green innovation
  - Green Strategic Orientation
  - Green Innovation Capabilities
- Readiness for digital innovation
  - Digital Strategic Orientation
  - Digital Innovation Capabilities
- Current sustainable operation capacities
  - Sustainable capacities in the 6 CRT Key Business areas
  - Capacities in nudging clients and staff towards sustainability and reaching new sustainable and inclusive markets

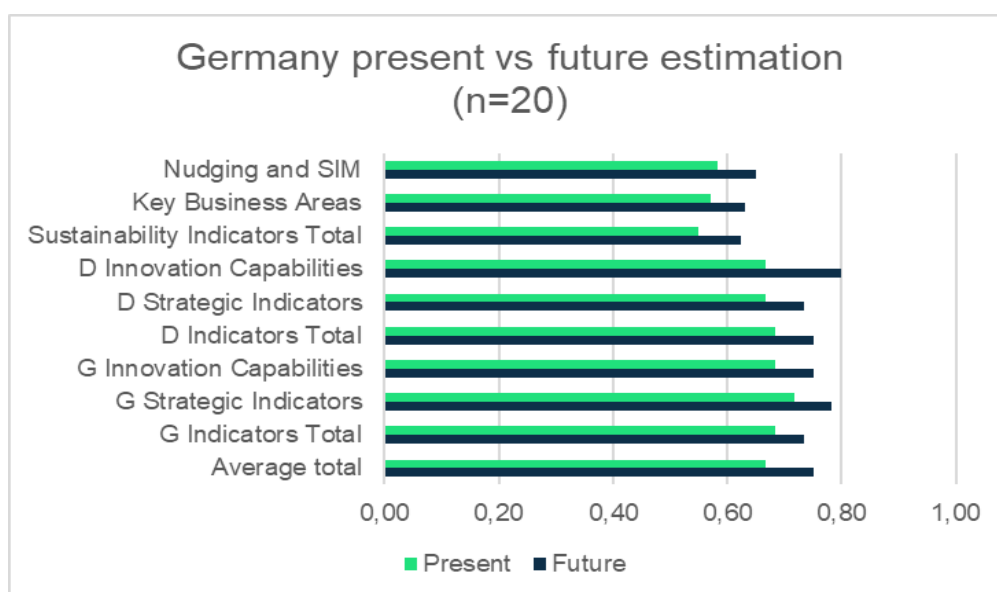


Figure 3.1: AAT German SMEs: assessed current situation VS future estimation

Figure 3.1 provides a visual representation of the aggregate results for German SMEs, giving an idea of how SMEs are performing in the mentioned macro-areas and sub-topics. Here are some interesting insights:

**Best-Performing Metric (Present):** Green Strategic Orientation. German companies show a solid commitment to sustainable practices in the present, with a structured green strategy supporting their environmental goals.

**The Biggest Shift to Future is Digital Strategic Orientation:** When considering the future, German SMEs are prioritizing digital transformation, with notable progress anticipated in digital strategic orientation. This shift suggests that German companies aim to embed digital innovation as an important part of their future strategies, incorporating digital solutions to support sustainability and efficiency.

**Future Goals:** Germany's SMEs are focusing on strengthening their digital innovation capabilities alongside sustaining their established strategies for green innovation. This balance reflects a dual commitment to technology and environmental responsibility.

### 3.1.5. Recommendations for SMEs

To foster cross-domain open innovation in German tourism SMEs, it is crucial to address their limited focus on innovation, which often stems from prioritizing daily operations and reliance on traditional practices. A key recommendation is to designate an "innovation manager" within the organization. This role should encompass building a network of like-minded businesses within the industry, identifying opportunities for collaboration, and actively engaging in cross-domain innovation networks. Regular meetings within these networks can encourage shared ideas and joint projects. Additionally, companies should invest in staff training to enhance innovation skills and stay informed about funding opportunities and relevant regulations. By dedicating time and resources to innovation, tourism SMEs can break free from conventional approaches, unlocking new potential and driving sustainable growth.

### 3.1.6. Possible solutions at the political level

At the political level, public institutions, such as chambers of commerce, can play a vital role in fostering innovation in the tourism sector. They can organize regular cross-domain networking events, featuring keynote speakers who present best practice examples to inspire businesses and encourage collaboration. Additionally, these institutions should provide comprehensive support for accessing financing opportunities, including clear overviews of available funding options and hands-on assistance with application processes. By taking these proactive measures, public entities can create an environment that nurtures innovation and empowers tourism businesses to explore new possibilities and thrive in a competitive landscape.

## 3.2. Country Report Latvia

<i>Mapped Innovations/Solution</i>	<i>Innovator/ Provider</i>	<i>CRT Key &amp; Transversal Business Areas</i>	<i>Scope</i>	<i>Current Fields of Application</i>	<i>Addressed SMEs Challenges</i>	<i>TTP Topics</i>	<i>NOV</i>	<i>IMP</i>	<i>COM</i>	<i>SAR</i>
Eco-friendly biodegradable clothing hangers	Trempel	Plastic	G	Furniture & Design Retail & Consumer Goods	Adopting circularity Waste management	7, 12	M-L	M-L	M-L	M-H
Restoring and upcycling old furniture	Pavasara Mēbeles	Plastic Furniture & Equipment	G	Furniture & Design Property Management Retail & Consumer Goods	Adopting circularity Waste management Technical capacity	7, 8, 12	M-L	M-L	M-L	M-L
Recycling coffee waste into sustainable products	Koffeco	Food	G	Retail & Consumer Goods Food & Beverage Industry Manufacturing	Adopting circularity Waste management Technical capacity	7, 12, 20	M-H	M-L	M-L	M-H
Mosphera Electric Scooters to enhance exploring opportunities	Global Wolf Motors	Transport Client Nudging	G	Logistics & Transportation Agriculture & Forestry	Resource efficiency Price/Quality balance Client nudging	6, 12, 20	M-H	M-H	M-L	M-H
CHUM - compostable & eatable tableware	Dabas Trauks	Plastic Sustainable & Inclusive M.	G	Food & Beverage Industry Events & Entertainment Retail & Consumer Goods	Adopting circularity Waste management Price/Quality balance	7, 12, 20	M-H	M-L	M-L	M-H
Machine Learning Technology for Smart energy usage	Peaksave	Energy	G & D	Property Management IT & Digital Services	Resource efficiency Technical capacity Real-Time monitoring	9, 16	M-H	M-H	M-H	M-H
Engaging and educational activities to nudge staff & customers towards sustainability	ieber.lv & Efectio	Client Nudging Staff Nudging	G & D	Human Resources & Training IT & Digital Services Retail & Consumer Goods	Client nudging Staff nudging Innovation knowledge-gap Technical capacity	7, 8, 19, 20	M-H	M-L	M-L	M-H
Electric Mobility Solutions for logistics & outdoor activities	Bruntor	Transport	G	Logistics & Transportation Events & Entertainment	Price/Quality balance Resource efficiency	6, 16, 20	M-H	M-H	M-L	M-L
Ecowool as thermal insulation material	Balticfloc	Energy Furniture & Equipment	G	Construction & Building	Adopting circularity Waste management	7, 12	M-H	M-L	M-L	M-L
Electric amphibious vehicle for land & water explorations	BeTriton	Transport Sustainable & Inclusive M.	G	Events & Entertainment Logistics & Transportation	Price/Quality balance Resource efficiency	7, 12, 20	M-H	M-H	M-L	M-L
Environmentally friendly sewage pipe cleaning	Happy Fish	Water	G	Health & Sanitation Property Management	Waste management Technical capacity	7, 20	M-H	M-L	M-L	M-H
Autonomous Robotic Kitchen System	RoboEatz	Energy Food Plastic Furniture & Equipment	G & D	Food & Beverage Industry Events & Entertainment Retail & Consumer Goods	Resource efficiency Waste management	7, 9, 16	M-H	M-H	M-H	M-L

Table 3.8: Market Scan Overview - Latvia

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Table 3.8 (above) provides a comprehensive overview of innovations mapped in Latvia. For each innovation, the right part of the table indicates the associated topic of the Transition Pathway (TTP) and the assessed level (Medium-High vs. Medium-Low) for its novelty within the tourism industry (NOV), its expected impact on the sustainability of SME business operations (IMP), the complexity of its implementation (COM), and an overall evaluation regarding scalability, adaptability, and replicability (SAR) for tourism SMEs.

### 3.2.1. Local context and key features

Expert interviews, along with the results from the Online Dialogue and the Call for Challenges, reveal that tourism SMEs in Latvia are keen to adopt green and digital innovations and are eager to improve sustainability practices. Many businesses express a strong interest in enhancing their operations, but they face some obstacles in doing so. These challenges arise from limited knowledge, financial constraints, and complex regulatory requirements. SMEs often prioritize immediate business concerns over innovation, and there is a perception that sustainability demands substantial investments. State support is available but not always accessible, leaving non-affiliated SMEs particularly disadvantaged.

Latvia's innovation context is characterized by grassroots efforts in rural tourism, where small-scale solutions, such as energy and resource-saving practices, emerge from necessity and creativity. However, the lack of standardized, easy-to-implement models hinders broader adoption. Digitalization is also underdeveloped, with SMEs often relying on outdated methods despite the potential benefits of tools like QR codes and digital customer engagement.

A shift toward 'back-to-basics' strategies could drive incremental innovation. Collaboration across industries and support from academic institutions could help bridge the gap between innovation potential and practical implementation. Building awareness and simplifying processes are critical for fostering a more innovation-friendly environment in the Latvian tourism sector.

### Key features of the mapped solutions & innovations

Key Business Area	
Water	1
Energy	3
Transport	3
Food	2
Plastic	4
Furniture & Equipment	3
Transversal Business Area	
Staff Nudging	1
Client Nudging	2
Sustainable & Inclusive Markets	2

Table 3.9: Frequencies of mapped innovations across KBA and TBA (Latvia)

Table 3.9 shows the frequencies of innovations mapped in Latvia across the different CRT Key Business Areas (KBA) and Transversal Business Areas (TBA). The same innovation can be associated with more than one KBA/TBA, therefore contributing to more of the frequencies indicated in the table. Plastic is the most represented KBA (4 innovations touch upon this category), followed by Furniture and Equipment (3), transport (3) and Energy (3). In terms of TBA, 2 innovations are relevant in terms of client nudging, as well as for reaching out to sustainable and inclusive markets. Only

Current Application	
Property Management	3
Construction & Building	1
Manufacturing	1
Logistics & Transportation	3
Retail & Consumer Goods	6
Agriculture & Forestry	1
IT & Digital Services	2
Furniture & Design	2
Human Resources & Training	1
Health & Sanitation	1
Food & Beverage Industry	3
ML Accommodations	0
Events & Entertainment	4

**Table 3.10: Frequencies of mapped innovations across current fields of application (Latvia)**

one innovation seems to facilitate SMEs in nudging staff towards sustainability.

When considering the current field of application of the considered innovations, Table 3.10 shows that Retail and Events & Entertainment are the most represented areas. Nevertheless, the mapped innovations are currently already implemented in a variety of different sectors and fields of application, from Property Management to Logistics & Transportation and IT and digital services. This is particularly valuable and useful for SMEs willing to consider the potential of cross-domain innovation. This can be an interesting strategy to make a difference in the Latvian tourism industry, while taking advantage of solutions that have

already been tested and improved in other domains.

By comparing the Latvian-considered innovations with SMEs challenges (Table 3.11), mapped innovations seem to be particularly helpful in addressing waste management issues and providing technical capacity to SMEs to support green and digital transition. Coherently, many innovations can also support SMEs in adopting circularity principles in their business operations and in using resources more efficiently. The market scan also points out several innovations that might allow SMEs to find a price-quality balance for their offer to customers.

Challenge	
Resource efficiency	5
Adopting circularity	5
Waste management	7
Innovation knowledge-gap	1
Technical capacity	5
Real-Time monitoring	1
Price/Quality balance	4
High investments	0
Client nudging	2
Staff nudging	1

**Table 3.11: Frequencies of mapped innovations across SMEs' challenges (Latvia)**

Green / Digital	
G & D	3
G	9

**Table 3.13: Innovations' scope (Latvia)**

Table 3.13 on the left shows a clear prevalence of solutions focusing on green innovations, compared to the ones including both green and digital features.

Table 3.12, on the right illustrates how the considered innovations can be associated with several of the topics outlined in the Tourism Transition Pathway policy document, especially in relation to topic 7 (circularity of tourism services), topic 12 (research & innovation on circular and climate-friendly tourism) and topic 20 (awareness on changes in tourism demand and opportunities for twin transition).

Table 3.14, below, shows the distribution of innovations in terms of their assessed level of novelty for the tourism industry (clear prevalence of innovations assessed as having a Medium-High level of novelty), expected impact of innovations on the sustainability of business operations (prevalence of

TP Topic	
Topic 6	2
Topic 7	9
Topic 8	2
Topic 9	2
Topic 10	0
Topic 12	7
Topic 13	0
Topic 15	0
Topic 16	3
Topic 19	1
Topic 20	7

**Table 3.12: Frequencies of mapped innovations across TTP topics (Latvia)**

innovations with a Medium-Low impact) and estimated level of complexity of their implementation (clear prevalence of Medium-Low). This is also in line with the above mentioned need for Latvian tourism SMEs to 'get back to the basics' and prioritize simple innovations, not requiring disruptive changes in their way of

	Assessed level of			
	Novelty	Impact	Complexity	S&R
M-L	2	7	10	5
M-H	10	5	2	7

Table 3.14: Distribution of innovations across assessed criteria (Latvia)

operating but still representing initial and important steps towards sustainability. In terms of scalability and replicability of the considered innovations, Table 3.14 also shows a slight prevalence of innovations assessed as rather scalable and more easily replicable.

### 3.2.2. Best Practices

As emerged from the Online Dialogue, energy efficiency remains a significant challenge for tourism SMEs in Latvia. Businesses often face high energy costs and struggle with inefficient usage, compounded by limited knowledge of optimization techniques. Therefore, in the Latvian context, Peak Save's [Machine Learning Technology for Smart energy usage](#) is certainly a useful innovation. Based on smart sensors and machine learning, it allows to shift of energy consumption patterns to the most cost-effective hours, resulting in significant cost savings and reduced strain on the grid. The automation reduces the need for manual oversight of energy consumption and helps identify inefficiencies, reducing electricity bills by up to 30%. The system is straightforward to implement and, therefore, ideal for SMEs seeking sustainable practices without large upfront investments.

As transportation is another critical issue, Latvian SMEs are often seeking sustainable innovations regarding guest-friendly mobility options, to be adopted also as a distinctive element, to differentiate their market position in the field of outdoor leisure and adventure experiences. [Mosphera Electric Scooters to enhance exploring opportunities](#) seems to fit those requirements well, providing an eco-friendly way for guests to explore local areas, combining fun and sustainable experiences. Similarly, Bruntor's [Electric Mobility Solutions for logistics & outdoor activities](#) include cargo scooters and rugged off-road vehicles, catering to both logistics and adventure tourism needs. An interesting alternative is also BeTriton's multifunctional [Electric amphibious vehicle for land & water explorations](#). Its most complete version is a fully electric recreational vehicle that combines 3 functions: an electric motor boat, a cargo bi-/tricycle, a compact outdoor accommodation where 2 people can sleep. This innovative '3-in-1' concept can be a very interesting option for tourism SMEs willing to cater to adventure seekers, enhancing outdoor leisure experiences while minimizing environmental impact. All these sustainable mobility options allow SMEs to reduce emissions, enhance guest satisfaction, and differentiate themselves with environmentally conscious options.

Waste management and reducing single-use plastics also emerged as shared challenges during the discussions with Latvian SMEs. Koffeco's [Recycling coffee waste into sustainable products](#) transforms coffee waste into eco-friendly products



like oils that are widely consumed by the cosmetics and food industries, biodegradable tableware, and solid biofuel such as charcoal. A small but significant innovation in this field is also [CHUM - compostable & eatable tableware](#), which are made from pressed bran, oats and quinoa. These plates are food-safe, robust, and can be composted or even consumed, providing an innovative solution to reduce plastic waste in the tourism industry, especially for catering and events. Together, these solutions enable SMEs to minimize waste, enhance sustainability, and appeal to environmentally conscious travellers.

### 3.2.3. Potential for scalability and replicability

Many of the mapped innovations in Latvia are easy to scale and replicate, especially those that address common challenges faced by tourism SMEs. For example, solutions like Peak Save's [Machine Learning Technology for Smart energy usage](#) or [CHUM - compostable & eatable tableware](#) are straightforward, easy to adopt, and fit well with the needs of businesses looking to improve energy efficiency and reduce waste. The nudging solution [Engaging and educational activities to nudge staff & customers towards sustainability](#), which use gamified challenges to engage staff and guests in sustainable practices, is also relatively easy to implement, cost-effective and replicable without the need for complex adaptations. Many tourism SMEs in Latvia are small and located in rural areas, so they benefit most from simple and affordable solutions that can be easily replicated. Innovations like Koffeco's [Recycling coffee waste into sustainable products](#) fit these needs perfectly by delivering strong sustainability benefits with little investment or effort.

Transportation solutions, such as [Mosphera Electric Scooters to enhance exploring opportunities](#), Bruntor's [Electric Mobility Solutions for logistics & outdoor activities](#) and BeTriton's [Electric amphibious vehicle for land & water explorations](#) also have good potential for scaling, especially in adventure tourism and urban areas. However, especially for the last 2, the high cost of buying vehicles and the need for charging infrastructure could make them harder to adopt, especially in rural areas. Shared ownership or rental models could help make these options more accessible.

Other solutions, like Pavasara Mebeles' [Restoring and upcycling old furniture](#) require a high level of customization and specialized labour, making it less easily replicable, while innovations such as RoboEatz's [Autonomous Robotic Kitchen System](#) are more advanced solutions addressing important issues, but high initial investments and complexity of implementation reduce the scalability and replicability for tourism SMEs.

### 3.2.4. AAT Self-Assessment insights

The CRT AAT platform was used by 20 Latvian SMEs, self-assessing their current and future (expected) situation in relation to a set of indicators organized in 3 macro areas and 2 sub-topics for each macro-areas:

- Readiness for green innovation

- Green Strategic Orientation
- Green Innovation Capabilities
- Readiness for digital innovation
  - Digital Strategic Orientation
  - Digital Innovation Capabilities
- Current sustainable operation capacities
  - Sustainable capacities in the 6 CRT Key Business areas
  - Capacities in nudging clients and staff towards sustainability and reaching new sustainable and inclusive markets

The chart below (Figure 3.2) provides a visual representation of aggregate results for Latvian SMEs, giving an idea of how participating Latvian SMEs are performing in the mentioned macro-areas and sub-topics. Here below some particularly interesting insights:

**Best-Performing Metric (Present): Green Strategic orientation.** Latvian companies currently have a strong strategic alignment with green innovation, particularly in ensuring that environmental sustainability is embedded in their business strategies and vision for the future.

**Biggest Shift to the Future: Sustainable operation capacities.** Latvia’s SMEs are striving to enhance their foundational sustainability practices, with a marked increase in sustainable efforts projected for the future. This shift indicates an intent to embed environmentally responsible practices more deeply within business operations, including nudging clients and staff towards sustainability and strengthening their capabilities to reach out to sustainable and inclusive markets.

**Future Goals:** Latvia’s focus on enhancing sustainability shows an ambition to close the gap between current practices and future goals. By increasing efforts in sustainable practices, Latvia companies aim to strengthen their overall environmental impact and align more closely with global sustainability standards.

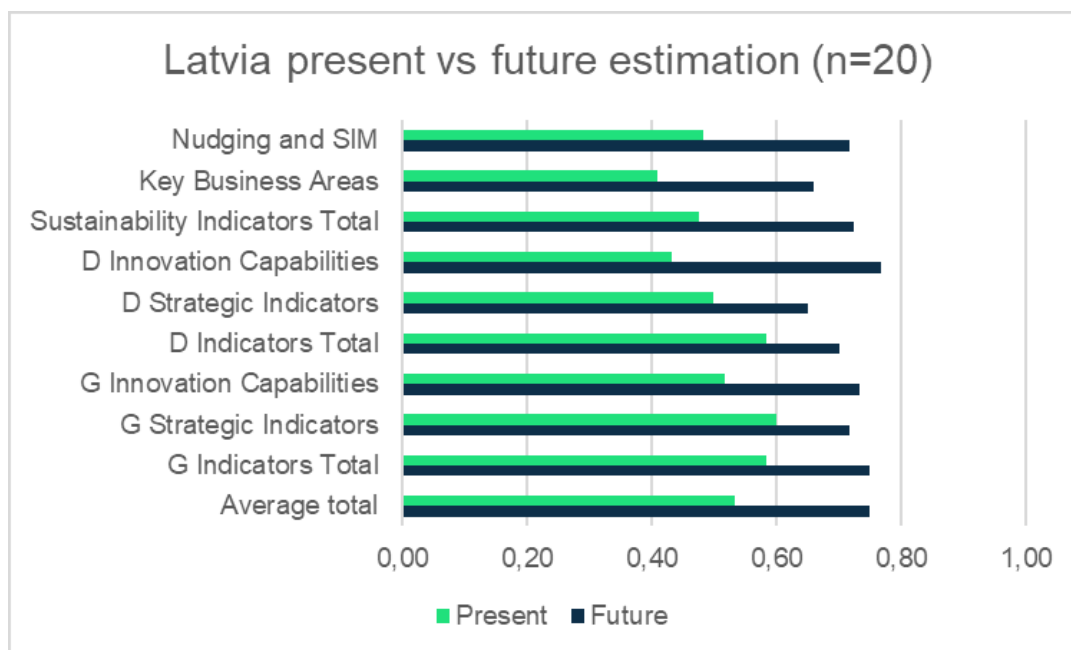


Figure 3.2: AAT Latvian SMEs: assessed current situation VS future estimation

### 3.2.5. Recommendations for SMEs

Many SMEs view sustainability and digital transformation as requiring significant investments, but starting with small, affordable and achievable steps can be a good strategy for progressively making innovation more accessible. Improving resource efficiency or adopting basic digital tools, for example, can deliver impactful results with minimal effort and cost. To both reduce costs and enrich SMEs' offering value, collaborations with local producers, artisans, farmers, or manufacturers can strengthen sustainability while enhancing product uniqueness. Building local networks can also help SMEs access shared tools or infrastructure.

High importance should also be given to Human Resources and their readiness to uptake green and digital innovation by investing in knowledge sharing and training. Collaborating with universities, research centres, and innovation hubs can provide tailored advice and solutions, while sharing examples of successful practices can inspire action and foster learning. Strategies to encourage staff engagement and leadership are also needed. For example, SMEs could experiment assigning an 'innovation champion' to prioritize innovation initiatives. Empowering employees through training and involvement fosters a more proactive and innovative-oriented work environment.

Overall, it is also important for SMEs to allocate time and resources to experiment and test small initiatives regarding new ways of operating. This is necessary to balance the need for business operations to rely on a solid and reliable base with the necessity of preparing the businesses for the future.

### 3.2.6. Possible solutions at the political level

To support tourism SMEs, governments can promote cross-domain collaboration by creating innovation hubs where SMEs can connect with experts from other industries. Simplifying access to funding is crucial, providing clear information and offering hands-on assistance with applications, along with fiscal incentives for adopting green or digital innovations, can help SMEs get started. Additionally, governments should invest in capacity-building initiatives, such as affordable training programs that focus on digital and sustainability skills for SMEs. Encouraging sustainable practices through regulations and incentives, such as tax breaks for green solutions, can further boost innovation and competitiveness in the sector.

### 3.3. Country Report Malta

Mapped Innovations/Solutions	Innovator/ Provider	CRT Key & Transversal Business Areas	Scope	Current Fields of Application	Addressed SMEs Challenges	TTP Topics	NOV	IMP	COM	SAR
Applying oil filters to extend the life of cooking oil	Memcon Solutions	Food	G	Food & Beverage Industry	Resource efficiency Waste management	7, 20	M-H	M-L	M-L	M-H
Near Waterless Laundry system	Memcon Solutions	Water Energy	G	Health & Sanitation ML Accommodations	Resource efficiency Waste management	7, 20	M-H	M-L	M-L	M-H
Sustainable kitchenware cleaning	Memcon Solutions	Water Energy	G	Food & Beverage Industry Events & Entertainment	Resource efficiency Waste management	7, 20	M-H	M-L	M-L	M-H
Smart Water Genie (SWG): prevent water waste	SmartGenie	Water	G & D	Construction & Building Property Management ML Accommodations	Resource efficiency Real-Time monitoring	7, 9	M-H	M-L	M-L	M-H
Paperless Smart Kitchen automated HACCP plan	Memcon Solutions	Food	G & D	Food & Beverage Industry Health & Sanitation Events & Entertainment	Resource efficiency Waste management Real-Time monitoring Technical capacity	7, 9, 16	M-H	M-H	M-H	M-L
Eco-friendly packaging solutions	InServ	Plastic Sustainable & Inclusive M.	G	Retail & Consumer Goods Events & Entertainment Manufacturing	Adopting circularity Waste management Price/Quality balance	7, 20	M-L	M-L	M-L	M-H
Digital tools to enhance your online sustainability reputation	Polzify	Sustainable & Inclusive M.	G & D	IT & Digital Services Retail & Consumer Goods ML Accommodations	Technical capacity Real-Time monitoring High investments	9, 16, 20	M-H	M-L	M-H	M-L
Using water filters to get clean drinking water from the tap	Eco Pro by TAPP Water	Water Plastic	G	Health & Sanitation Food & Beverage Industry Property Management	Resource efficiency Adopting circularity Waste management Price/Quality balance High investments	7, 20	M-L	M-L	M-L	M-H
Using real-time customer insights to foster sustainability	Hotjar by Contentsquare	Client Nudging Sustainable & Inclusive M.	G & D	IT & Digital Services Events & Entertainment Retail & Consumer Goods	Innovation knowledge-gap Real-Time monitoring Client nudging Price/Quality balance	9, 10, 16, 20	M-L	M-H	M-H	M-L
Using a loyalty platform to encourage sustainable choices	Loyale	Client Nudging Sustainable & Inclusive M.	G & D	IT & Digital Services Retail & Consumer Goods ML Accommodations	Client nudging Real-Time monitoring Price/Quality balance	7, 10, 16, 20	M-H	M-H	M-H	M-L
Energy and carbon management digital platform	ClearVUE	Energy	G & D	Property Management IT & Digital Services	Resource efficiency Real-Time monitoring Technical capacity	9, 13, 16	M-H	M-H	M-L	M-H
Innovative materials for sustainable mattresses	Smart Material	Furniture & Equipment	G	Furniture & Design Health & Sanitation	Adopting circularity Waste management	7, 12	M-H	M-L	M-L	M-H
Innovative technologies for hot water and steam generation	Ecotherm by MI Select	Water Energy	G & D	Construction & Building Manufacturing Health & Sanitation	Resource efficiency Technical capacity Innovation knowledge-gap Real-Time monitoring	9, 16	M-H	M-H	M-L	M-H

Table 3.15: Market Scan Overview - Malta

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Table 3.15 (above) provides a comprehensive overview of innovations mapped in Malta. For each innovation, the right part of the table indicates the associated topic of the Transition Pathway (TTP) and the assessed level (Medium-High vs. Medium-Low) for its novelty within the tourism industry (NOV), its expected impact on the sustainability of SME business operations (IMP), the complexity of its implementation (COM), and an overall evaluation regarding scalability, adaptability, and replicability (SAR) for tourism SMEs.

### 3.3.1. Local context and key features

SMEs in Malta's tourism sector struggle with limited time, staff, and financial resources, hindering their investment in digitalisation and sustainability. The industry is often risk-averse, favouring the status quo and replicating successful models without customisation. This fragmentation leads to inconsistent approaches to innovation, with smaller operators lacking the necessary support.

A lack of awareness about available technologies and varying levels of digital literacy, impede SMEs' ability to adapt. Increasing consumer demand for sustainability pressures SMEs to align their offerings, but many find compliance with EU regulations overwhelming. Some SMEs have successfully implemented sustainable practices through committed leadership and employee involvement, highlighting the importance of industry networking for sharing best practices. Government support, including incentives and targeted training programs, is essential for fostering innovation and enhancing the skills of operators and staff.

Moreover, Malta's insularity and the competition with Mediterranean destinations necessitate a focus on unique value propositions like sustainability and digital experiences. Local cultural factors often prioritise traditional practices and the preservation of the status-quo, also in the way tourism businesses operate. Nevertheless, supporting SMEs to understand the value of innovation and sustainability also for engaging with tourists, can help shifting this mindset towards a future-proof approach. Additionally, COVID-19 has intensified the need for innovation, prompting a re-evaluation of operational models amidst ongoing economic uncertainties.

### Key features of the mapped solutions & innovations

Key Business Area	
Water	5
Energy	4
Transport	0
Food	2
Plastic	2
Furniture & Equipment	1
Transversal Business Area	
Staff Nudging	0
Client Nudging	2
Sustainable & Inclusive Markets	4

Table 3.16: Frequencies of mapped innovations across KBA and TBA (Malta)

Table 3.16 shows the frequencies of innovations mapped in Malta across the different CRT Key Business Areas (KBA) and Transversal Business Areas (TBA). The same innovation can be associated with more than one KBA/TBA, therefore contributing to more of the frequencies indicated in the table. Water (5) and Energy (4) are the most represented KBA, followed by Plastic (2) and Food (2). Concerning TBA, innovations mapped in Malta (4 of them) may support SMEs in reaching out to sustainable and inclusive markets. At the same time, not many (only 2)

have been assessed as useful to nudge staff towards sustainability. None of them can substantially help SMES in nudging customers.

When considering the current field of application of the considered innovations, Table 3.17 shows that many of the considered innovations are already used in the field of health and sanitation (5), but also in other fields such as Retail (4) and IT & Digital Services (4). Some solutions have been applied in sectors closer or part of the tourism industry, such as Food & Beverage and Medium-Large accommodation providers. Adapting these innovations might help in mitigating the risk-aversity of Maltese tourism SMEs. They might feel more open to adopt something that has been already proven to be successful in closer types of businesses. Nevertheless, the table also clarifies how the mapped innovations have been adopted already in a variety of other sectors and fields of application, from Property Management, to Construction & Building and Furniture & Design. This variety of applications is particularly valuable and useful for SMEs willing to consider the potential of cross-domain innovation and how to use them to differentiate their offer or improve their business operations.

Current Application	
Property Management	3
Construction & Building	2
Manufacturing	2
Logistics & Transportation	0
Retail & Consumer Goods	4
Agriculture & Forestry	0
IT & Digital Services	4
Furniture & Design	1
Human Resources & Training	0
Health & Sanitation	5
Food & Beverage Industry	4
ML Accommodations	4
Events & Entertainment	4

**Table 3.17: Frequencies of mapped innovations across current fields of application (Malta)**

Challenge	
Resource efficiency	8
Adopting circularity	3
Waste management	7
Innovation knowledge-gap	2
Technical capacity	4
Real-Time monitoring	7
Price/Quality balance	4
High investments	2
Client nudging	2
Staff nudging	0

**Table 3.18: Frequencies of mapped innovations across SMEs' challenges (Malta)**

By comparing the Maltese- considered innovations with SMEs challenges (Table 3.18), 8 innovations seems to be helpful to SMEs in addressing the urgent need of using their resources more efficiently. This is logically connected with issues regarding managing and reducing waste (7 innovations useful to address this challenge). Taking effective decisions and optimizing resource use as well as reducing waste, obliges SMEs to monitor consumption and other parameters in real-time. This will provide business owners with insights to decide, intervene and correct. The majority of the mapped innovations (7) has been recognized as useful for this crucial purpose in Malta. The market

scan also points out to several innovations that might allows tourism SMEs to find a price-quality balance for their offer, adopt circularity principles and reduce the gaps of knowledge, awareness and technical capacity regarding available technologies.

Green / Digital	
G & D	7
G	6

**Table 3.19:**  
Innovations' scope  
(Malta)

Table 3.19 on the left shows a slight prevalence of solutions focusing on both green and digital features of innovations (7), compared to the ones including only green aspects (6).

Table 3.20, below on the right, illustrates how the considered innovations can be associated with several of the topics outlined in the Tourism Transition Pathway policy document, especially in relation to topic 7 (circularity of tourism services), topic 9 (data-driven tourism services), topic 16 (support for digitalisation of tourism SMEs and destinations) and topic 20 (awareness on changes in tourism demand and opportunities for twin transition).

Table 3.21 below gives insights on the distribution of innovations in terms of assessed level of novelty within the tourism industry (prevalence of innovations assessed as having a Medium-High level of novelty), expected impact of innovations on the sustainability of business operations (prevalence of innovations with a Medium-Low impact) and estimated level of complexity of their implementation (clear prevalence of Medium-Low level of complexity). This is in line with the above mentioned need of Maltese tourism SMEs to prioritize simple innovations that help them to get out of their comfort zone and experiment with green and digital innovation in a highly competitive environment, without large initial investments or substantial organizational changes. Coherently, table 3.21 shows how the great majority of the considered innovations (9) have been assessed as having a Medium-High level of scalability and replicability, which seems to respond to the needs of the current innovation landscape of tourism SMEs in Malta.

TP Topic	
Topic 6	0
Topic 7	9
Topic 8	0
Topic 9	6
Topic 10	2
Topic 12	1
Topic 13	1
Topic 15	0
Topic 16	6
Topic 19	0
Topic 20	8

**Table 3.20:** Frequencies of mapped innovations across TTP topics (Malta)

	Assessed level of			
	Novelty	Impact	Complexity	S&R
M-L	3	8	9	4
M-H	10	5	4	9

**Table 3.21:** Distribution of innovations across assessed criteria (Malta)

### 3.3.2. Best Practices

Many of the mapped innovations can be regarded as best practices within the specific context of Malta, as they effectively address practical issues regarding operating a tourism business on an island and the particular challenges raised by SMEs during the online dialogue and the call for challenges.

For instance, water is a crucial element for a Mediterranean island and it should be treated as a precious resource that is not to be wasted. As a matter of fact, 5 out of 13 mapped solutions are also or exclusively related to water as a key business area. Similarly, the production of waste also represents an issue due to the limitation of space and facilities for disposal. Therefore, innovations such as **Smart Water Genie (SWG): prevent water waste** and **Near Waterless Laundry system** represent simple interventions that can really make a difference in the impact that business operations have on the environment. Another simple but

useful innovation is [Using water filters to get clean drinking water from the tap](#). This water filtration system provides filtered drinking water directly from the tap, reducing the need for single-use plastic bottles and therefore lowering the environmental impact of bottled water production and disposal. This innovation represents a direct solution to challenges expressed by SMEs, as it can enhance guest experiences with accessible, filtered water, while being cost-effective and water-efficient, minimizing both plastic and energy use without heavy resource demands like reverse osmosis. This could contribute significantly to waste reduction efforts, especially in high-usage areas.

For tourism establishments offering food & beverage services, a complementary innovation is represented by the [Paperless Smart Kitchen automated HACCP plan](#), which entirely digitises the Hazard Analysis and Critical Control Points (HACCP) processes, replacing manual monitoring with automated, real-time data collection and reporting. By reducing paper use and automating food safety processes, the system conserves resources, reduces energy consumption and improves operational efficiency. This aligns with the challenge of resource efficiency and waste reduction in resource-heavy environments like kitchens.

As in many other countries, also in Malta, energy saving and decarbonization have become top priorities for many types of businesses, including tourism SMEs. In this regard, ClearVUE introduced an [Energy and carbon management digital platform](#), an advanced energy and carbon management digital solution designed to help businesses track and reduce their carbon footprint. By consolidating energy consumption data in real time, it offers detailed analytics, providing insights that drive decarbonization efforts. It has a user-friendly interface and allows businesses to track their carbon intensity against reduction targets. ClearVUE.Zero can help achieve net-zero goals by pinpointing areas of high energy use, offering actionable insights for immediate efficiency improvements and fostering proactive maintenance. The platform's capability to monitor energy usage at different property sites offers a streamlined approach to energy management across various facilities, which is especially useful for managing consumption in areas like guest rooms and staff areas.

### 3.3.3. Potential for scalability and replicability

The great majority of the mapped solutions (9 out of 13) have been assessed as relatively easily scalable and replicable. This is very important considering the current situation of the tourism industry in Malta, which as mentioned, is often risk-averse and favours the status quo or replicating successful models without customisation. To shake this status quo, simple and easily replicable innovations can be a necessary and useful starting point.

For instance, most of the innovations indicated as best practices demonstrate a significant potential for scalability and replicability, especially within Malta's tourism and hospitality sectors. ClearVUE's [Energy and carbon management digital platform](#) offers scalability due to its capability to monitor multiple locations and assets. This flexibility makes it suitable for a variety of businesses aiming to



achieve energy efficiency and carbon reduction targets without complex interventions and high initial investments. **Smart Water Genie (SWG): prevent water waste**, as well as the **Near Waterless Laundry system** and **Using water filters to get clean drinking water from the tap** are also highly scalable and easy to implement, providing low-cost and highly replicable solution that directly addresses issues of plastic waste and resource efficiency.

The **Paperless Smart Kitchen automated HACCP plan** works with modular systems that can be integrated across multiple kitchen environments, which helps its adaptability to different settings. Nevertheless, elements such as regulatory standards, staff expertise and initial investments significantly reduce its replicability without specific adaptations. Similarly, some of the mapped solutions are focused on different forms of digital platforms to nudge customers towards sustainability or to reach out to sustainable and inclusive markets, such as Loyale's platform: **Using a loyalty platform to encourage sustainable choices**. These can be powerful and useful instruments to innovate the way in which tourism SMEs manage their relationship with customers and influence their decisions towards sustainability, but some time and resources for the necessary adaptations to the specific context and business should be taken into consideration.

#### 3.3.4. AAT Self-Assessment insights

The CRT AAT platform was used by 18 Maltese SMEs, self-assessing their current and future (expected) situation in relation to a set of indicators organized in 3 macro areas and 2 sub-topics for each macro-areas:

- Readiness for green innovation
  - Green Strategic Orientation
  - Green Innovation Capabilities
- Readiness for digital innovation
  - Digital Strategic Orientation
  - Digital Innovation Capabilities
- Current sustainable operation capacities
  - Sustainable capacities in the 6 CRT Key Business areas
  - Capacities in nudging clients and staff towards sustainability and reaching new sustainable and inclusive markets

The chart below (Figure 3.3) provides a visual representation of aggregate results for Maltese SMEs, giving an idea of how participating Maltese SMEs are performing in the mentioned macro-areas and sub-topics.

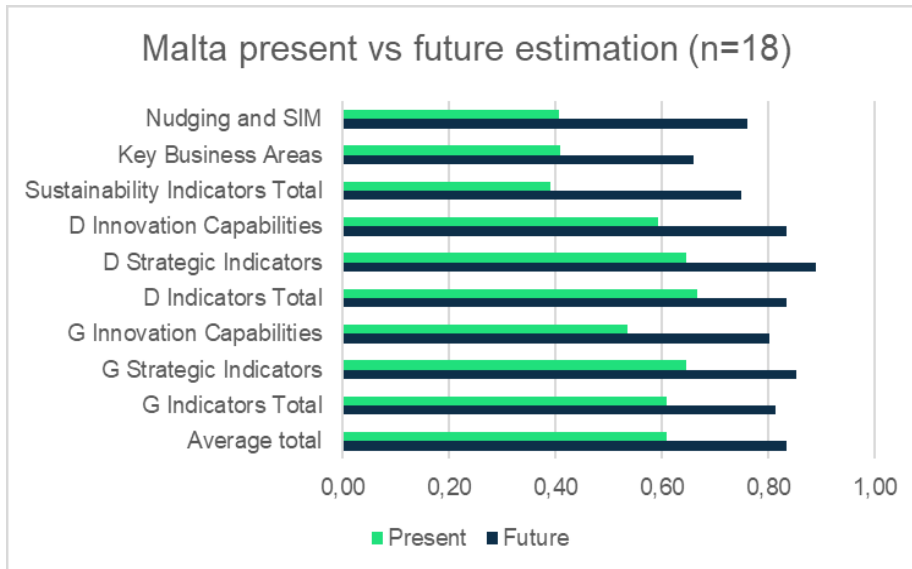


Figure 3.3: AAT Maltese SMEs: assessed current situation VS future estimation

Here below some specific insights:

**Best-Performing Metric (Present):** Digital Innovation Capabilities - Maltese companies reported strong digital innovation capabilities, supported by a strong strategic orientation toward digital innovation, positioning themselves as leaders in this area.

**Biggest Shift to the Future:** Green strategic approach - Malta's SMEs are planning a significant expansion of their green strategies. This shift suggests a future emphasis on sustainable practices and environmental responsibility, indicating that Malta is aligning its innovation strengths with a robust sustainability agenda.

**Future Goals:** Maltese companies are focusing on expanding green strategies to complement their existing digital capabilities, reflecting an integrated approach to innovation and sustainability. SMEs in Malta are likely aiming to become more environmentally conscious while continuing to leverage digital advancements.

### 3.3.5. Recommendations for SMEs

To enhance cross-domain open innovation among SMEs in Malta's tourism sector, SMEs should consider efforts to establish collaborative networks through partnerships with universities and tech providers, to share insights and foster tailored innovations. This can also be useful to showcase best practices and successful case studies or create collaborative platforms for sharing knowledge and expertise. SMEs should also consider specific training programs for their staff, focusing on digital skills and sustainability, to empower staff in utilizing new technologies. Considering existing government incentives such as grants or subsidies, it's also an important strategy and can help in easing financial constraints that might limit SMEs investments in digital and green transition. The power of consumer engagement should also not be dismissed, but rather taken into consideration to activate educational campaigns on sustainability, shifting traditional mindsets towards the adoption of green practices.

### 3.3.6. Possible solutions at the political level

To facilitate cross-domain open innovation among SMEs in Malta's tourism sector, the government could provide incentives, including grants and subsidies for adopting digital tools and sustainable practices. Tax breaks for innovative investments and the establishment of public-private partnerships (PPPs) to share resources and expertise represent other valuable options. Additionally, creating regional innovation hubs can provide training and networking opportunities, while awareness campaigns can inform SMEs about available resources. Simplifying regulatory compliance and funding skill development initiatives will further support SMEs in navigating the challenges of innovation and sustainability.

### 3.4. Country Report Montenegro

Mapped Innovations/Solutions	Innovator/ Provider	CRT Key & Transversal Business Areas	Scope	Current Fields of Application	Addressed SMEs Challenges	TTP Topics	NOV	IMP	COM	SAR
Bio Toilets: providing off-grid settlements with sanitary facilities	Panarchy R. Borplastika & Ecoplast	Water	G	Health & Sanitation Construction & Building	Waste management Technical capacity	7	M-L	M-L	M-H	M-L
Camping Service Points in rural areas	Camping Association Montenegro	Water Client Nudging Sustainable & Inclusive M.	G & D	Health & Sanitation	Waste management Resource efficiency Client nudging	7, 12, 20	M-H	M-H	M-L	M-L
Solar-powered water heating in off-grid settlements	Panarchy & Elektrovod	Energy	G	Construction & Building Property Management	Resource efficiency Technical capacity	7	M-L	M-H	M-L	M-H
Eco-Board outdoor furniture made of recycled plastic	Ekodaska powered by 3D Soba	Plastic Furniture & Equipment	G	Furniture & Design Construction & Building Property Management	Adopting circularity Waste management Price/Quality balance	7, 12	M-H	M-L	M-L	M-H
Certification scheme to promote sustainable business operations	Green Destination	Water Energy Plastic Staff Nudging Sustainable & Inclusive M.	G	ML Accommodations Events & Entertainment	Resource efficiency Waste management Innovation knowledge-gap Staff nudging	7, 8, 19, 20	M-L	M-H	M-H	M-H
BioBlu System: collecting and re-using rainwater	Eco Nova	Water	G	Construction & Building Agriculture & Forestry Property Management	Resource efficiency Adopting circularity	7, 12	M-H	M-H	M-H	M-L
SunChef Solar Oven	Metalac Market	Energy Furniture & Equipment	G	Food & Beverage Industry Events & Entertainment	Resource efficiency Price/Quality balance	7, 12, 20	M-H	M-L	M-L	M-H
AI-powered smart waste management system	Bin-e Smart Waste Bins	Plastic Furniture & Equipment	G & D	Property Management Food & Beverage Industry	Adopting circularity Waste management Real-Time monitoring	7, 9, 20	M-H	M-L	M-L	M-L
IT-based tools to improve resource efficiency and sustainability	Montora	Energy Staff Nudging	G & D	Food & Beverage Industry IT & Digital Services ML Accommodations	Resource efficiency Real-Time monitoring Technical capacity Staff nudging	7, 9, 16	M-H	M-H	M-H	M-H
Waterless toilets for off-grid settlements	Separett AB	Water Furniture & Equipment Sustainable & Inclusive M.	G	Health & Sanitation Construction & Building	Resource efficiency Adopting circularity Waste management	7	M-H	M-L	M-H	M-H
Incorporating sustainability nudges into AR experiences	PastView by Sebka Technology	Client Nudging Sustainable & Inclusive Markets	G & D	IT & Digital Services Events & Entertainment	Client nudging Technical capacity Waste management	9, 10, 15, 16	M-H	M-L	M-H	M-H
Implementing measures to reduce plastic waste	Zero Waste Montenegro and CZIP	Plastic Sustainable & Inclusive M. Staff Nudging	G & D	Food & Beverage Industry Health & Sanitation Retail & Consumer Goods	Adopting circularity Waste management Innovation knowledge-gap Staff nudging	7, 8, 19, 20	M-L	M-H	M-L	M-L

Table 3.22: Market Scan Overview - Montenegro

[Go to INTERACTIVE MATRIX](#)

Table 3.22 (above) provides a comprehensive overview of innovations mapped in Montenegro. For each innovation, the right part of the table indicates the associated topic of the Transition Pathway (TTP) and the assessed level (Medium-High vs. Medium-Low) for its novelty within the tourism industry (NOV), its expected impact on the sustainability of SME business operations (IMP), the complexity of its implementation (COM), and an overall evaluation regarding scalability, adaptability, and replicability (SAR) for tourism SMEs.

### 3.4.1. Local context and key features

Tourism in Montenegro's mountainous areas, particularly in the rural zones and katuns, is deeply tied to its natural and cultural heritage. These regions face challenges in infrastructure, resource management, and sustainability practices. However, they also present unique opportunities for innovation that aligns with eco-conscious travel trends.

In terms of challenges, many rural areas lack essential amenities such as water, energy, and sanitation, particularly in off-grid settlements, making it difficult for businesses to meet visitor expectations. The environmental sensitivity of these protected areas requires careful planning, to ensure tourism growth does not compromise the natural habitats and biodiversity. Other significant challenges are related to education and awareness gaps and the digital divide. Limited access to vocational training and sustainability education prevents rural tourism providers from adopting innovative practices and improving their operations. Moreover, many rural tourism providers lack digital literacy, hindering their ability to market services effectively using digital channels and tools, or engage with tech-savvy travelers.

Nevertheless, the area also offers numerous opportunities in terms of rural tourism, such as Katuns, that could be seen as tourism hubs. These traditional seasonal settlements can be revitalized to provide authentic cultural and nature-based experiences, with targeted investments in infrastructure and amenities. This allows to intercept a growing demand and interest in nature and eco-friendly travel, providing opportunities for rural businesses, also to innovate their offer and business operations. Practices like rainwater collection, solar cooking, and waste management can be formalized and expanded, offering cost-effective and environmentally friendly solutions for rural tourism businesses. Partnerships with IT service providers or leveraging younger family members' digital skills can help rural SMEs improve their market reach and include digital elements in their service delivery.

## Key features of the mapped solutions & innovations

Key Business Area	
Water	5
Energy	4
Transport	0
Food	0
Plastic	4
Furniture & Equipment	4
Transversal Business Area	
Staff Nudging	3
Client Nudging	2
Sustainable & Inclusive Markets	5

**Table 3.23: Frequencies of mapped innovations across KBA and TBA (Montenegro)**

Table 3.23 shows how the innovations mapped in Montenegro are distributed across the CRT Key Business Areas (KBA) and Transversal Business Areas (TBA). The same innovation can be associated with more than one KBA/TBA, therefore contributing to more of the frequencies indicated in the table. Water is the most represented KBA (5 innovations), followed by Energy (4), Plastic (4) and Furniture and Equipment (4). In terms of TBA, many of the innovations mapped in Montenegro (5) are useful to support SMEs in reaching out to sustainable and inclusive markets. At the same time, in Montenegro not many of the mapped innovations seems potentially useful to nudge staff

and clients towards sustainability.

When considering the current field of application of the considered innovations, Table 3.24 shows that many of the considered innovations are already used in the fields of Construction & Building (5), Property Management (4), Health & Sanitation (4). Some have also been applied in sectors closer or part of the tourism industry, such as Food & Beverage (4), Events & Entertainment (3) and larger accommodation providers (2). Adaptation of these solutions may allow for innovation in tourism SMEs, as businesses might feel comfortable to adopt them. The current field of application of the mapped solutions seems particularly interesting for tourism SMEs operating in off-grid settlements and rural areas of Montenegro which, as mentioned above, are facing challenges regarding sanitation and lack of other facilities and amenities that are necessary to meet visitor expectations and operate with respect of the environment.

Current Application	
Property Management	4
Construction & Building	5
Manufacturing	0
Logistics & Transportation	0
Retail & Consumer Goods	1
Agriculture & Forestry	1
IT & Digital Services	2
Furniture & Design	1
Human Resources & Training	0
Health & Sanitation	4
Food & Beverage Industry	4
ML Accommodations	2
Events & Entertainment	3

**Table 3.24: Frequencies of innovations across current fields of application (Montenegro)**

Challenge	
Resource efficiency	7
Adopting circularity	5
Waste management	8
Innovation knowledge-gap	2
Technical capacity	4
Real-Time monitoring	2
Price/Quality balance	2
High investments	1
Client nudging	2
Staff nudging	3

**Table 3.25: Frequencies of mapped innovations across SMEs' challenges (Montenegro)**

Similarly, by comparing the considered innovations with specific SMEs challenges (Table 3.25), mapped innovations seem to be helpful in addressing challenges such as managing and reducing waste (8 innovations associated with this challenge), which is logically connected with the need of using resources more efficiently (7 innovations). Coherently, many solutions (5) potentially allow SMEs to embrace circularity principles, which is crucial for rural businesses

relying on the integrity and conservation of the natural landscape in which they operate. Some of the mapped innovations (4) also provide the opportunity to acquire the technical capacities necessary to make business operations more sustainable and to nudge staff and customers towards more sustainable behaviours.

Table 3.26 on the right shows a slight prevalence of solutions focusing only on green innovations (7), compared to the ones including both green innovations and digital features (5).

Green / Digital	
G & D	5
G	7

**Table 3.26:**  
Innovations' scope  
(Montenegro)

TP Topic	
Topic 6	0
Topic 7	11
Topic 8	2
Topic 9	3
Topic 10	1
Topic 12	4
Topic 13	0
Topic 15	1
Topic 16	2
Topic 19	2
Topic 20	5

**Table 3.27:** Frequencies of mapped innovations across TTP topics (Montenegro)

Table 3.27 illustrates how the considered innovations are associated with several of the topics outlined in the Tourism Transition Pathway policy document, especially in relation to topic 7 (circularity of tourism services) for which the reduction of waste produced by tourism services is an important component. To a lesser extent, the mapped innovations are also often linked to topic 20 (awareness on changes in tourism demand and opportunities for twin transition), topic 12 (Research and innovation projects and pilots on circular and climate-friendly tourism) and topic 9 (Data-driven tourism services).

Table 3.28 below provides insights on the distribution of innovations regarding the assessed level of novelty for the tourism industry (clear prevalence of innovations assessed as having a Medium-High level of novelty), expected impact of innovations on the sustainability of business operations (balanced distributions between innovations assessed as having a Medium-High and Medium-Low impact) and estimated level of complexity of their implementation (also balanced distribution between innovations having Medium-High and Medium-Low level of complexity). This means the set of mapped solutions provides a balanced mix of different types of innovation in terms of novelty, impact and complexity. Solutions that are not so complex to implement, but still able to determine a reasonable impact, can be a good option for SMEs operating in rural setting, not so experienced in green and digital innovations, but willing to take initial steps. The table also shows how a slight majority of the considered innovations (7) have been assessed as having a Medium-High level of scalability and replicability, responding to the needs of SMEs willing to implement solutions that do not require too much adaptation.

	Assessed level of			
	Novelty	Impact	Complexity	S&R
M-L	4	6	6	5
M-H	8	6	6	7

**Table 3.28:** Distribution of innovations across assessed criteria (Montenegro)

### 3.4.2. Best Practices

Some of the considered innovations directly address key issues faced by rural tourism SMEs in Montenegro's mountainous areas, such as insufficient facilities,

limited market visibility, and environmental concerns. Their implementation represents a practical way for SMEs to build more sustainable operations, attract eco-conscious travelers, and develop scalable solutions adaptable to different contexts within Montenegro's mountain regions.

For instance, [Camping Service Points in rural areas](#) address needs of campers by providing sustainable self-service facilities. By addressing the needs of campers, this innovation helps in reaching out to a segment of the market that is interested in visiting rural areas but might be concerned about the lack of facilities. These points make it easier for travelers to dispose of waste and refill water, enhancing the camping experience, while protecting natural areas.

[Certification scheme to promote sustainable business operations](#) provides a structured framework to foster sustainable practices, reduce costs, and improve business operations and management, culminating in the achievement of a certificate. Obtaining the certification requires SMEs to take substantial steps towards sustainability, adjusting business operations to ensure an efficient and eco-friendly use of resources. This certification not only improves environmental impact but also boosts global visibility and guest trust, making it a transformative tool for rural businesses.

For SMEs located in remote locations, often off-grid, adopting and implementing solutions such as [SunChef Solar Oven](#), [Bio Toilets: providing off-grid settlements with sanitary facilities](#), [Waterless toilets for off-grid settlements](#) or [Solar-powered water heating in off-grid settlements](#) really gives the opportunity to be attractive towards eco-friendly markets and be ready to offer them a quality service with modern facilities, while reducing the negative impacts on the environment.

Moreover, collaborations between sectors and different types of establishments can help in acquiring resources and expertise, such as luxury hotels partnering with rural households. These collaborations can be fruitful for both parties and might enhance the orientation of rural SMEs towards change and innovation.

### 3.4.3. Potential for scalability and replicability

The increasing global demand for eco-tourism creates a supportive market environment, where tourism SMEs are pressed to consider green and digital innovation in their strategic and operational plans. The availability of modular and scalable technologies for water management, energy efficiency and waste management, can support SMEs in this process. The more these solutions can be applied by SMEs without complex and costly adaptation procedures, the more they might be replicated across the entire industry. Obviously, high initial investments required for advanced technologies may deter the adoption by smaller SMEs. Moreover, lack of awareness and technical skills is a barrier to adopting and maintaining innovative solutions, as well as limited access to reliable internet and the lack of energy and water infrastructure in rural areas. Those are all contextual elements that should be taken into consideration when assessing the scalability and replicability of green and digital innovations.



Solutions such as the [Solar-powered water heating in off-grid settlements](#), the [SunChef Solar Oven](#) and [Eco-Board outdoor furniture made of recycled plastic](#) are highly replicable, they align with existing rural practices and require moderate financial investment. These solutions can be easily adopted by rural SMEs without complex adjustments and with minimal changes to their current operations.

Other innovations represent more challenging yet impactful solutions, such as [BioBlu System: collecting and re-using rainwater](#) and [Implementing measures to reduce plastic waste](#). Those are more advanced technologies and they have high potential for transformative impact, but require significant upfront investments and technical expertise for their implementation. Their adoption may be slower, but they offer long-term benefits in terms of reduced environmental impact for branding and operational efficiency.

#### 3.4.4. AAT Self-Assessment insights

The CRT AAT platform was used by 22 SMEs in Montenegro, self-assessing their current and future (expected) situation in relation to a set of indicators organized in 3 macro areas and 2 sub-topics for each macro-areas:

- Readiness for green innovation
  - Green Strategic Orientation
  - Green Innovation Capabilities
- Readiness for digital innovation
  - Digital Strategic Orientation
  - Digital Innovation Capabilities
- Current sustainable operation capacities
  - Sustainable capacities in the 6 CRT Key Business areas
  - Capacities in nudging clients and staff towards sustainability and reaching new sustainable and inclusive market

The chart below (Figure 3.4) provides a visual representation of aggregate results for SMEs in Montenegro, giving an idea of how participating SMEs are performing in the mentioned macro-areas and sub-topics. Here below some specific insights:

**Best-Performing Metric (Present): Green Strategic orientation** – Montenegro’s SMEs show a positive strategic alignment with green innovation, reflecting a foundational commitment to sustainability.

**Biggest Shift to the Future is Digital Strategic orientation** – SMEs in Montenegro are willing to focus especially on digital transformation, with a substantial increase projected in digital strategy. This shift indicates an intent to build digital competencies that support more streamlined and competitive operations.

**Future Goals:** Montenegro’s SMEs appear focused on enhancing their digital strategic orientation, suggesting an ambition to bridge the gap between current and future digital capabilities. This goal may support broader efforts to boost competitiveness and efficiency.

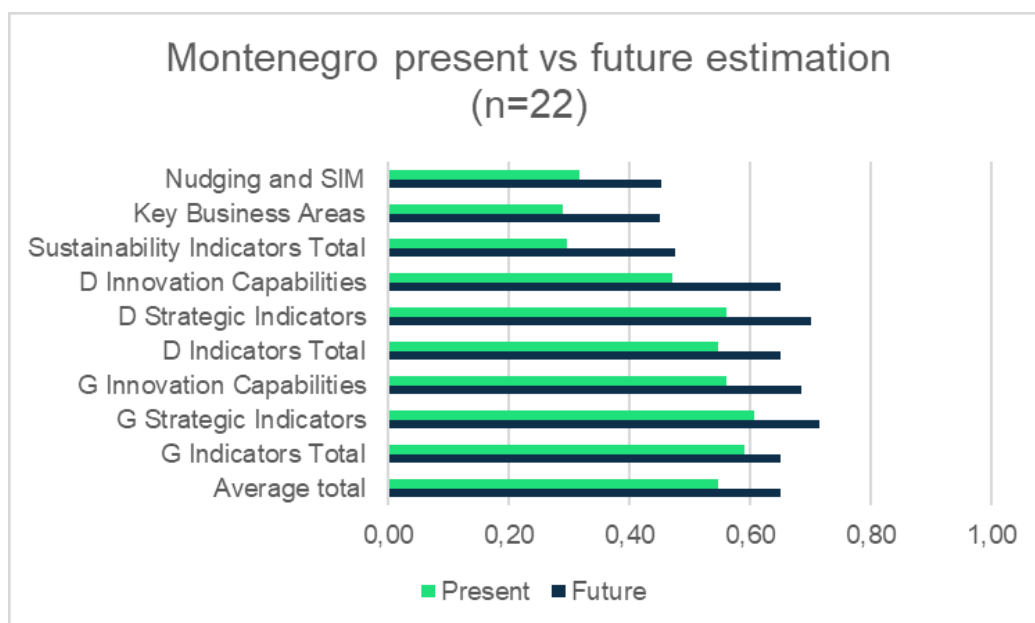


Figure 3.4: AAT Montenegrin SMEs: assessed current situation VS future estimation

### 3.4.5. Recommendations for SMEs

To embrace future market opportunities, mitigate the impact on the environment and anticipate future regulations, tourism SMEs in Montenegro, especially the ones operating in rural areas, should keep investing in affordable and impactful sustainable practices and solutions, such as some of the mapped innovations: [SunChef Solar Oven](#), [BioBlu System: collecting and re-using rainwater](#), [Solar-powered water heating in off-grid settlements](#). These solutions align well with rural tourism needs and can significantly reduce operational costs. Another necessary area of intervention concerns the implementation of integrated waste management practices, for which solutions such as [AI-powered smart waste management system](#) or [Waterless toilets for off-grid settlements](#) can be very useful, not only to enhance environmental stewardship, but also to attract the growing market of eco-conscious travelers. SMEs are also recommended to pursue certifications to strengthen their environmental credibility and visibility for eco-conscious markets.

Tourism SMEs in Montenegro are lagging behind in terms of embedding digital features into their business operations. On one side, SMEs are recommended to strengthen their digital market presence by developing websites and social media profiles to increase market reach and engagement. Digital tools should also be used to foster communication with guests, such as automated booking systems and feedback collection apps. Education and training also play a fundamental role in deploying an effective digital transition, therefore investments in workshops and training on digital marketing and innovation in service delivery should be attentively considered. Engaging younger family members or external consultants to bridge gaps in digital literacy and skills might also produce positive results. Incorporating interactive experiences using Augmented Reality (AR) or Virtual Reality (VR), can help in reaching out to more digitally-oriented type of markets

and meet modern traveller expectations, while preserving the strong nature-based character of the local tourism offer.

SMEs can also work towards strengthening their capabilities in adapting and scaling solutions to their specific needs. This could be achieved by participating in pilot programs to experiment and train their innovation abilities by implementing small-scale projects in select regions. In line with this, building partnerships between SMEs, local governments, and technology providers to share costs and resources can also be beneficial, as well as establishing regional hubs or networks for SMEs to share experiences and best practices.

To achieve all this, SMEs might need a network of support, ranging from funding support or incentives granted by governments or grants designed for green and digital innovation, to partnerships with IT service providers such as OBLAK, to implement scalable digital solutions and simplify compliance processes.

#### 3.4.6. Possible solutions at the political level

In the context of tourism SMEs operating in rural areas of Montenegro, possible solutions at the political level might involve incentives for green technology (such as subsidies or tax relief for investments in sustainable green solutions), training programs (e.g. government-founded capacity-building workshops for rural tourism SMEs on eco-tourism practices and certifications) and infrastructure development (e.g. financial and technical support to establish camping service points and other critical facilities in rural areas).

Moreover, substantial investments in improving internet accessibility and digital literacy in rural areas can help in bridging the gap between innovation and traditional practices, while national campaigns highlighting Montenegro's mountain regions and eco-friendly initiatives are important to attract environmentally conscious travelers to the area.

### 3.5. Country Report Portugal

Mapped Innovations/Solutions	Innovator/ Provider	CRT Key & Transversal Business Areas	Scope	Current Fields of Application	Addressed SMEs Challenges	TTP Topics	NOV	IMP	COM	SAR
Sustainable plastic packaging	Logoplaste	Plastic	G	Manufacturing Food & Beverage Industry Retail & Consumer Goods	Adopting circularity Waste management Technical capacity	7	M-L	M-L	M-L	M-H
Reduce waste of water dispensed at undesired temperature	Aqva More	Water Energy	G & D	Construction & Building Property Management	Resource efficiency Waste management Real-Time monitoring High investments	7, 16	M-H	M-H	M-L	M-H
Smart irrigation management software	Hidosoph	Water Energy	G & D	Agriculture & Forestry Property Management	Resource efficiency Real-Time monitoring	7, 9, 16	M-H	M-L	M-H	M-L
Digital platform to manage and monitor the energy consumption	Smartwatt	Energy Staff Nudging	G & D	Property Management Events & Entertainment ML Accommodations	Resource efficiency Real-Time monitoring Staff nudging Technical capacity	9, 16	M-L	M-H	M-L	M-H
Automate and optimize water usage for irrigation	Trigger Systems	Water Energy	G & D	Agriculture & Forestry	Resource efficiency Real-Time monitoring	7, 9, 16	M-H	M-L	M-H	M-L
Healthy aquatic ecosystems	Bluemater	Water	G	Agriculture & Forestry Furniture & Design Health & Sanitation	Price/Quality balance	7, 20	M-H	M-L	M-L	M-L
AI-driven Virtual Energy Manager	Watt-Is	Energy Client Nudging Staff Nudging	G & D	Property Management ML Accommodations	Resource efficiency Real-Time monitoring Client nudging Staff nudging	9, 16, 19	M-H	M-H	M-L	M-H
Community Corporate Garden	Noocity	Food Staff Nudging	G	Agriculture & Forestry Human Resources & Training	Innovation knowledge-gap Staff nudging High investments Adopting circularity	7, 8, 12, 20	M-H	M-L	M-L	M-L
Bamboo Bicycles for sustainable mobility	bam•bu bicycles	Transport Sustainable & Inclusive M.	G	Logistics & Transportation Events & Entertainment	Adopting circularity Price/Quality balance Waste management	6, 7, 12, 20	M-H	M-L	M-L	M-H
App-based reusable food packaging system	Ecoceno	Plastic Client Nudging Sustainable & Inclusive M.	G & D	Food & Beverage Industry Retail & Consumer Goods	Adopting circularity Waste management Client nudging	7, 9, 12, 16	M-H	M-H	M-L	M-L
Fostering sustainability through Corporate Social Responsibility projects	Sair da Casca	Transport Staff Nudging Client Nudging Sustainable & Inclusive M.	G	Human Resources & Training ML Accommodations	Innovation knowledge-gap Staff nudging Client nudging Technical capacity	7, 8, 19, 20	M-L	M-H	M-L	M-H
Heritage-inspired sustainable furniture	DAM Portugal	Plastic Furniture & Equipment Sustainable & Inclusive M.	G	Furniture & Design Manufacturing Retail & Consumer Goods	Adopting circularity Waste management	7, 12, 20	M-L	M-L	M-L	M-L
Transforming waste into valuable products	Flowco Lab	Plastic Furniture & Equipment	G	Manufacturing Furniture & Design Retail & Consumer Goods	Adopting circularity Waste management Technical capacity High investments	7, 12, 20	M-H	M-H	M-H	M-H

Table 3.29: Market Scan Overview - Portugal

[Go to INTERACTIVE MATRIX](#)



Table 3.29 (above) provides a comprehensive overview of innovations mapped in Portugal. For each innovation, the right part of the table indicates the associated topic of the Transition Pathway (TTP) and the assessed level (Medium-High vs. Medium-Low) for its novelty within the tourism industry (NOV), its expected impact on the sustainability of SME business operations (IMP), the complexity of its implementation (COM), and an overall evaluation regarding scalability, adaptability, and replicability (SAR) for tourism SMEs.

### 3.5.1. Local context and key features

According to interviewed experts, the tourism innovation context in Portugal reflects distinct cultural nuances, including a tendency to emulate successful ventures and a preference for structured frameworks that minimize uncertainty. This means the tourism ecosystem is influenced by a cultural adversity to risk, as many business owners prefer to observe others' outcomes before acting, especially in terms of business innovation. This seems to be coupled with challenges such as low digital literacy and underutilization of online platforms, which stems from uncertainty about the returns on digital transition investments. Additionally, companies seem behind in addressing diverse tourist profiles, and there's a prevailing attitude of sectionalism and individualism that limits cross-sectoral innovation adoption.

### Key features of the mapped solutions & innovations

Key Business Area	
Water	4
Energy	5
Transport	2
Food	2
Plastic	4
Furniture & Equipment	2
Transversal Business Area	
Staff Nudging	4
Client Nudging	3
Sustainable & Inclusive Markets	4

Table 3.30: Frequencies of mapped innovations across KBA and TBA (Portugal)

Innovations mapped in Portugal are relatively useful also in regards to the TBA, as 4 innovations are relevant in terms of staff nudging, as well as for reaching out to sustainable and inclusive markets. 3 innovations also seem to facilitate SMEs in nudging clients towards sustainability.

When considering the current field of application of the considered innovations, Table 3.31 shows that Retail, Agriculture & Forestry and Property Management are the most represented sectors.

Table 3.30 shows the frequencies of innovations mapped in Portugal across CRT Key Business Areas (KBA) and Transversal Business Areas (TBA). The same innovation can be associated with more than one KBA/TBA, therefore contributing to more of the frequencies indicated in the table. Energy is a well represented KBA (5 innovations related to this specific category), followed by Water (4) and Plastic (4).

Current Application	
Property Management	4
Construction & Building	1
Manufacturing	3
Logistics & Transportation	1
Retail & Consumer Goods	4
Agriculture & Forestry	4
IT & Digital Services	0
Furniture & Design	3
Human Resources & Training	2
Health & Sanitation	1
Food & Beverage Industry	2
ML Accommodations	3
Events & Entertainment	2

Table 3.31: Frequencies of mapped innovations across current fields of application (Portugal)

Nevertheless, the mapped innovations are currently already implemented in a variety of different sectors and fields of application, from Furniture & Design, to Manufacturing, medium-large accommodation providers and Human Resources and Training. This is particularly valuable and useful for SMEs willing to consider the potential of cross-domain innovation, which can be an interesting strategy to differentiate a business in the Portuguese tourism industry.

Challenge	
Resource efficiency	5
Adopting circularity	6
Waste management	7
Innovation knowledge-gap	2
Technical capacity	6
Real-Time monitoring	5
Price/Quality balance	2
High investments	3
Client nudging	3
Staff nudging	4

**Table 3.33: Frequencies of mapped innovations across SMEs' challenges (Portugal)**

When considering SMEs' challenges (Table 3.33), mapped innovations seem particularly helpful in addressing waste management issues and providing technical capacity to SMEs to support green and digital transition. Coherently, many innovations can also support SMEs in adopting circularity principles in their business operations and in using resources more efficiently. The market scan also points out several innovations that might support the need for SMEs to have real-time data regarding resource consumptions (e.g. energy), allowing for timely corrective interventions that might also go through staff nudging.

Table 3.32 on the right shows a slight prevalence of solutions focusing on green innovations, compared to the ones including both green and digital features.

Green / Digital	
G & D	6
G	7

**Table 3.32: Innovations' scope (Portugal)**

Table 3.34 below on the left illustrates how the considered innovations are associated with several of the topics outlined in the Tourism Transition Pathway policy document, especially in

TP Topic	
Topic 6	1
Topic 7	11
Topic 8	2
Topic 9	5
Topic 10	0
Topic 12	5
Topic 13	0
Topic 15	0
Topic 16	6
Topic 19	2
Topic 20	6

**Table 3.34: Frequencies of mapped innovations across TTP topics (Portugal)**

relation to topic 7 (circularity of tourism services), but also in relation to topic 9 (data-drive tourism services), topic 12 (research & innovation on circular and climate-friendly tourism), topic 16 (support to digitalization of tourism SMEs and destinations) and topic 20 (awareness on changes in tourism demand and opportunities for twin transition).

Table 3.35 below shows the distribution of innovations in terms of their assessed level of novelty within the tourism industry (clear prevalence of innovations assessed as having a Medium-High level of novelty), expected impact of innovations on the sustainability of business operations (slight prevalence of innovations assessed as having a Medium-Low impact) and estimated level of complexity of their implementation (clear prevalence of Medium-Low complexity). In terms of scalability and replicability of the

considered innovations, Table 3.35 also shows a slight prevalence of innovations assessed as rather scalable and more easily replicable. By looking at the overall picture, the set of mapped innovations in Portugal provides a variegated mix of

solutions that are mostly new in the tourism sector, they are rather easily replicable and not so complex to implement, although their impact on the sustainability of the business operations might be limited. This mix also matches the above mentioned adversity to the risk of Portuguese tourism SME and their preference for minimizing uncertainty.

	Assessed level of			
	Novelty	Impact	Complexity	S&R
M-L	4	7	10	6
M-H	9	6	3	7

Table 3.35: Distribution of innovations across assessed criteria (Portugal)

### 3.5.2. Best Practices

The Portuguese SMEs that shared their challenges, particularly the numerous rural tourism businesses, are prioritizing the optimization of water and energy resources while actively exploring sustainable mobility solutions. Therefore, exploring best practices in these fields of application provides valuable insights for the considered settings of tourism SMEs. Among the innovative responses to these challenges there are two water management solution providers, Hidrosoph and Trigger Systems. Hidrosoph’s [Smart irrigation management software](#) offers a comprehensive digital platform that integrates real-time data processing, monitoring equipment, and data exploration tools to optimize water usage, while Trigger System solution [Automate and optimize water usage for irrigation](#) leverages real-time data analysis, predictive algorithms, and remote control capabilities to make precise irrigation decisions, ensuring efficient water distribution and reducing water waste. These tools are highly relevant for SMEs managing accommodations with large outdoor spaces, a key attraction for urban tourists seeking a connection with nature.

Energy efficiency is another critical focus, with solar panel adoption in Portugal lagging, compared to other EU countries, due to high costs, limited incentives, and unattractive resale options for surplus energy. Alternatives like Watt-Is’s [AI-driven Virtual Energy Manager](#) offer cloud-based analytics to identify inefficiencies and provide actionable insights, rather than just monitoring capabilities to reduce energy waste, making it suitable for multi-site businesses, even without solar panels.

In sustainable mobility, [Bamboo Bicycles for sustainable mobility](#) stands out with its innovative use of bamboo to create carbon-negative bicycles. This solution promotes eco-friendly transportation, supports local economies, and appeals to niche markets, helping businesses differentiate themselves in the competitive tourism sector.

An original solution among the ones mapped in Portugal is represented by Noocity’s [Community Corporate Garden](#). Noocity installs biological vegetable gardens within companies in urban areas, promoting sustainable urban agriculture while stimulating a sense of community and staff connection with nature. Corporate gardens are a powerful tool to foster engagement among staff and connect employees to nature and sustainability values.

Moreover, the interviewed expert highlighted the case of one promising solution arising from the manufacturing sector (textile and shoe, specifically), involving reutilization and recycling practices such as utilizing second-hand materials. The adaptability demonstrated by the textile and shoe industries in embracing sustainability and catering to evolving consumer preferences serves as a compelling example for the tourism sector to follow.

Collectively, these innovations address common challenges and align with the main sustainability goals of SMEs in Portugal.

### 3.5.3. Potential for scalability and replicability

The replicability and scalability of innovations offered by the Portuguese solution providers depend on factors such as cost, required expertise, and adaptability to local contexts. Solutions like [Digital platform to manage and monitor the energy consumption](#), Watt-Is's [AI-driven Virtual Energy Manager](#) or [Bamboo Bicycles for sustainable mobility](#) and others are more easily replicable for Portuguese SMEs, particularly in rural tourism, as they do not require complex or costly adjustments to operate in specific settings and they require reasonable initial investments. Overall, 7 out of 13 mapped innovations have been assessed as having a Medium-High scalability and replicability.

Conversely, solutions like Hidrosoph's [Smart irrigation management software](#), Trigger System solution [Automate and optimize water usage for irrigation](#) or [Healthy aquatic ecosystems](#) present more challenges, such as significant upfront investments, specific technical expertise, and, in some cases, infrastructure upgrades, which can be difficult for rural SMEs to manage.

Addressing these barriers through financial incentives, training opportunities, and partnerships with solution providers could enable broader adoption of these innovations, aligning with Portugal's growing focus on eco-tourism and sustainable business practices.

### 3.5.4. AAT Self-Assessment insights

The CRT AAT platform was used by 12 Portuguese SMEs, who self-assessed their current and future (expected) situation in relation to a set of indicators organized in 3 macro areas and 2 sub-topics for each macro-areas:

- Readiness for green innovation
  - Green Strategic Orientation
  - Green Innovation Capabilities
- Readiness for digital innovation
  - Digital Strategic Orientation
  - Digital Innovation Capabilities
- Current sustainable operation capacities
  - Sustainable capacities in the 6 CRT Key Business areas
  - Capacities in nudging clients and staff towards sustainability and reaching new sustainable and inclusive markets



The chart below (Figure 3.5) provides a visual representation of aggregate results for SMEs in Portugal, giving an idea of how participating SMEs are performing in the mentioned macro-areas and sub-topics. Here below some specific insights:

**Best-Performing Metric (Present): Green strategic orientation.** Portuguese companies have a stable foundation in terms of strategic orientation towards green innovation, with a consistent approach to sustainability within their current practices and strategies.

**Biggest Shift to the Future is Digital strategic orientation.** Portugal’s SMEs are setting ambitious goals for digital transformation, aiming to increase their digital strategic alignment significantly. This suggests that Portugal SMEs plan to harness digital tools to drive efficiency and innovation across the sector.

**Future Goals:** Portugal’s focus on advancing digital strategy aligns with broader trends in digitalization, with SMEs striving to enhance their technological capabilities and remain competitive in a fast-evolving digital landscape. They also seem to have strong ambitions in terms of nudging more customers and staff towards sustainability and increasing their efforts in reaching out to sustainable and inclusive markets.

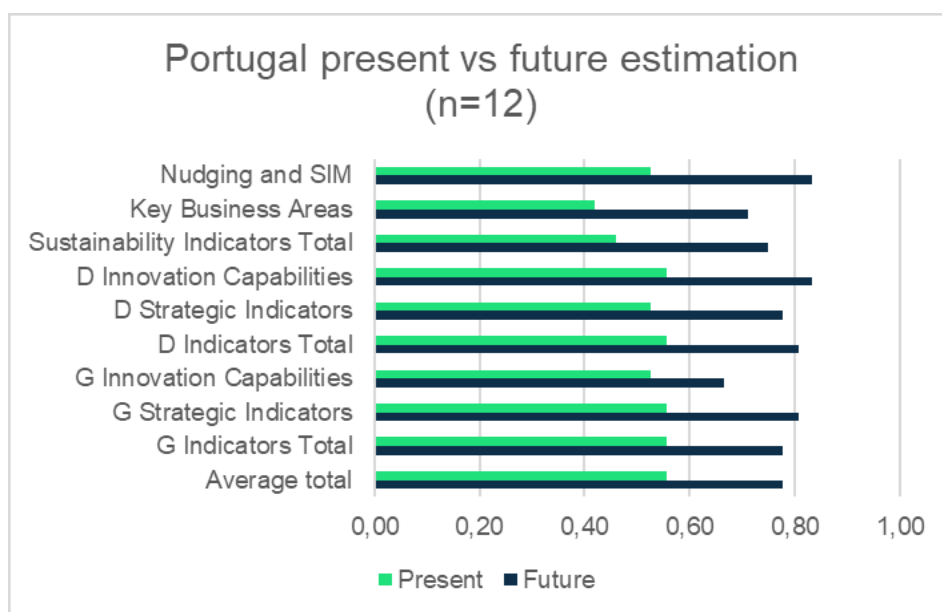


Figure 3.5: AAT Portugues SMEs: assessed current situation VS future estimation

### 3.5.5. Recommendations for SMEs

As previously mentioned, a prevailing attitude of individualism among Portuguese SMEs often hinders the adoption of cross-sectoral innovation. To foster growth, collaboration, and sustainability, tourism SMEs must shift their mindset and actively embrace new opportunities.

Developing interdisciplinary skills is essential to meet the sector’s increasing demands. This can be achieved through targeted training programs, workshops, or online courses on areas such as project management, artificial intelligence (AI), blockchain, IoT (Internet of Things), and the circular economy. Moreover,

participating in innovation hubs and cross-domain networks will expose SMEs to diverse ideas, technologies, and collaboration opportunities, while also serving as an effective way to monitor industry trends and technological advancements.

Lastly, it is crucial for SMEs to actively pursue funding and grant opportunities offered by national and EU programs. For micro and small enterprises, these grants can be transformative, offering the financial resources needed to implement innovative initiatives that drive growth and long-term sustainability.

### 3.5.6. Possible solutions at the political level

The lack of cross-sectoral interaction significantly hinders innovation in many regions. Promoting such interactions through initiatives like national and international industrial exchange programs can be highly beneficial. A notable example comes from the textile and shoe sectors, where practices like reutilizing and recycling second-hand materials are being explored. Many secondary and transformative industries share the need to transform raw materials, making the use of second-hand materials scalable and applicable across various sectors.

Additionally, many SMEs in isolated, rural areas face additional challenges due to limited access to information and key stakeholders. To address this, municipalities and regional authorities must take an active role in supporting their local SMEs. Leveraging multiple communication channels, both digital and offline, is crucial to ensure even the most remote businesses stay informed. By collaborating with national ministries and regional governments, municipalities can facilitate the dissemination of up-to-date trends, opportunities for training and capacity building, and information about funding and grant programs, effectively empowering local SMEs to innovate and thrive.

### 3.6. Country Report Slovenia

Mapped Innovations/Solutions	Innovator/ Provider	CRT Key & Transversal Business Areas	Scope	Current Fields of Application	Addressed SMEs Challenges	TTP Topics	NOV	IMP	COM	SAR
AI-driven personalized digital guides	Giro Car Share	Transport Client Nudging	G & D	Events & Entertainment IT & Digital Services	Technical capacity Real-Time monitoring Client nudging	9, 15, 16, 20	M-H	M-L	M-H	M-L
iQwood eco-friendly wood construction system	iQwood	Energy Furniture & Equipment	G	Construction & Building Furniture & Design	Resource efficiency Waste management	7, 20	M-L	M-L	M-H	M-H
Sustainable footwear for guests	Kaaita	Plastic Client Nudging	G	Furniture & Design ML Accommodations	Adopting circularity Waste management Client nudging Price/Quality balance	7, 20	M-L	M-L	M-L	M-H
Circular LAB: Develop and implement circular economy solutions	Zavod Knof	Plastic Furniture & Equipment	G	Furniture & Design Property Management	Adopting circularity Waste management	7, 12, 20	M-L	M-H	M-H	M-L
Planet Positive Event: Assess the sustainability of events	Toleranca Marketing	Water Energy Food Plastic	G	Events & Entertainment IT & Digital Services	Innovation knowledge-gap Technical capacity	7, 8, 13, 20	M-H	M-L	M-L	M-H
Bokashi composting solutions for organic waste management	Plastika Skaza	Food Client Nudging	G	Food & Beverage Industry Agriculture & Forestry	Adopting circularity Waste management Client nudging Technical capacity	7, 12, 20	M-H	M-H	M-L	M-H
App to reduce food waste by connecting food providers & consumers	Kročnik	Food Client Nudging	G & D	Food & Beverage Industry	Waste management Client nudging Technical capacity Price/Quality balance	7, 9, 10, 16	M-H	M-L	M-L	M-H
Green Direction: sustainable cleaning practices	Barjans, obvladovanje čistoče, d.o.o.	Water Energy Staff Nudging	G	Health & Sanitation Food & Beverage Industry Retail & Consumer Goods	Resource efficiency Technical capacity Staff nudging	7, 8, 19	M-L	M-L	M-L	M-H
Comprehensive energy solutions for sustainable hospitality	Resalta	Energy	G & D	Property Management ML Accommodations	Resource efficiency Innovation knowledge-gap High investments Technical capacity	8, 9, 16, 19	M-L	M-H	M-H	M-L
Eco-friendly glamping cabins	Lushna	Energy Furniture & Equipment Sustainable & Inclusive M.	G	Construction & Building Furniture & Design ML Accommodations	Resource efficiency Technical capacity High investments Price/Quality balance	12, 20	M-L	M-L	M-L	M-H
Using gamified experiences to stimulate sustainable choices	Nexto	Client Nudging Sustainable & Inclusive M.	G & D	IT & Digital Services Events & Entertainment	Technical capacity Client nudging Resource efficiency Price/Quality balance	7, 10, 15, 16	M-H	M-H	M-H	M-L
Improve resource efficiency by using a staff collaboration platform	Flexkeeping by Creatriks	Water Energy Staff Nudging	G & D	Human Resources & Training ML Accommodations Property Management	Resource efficiency Real-Time monitoring Staff nudging Technical capacity	9, 16, 19	M-H	M-L	M-L	M-L

Table 3.36: Market Scan Overview - Slovenia

[Go to INTERACTIVE MATRIX](#)

Table 3.36 (above) provides a comprehensive overview of innovations mapped in Slovenia. For each innovation, the right part of the table indicates the associated topic of the Transition Pathway (TTP) and the assessed level (Medium-High vs. Medium-Low) for its novelty within the tourism industry (NOV), its expected impact on the sustainability of SME business operations (IMP), the complexity of its implementation (COM), and an overall evaluation regarding scalability, adaptability, and replicability (SAR) for tourism SMEs.

### 3.6.1. Local context and key features

An analysis of collected practices and expert interviews revealed that Slovenia's innovation ecosystem for tourism is characterized by a strong emphasis on sustainability, digital transformation, and circular economy principles. The mapped solutions, ranging from AI-driven personalized digital guides to sustainable glamping cabins, demonstrate a commitment to integrating green practices and cutting-edge technologies into the tourism sector. Slovenia is a small market, R&D in tourism has just started in the last decade, so it is traditionally not research-oriented. However, tourism as a horizontal layer, is very much connected with other sectors (such as IT, transport, energy, food, medicine, etc.) and is co-developing various innovations with these sectors. Many solution providers mentioned during conversations that it is easier for them to offer their innovation on foreign markets, as that allows achieving higher added value, it entails less bureaucracy, and easiness to gain the trust of business partners and customers. Almost all of them also pointed out that it is challenging to do business in Slovenia, as over 50% of tourism is in the hands of the government, so it is hard to enter into the existing system.

Reflecting on the key challenges for tourism SMEs in Slovenia, the limited access to resources certainly deserves to be mentioned. SMEs, mostly being small enterprises, often face financial and technical constraints that hinder their ability to adopt innovative solutions, particularly in rural areas. The lack of a skilled workforce also represents a key challenge. While Slovenia has a burgeoning startup scene, many SMEs struggle to attract talent proficient in digital and sustainable practices. Very often, tourism SMEs have small staff teams which need to cover many different tasks and have no time to spend on digitalization and innovation. Many times, they also do not strategically recognize the fact that, in a longer term, this would actually optimize their work, save time and money, and also raise their competitiveness in the market. Moreover, regulatory barriers and complex legislation around environmental standards often discourage SMEs from fully engaging in sustainable innovation.

Looking at Slovenia's innovation context in general, the small size of the Country fosters collaboration among stakeholders, making it easier to implement pilot projects, as some of the mapped innovations. However, tourism SMEs often cite a need for more structured support systems, such as subsidies or mentorship programs, to scale these innovations effectively.

Overall, Slovenia's focus on sustainability and collaboration positions it as a leader in innovative tourism solutions, though continued support for SMEs is critical for broader adoption.

### Key features of the mapped solutions & innovations

Key Business Area	
Water	3
Energy	6
Transport	1
Food	3
Plastic	3
Furniture & Equipment	3
Transversal Business Area	
Staff Nudging	2
Client Nudging	5
Sustainable & Inclusive Markets	2

**Table 3.38: Frequencies of mapped innovations across KBA and TBA (Slovenia)**

mapped in Slovenia (5) are useful to nudge customers towards sustainability. At the same time, not many have been assessed as potentially useful to nudge staff or supporting SMEs in reaching out to sustainable and inclusive markets.

When considering the current field of application of the considered innovations, Table 3.37 on the right shows that categories such as Furniture & Design (4), Property Management (3) and IT & Digital services (3) are relatively well represented. Some of the mapped innovations have also been applied in sectors that are closer

Challenge	
Resource efficiency	6
Adopting circularity	3
Waste management	5
Innovation knowledge-gap	2
Technical capacity	9
Real-Time monitoring	3
Price/Quality balance	4
High investments	3
Client nudging	5
Staff nudging	2

**Table 3.39: Frequencies of mapped innovations across SMEs' challenges (Slovenia)**

Table 3.38 shows the frequencies of innovations mapped in Slovenia across CRT Key Business Areas (KBA) and Transversal Business Areas (TBA). The same innovation can be associated with more than one KBA/TBA, therefore contributing to more of the frequencies indicated in the table. Energy is the most represented KBA (6 innovations relate to this specific category), while almost all the other categories are equally represented: Water (3), Food (3), Plastic (3) and Furniture & Equipment (3). Only Transport is associated with just one solution. In terms of TBA, many of the innovations

Current Application	
Property Management	3
Construction & Building	2
Manufacturing	0
Logistics & Transportation	0
Retail & Consumer Goods	1
Agriculture & Forestry	1
IT & Digital Services	3
Furniture & Design	4
Human Resources & Training	1
Health & Sanitation	1
Food & Beverage Industry	3
ML Accommodations	4
Events & Entertainment	3

**Table 3.37: Frequencies of mapped innovations across current fields of application (Slovenia)**

or even part of the tourism industry, such as larger accommodation providers (4), Food & Beverage (3), Events & Entertainment (3). As indicated in other country reports, these solutions can break barriers between tourism SMEs and innovations. Businesses might adopt something that already was successfully implemented by closer types of businesses.

When considering SMEs challenges (Table 3.39, on the left), many of the mapped innovations may be particularly helpful in providing technical capacity to SMEs to support green and digital

innovation (9), improving resource efficiency (6), and mitigate issues regarding waste management (5). Many of them are also useful to nudge clients towards sustainability (5) and to communicate to clients how sustainability is not just an expensive add-on (4). Coherently, some innovations (3) can also support SMEs in adopting circularity principles in their business operations. The market scan also points out several innovations that might support the need of SMEs to have real-time data regarding resource consumptions (e.g. energy), allowing for timely corrective interventions (that might also go through staff nudging).

Table 3.40 on the right shows a slight prevalence of solutions focusing on green innovations, compared to the ones including both green and digital features.

Green / Digital	
G & D	5
G	7

Table 3.40: Innovations' scope (Slovenia)

Table 3.41, below on the left, illustrates how the considered innovations are associated with several of the topics outlined in the Tourism Transition Pathway policy document, especially in

TP Topic	
Topic 6	0
Topic 7	8
Topic 8	3
Topic 9	4
Topic 10	2
Topic 12	3
Topic 13	1
Topic 15	2
Topic 16	5
Topic 19	3
Topic 20	7

Table 3.41: Frequencies of mapped innovations across TTP topics (Slovenia)

relation to topic 7 (circularity of tourism services), and topic 20 (awareness of changes in tourism demand and opportunities for twin transition). Quite some of the mapped innovations are also closely related to topic 9 (data-drive tourism services) and topic 16 (support to digitalization of tourism SMEs and destinations).

Table 3.42 below shows the distribution of innovations in terms of their assessed level of novelty within the tourism industry. The table indicates a balanced distribution among innovations assessed as having a Medium-High and Medium-Low level of novelty, but also a significant prevalence of innovations expected to have a Medium-Low impact on the sustainability of business operations and a prevalence of innovations estimated to have a Medium-Low level of complexity in regards to their implementation. In terms of

scalability and replicability of the considered innovations, Table 3.42 shows a slight prevalence of innovations assessed as rather scalable and easily replicable. By looking at the overall picture, the set of innovations mapped in Slovenia provides a variegated mix of solutions that are rather easily replicable and not so complex to implement, although their impact on the sustainability of the business operations might sometimes be limited.

	Assessed level of			
	Novelty	Impact	Complexity	S&R
M-L	6	8	7	5
M-H	6	4	5	7

Table 3.42: Distribution of innovations across assessed criteria (Slovenia)

### 3.6.2. Best Practices

Among the mapped innovations, there are several that can be seen as best practices, when considered in the context of the Slovenian innovation landscape.

For instance, [AI-driven personalized digital guides](#) addresses the challenge of enhancing tourist experiences through technology, a key issue highlighted in online dialogues and other interactions with SMEs. By leveraging AI to create customized digital guides, this innovation offers a scalable way to improve tourist engagement while promoting lesser-known destinations, helping to combat over-tourism in popular areas. Previous use of the innovation has resulted in presenting Slovenian traditions and heritage in a very modern & easy to understand manner.

With sustainability being a cornerstone of Slovenia's tourism strategy, [Planet Positive Event: Assess the sustainability of events](#) fills a critical gap in measuring and improving the environmental impact of events. Conference (MICE) tourism plays a significant role in Slovenia's tourism sector. Its contribution is evident through economic, strategic impact and is also accounted for the infrastructure development. Planet Positive Events aligns with the outcomes of the CRT Call for Challenges in Slovenia, which emphasized the need for practical tools to integrate sustainability into operations. The methodology used can be applied across different event types (sports, food, culture and creative industries, medicine) and replicated throughout Slovenia, contributing significantly to the country's green tourism goals.

Shifting the focus on the need to reduce food waste, Krožnik's solution [App to reduce food waste by connecting food providers & consumers](#) directly addresses concerns raised by SMEs about resource inefficiency and sustainability (e.g. food waste) which is especially very problematic during high season. Partnering with Krožnik can be particularly interesting for tourism SMEs offering food & beverages. By connecting to the platform, they can minimize food waste. Instead of discarding surplus food, they can make it available to consumers on the platform, generating an income stream from items that would otherwise result in a loss.

The [Eco-friendly glamping cabins](#) by Lushna are another interesting example emerged through the market scan of innovations in the Slovenian context. This solution responds to the growing demand for sustainable accommodation options, a trend strongly supported by Slovenia's commitment to green tourism. These modular units are designed using natural materials such as untreated larch and eco wood fibre insulation, offering year-round comfort and energy efficiency. Their innovative design, combining eco-conscious construction with guest comfort, provides a replicable model for SMEs aiming to diversify their offerings while minimizing their ecological footprint.

These innovations collectively represent a forward-thinking approach to addressing sustainability, technology integration, and operational efficiency challenges in Slovenian tourism. These solutions are a frontrunner of Slovenian sustainable tourism and will likely play a significant role in the CRT Open Innovation Programme.

### 3.6.3. Potential for scalability and replicability

The mapped innovations in Slovenia reveal strong potential for replicability and scalability across the tourism domain, largely due to their alignment with

sustainability, digitalization, and operational efficiency trends. As seen in table 3.42, the majority of the mapped innovations have been assessed with a Medium-High level of scalability and replicability. Innovations such as [Planet Positive Event: Assess the sustainability of events](#), the [App to reduce food waste by connecting food providers & consumers](#), or [Bokashi composting solutions for organic waste management](#) are among the most replicable by tourism SMEs.

These solutions require minimal upfront investments and they are easily adaptable to various operational contexts. Their simplicity and eco-conscious appeal make them highly scalable and attractive to SMEs aiming to resource efficiency and waste reduction.

Innovations such as [iQwood eco-friendly wood construction system](#) and [Eco-friendly glamping cabins](#) might require substantial investments, but their modular approach ensures their scalability and replicability. Still, micro businesses might still find the necessary initial investment as challenging.

More digitally complex solutions such as [Circular LAB: Develop and implement circular economy solutions](#), or [Using gamified experiences to stimulate sustainable choices](#) require structured training on digitalisation (data), sustainability and collaboration (identifying data sources, collecting data...), presenting higher barriers for immediate adoption and replicability. However, their scalability is significant within niche markets (tourism sport, medicine, etc.) in Slovenia and all over the globe, aiming to implement circular economy practices.

Slovenia's supportive innovation ecosystem and sustainability focus provide fertile ground for scaling these solutions. Still, successful adoption hinges on addressing resource gaps, offering training, and promoting collaboration to ensure SMEs can integrate these innovations seamlessly.

#### 3.6.4. AAT Self-Assessment insights

The CRT AAT platform was used by 21 Slovenian SMEs, who self-assessed their current and future (expected) situation in relation to a set of indicators, organized in 3 macro areas and 2 sub-topics for each macro-areas:

- Readiness for green innovation
  - Green Strategic Orientation
  - Green Innovation Capabilities
- Readiness for digital innovation
  - Digital Strategic Orientation
  - Digital Innovation Capabilities
- Current sustainable operation capacities
  - Sustainable capacities in the 6 CRT Key Business areas
  - Capacities in nudging clients and staff towards sustainability and reaching new sustainable and inclusive markets

The chart below (Figure 3.6) provides a visual representation of aggregate results for Slovenian SMEs, giving an idea of how participating SMEs are performing in the mentioned macro-areas and sub-topics. Here below some specific insights:



**Best-Performing Metric (Present): Green strategic orientation.** Slovene companies demonstrate a balanced strategic approach that recognizes the importance of digital and especially green innovation, showing that innovation is a priority to them, which is also reflected in the way they assessed their innovation capabilities.

**Biggest Shift to the Future is Green strategic orientation.** Slovenia's SMEs are planning to strengthen their green strategies even further, aiming to deepen their commitment to sustainability. This reflects an ambition to lead in environmental responsibility and possibly adhere to stricter sustainability standards.

**Future Goals:** Slovene companies' continued focus on improving their green strategies underscores their goal of positioning themselves as sustainable leaders. They recognize that such an ambitious objective requires future improvements in the sustainability of their operations (key business areas) and a more effective engagement with sustainable and inclusive markets to align operations with a vision for long-term environmental impact and resilience.

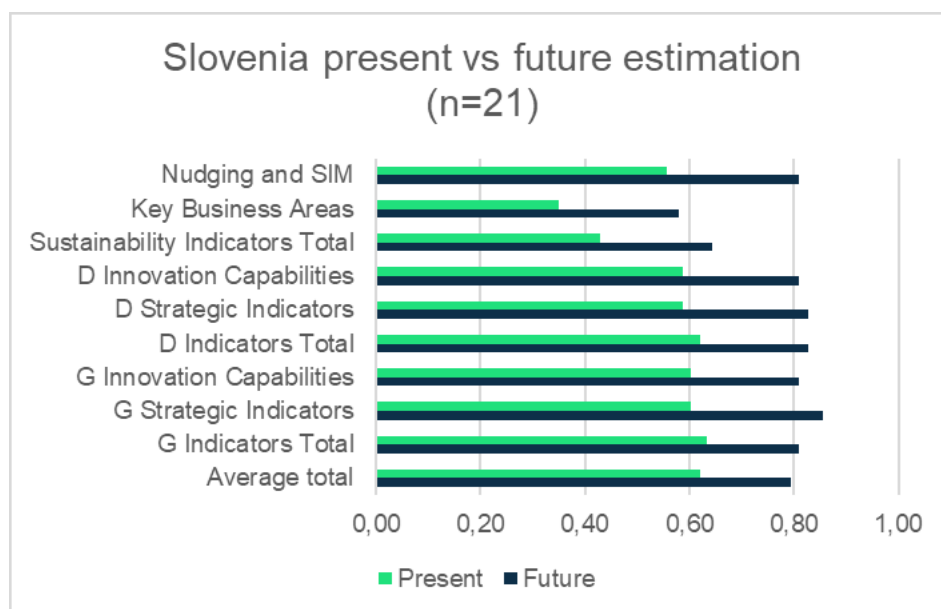


Figure 3.6: AAT Slovene SMEs: assessed current situation VS future estimation

### 3.6.5. Recommendations for SMEs

To boost SMEs' engagement in cross-domain open innovation, several strategic recommendations emerge. SMEs should prioritize adopting digital and sustainable innovations, such as platforms that **Use gamified experiences to stimulate sustainable choices** and **AI-driven personalized digital guides**, which are cost-effective and enhance operational efficiency. These tools offer immediate value in terms of efficient resource usage and improved guest engagement, which are Slovenian key sustainable focuses. Training in digital tools and sustainability practices is critical and highly required (can be offered through Cross-Re-Tour webinars, one-on-one consultancies and through implementing own projects). SMEs should seek targeted programs to build expertise in areas like circular

economy models (e.g. [Circular LAB: Develop and implement circular economy solutions](#)) or eco-construction (e.g. [iQwood eco-friendly wood construction system](#)). Collaboration with local stakeholders, such as innovation hubs, hi-tech companies, eco-focused enterprises, and digital solution providers, can drive knowledge sharing and co-creation, fostering adoption of impactful solutions.

Support and financing should be directed toward high-investment innovations, which offer significant immediate and also long-term benefits. SMEs should monitor trends in eco-tourism and sustainable practices to align with growing market demands and develop unique selling propositions. Engaging in public-private partnerships can provide access to resources and expertise, enhancing their ability to innovate effectively. Lastly, SMEs should leverage analytics from digital tools (e.g. [Improve resource efficiency by using a staff collaboration platform](#) and [App to reduce food waste by connecting food providers & consumers](#)) to identify customer preferences and operational inefficiencies, using data-driven strategies to refine offerings and expand into new markets, ensuring scalability and long-term competitiveness.

### 3.6.6. Possible solutions at the political level

To enhance cross-domain open innovation among tourism SMEs, policy/decision makers can implement several additional support measures. Beyond fiscal incentives and networking events, governments could establish dedicated innovation hubs or clusters that bring together tourism SMEs, technology providers, and sustainability experts to co-develop solutions (there already were some R&D projects TRL 7-9 Demo pilots connecting tourism & tech providers). Subsidies for research and development can help SMEs explore novel technologies like AI-driven tools or eco-friendly materials without financial strain. Offering low-interest loans or guarantees for high-investment projects could bridge funding gaps (partially already offered through the Slovenian Enterprise Fund and Slovenian Investment Bank, but too bureaucratic for the SMEs to use).

Governments could also create knowledge-sharing platforms to disseminate best practices and case studies, encouraging SMEs to replicate proven models. Strengthening educational programs and certifications in eco-tourism and digital transformation would equip SMEs with the necessary skills. Partnerships with universities and research institutions could foster innovation through academic-industry collaborations.

Regulations could be adjusted to simplify permitting processes for sustainable projects and provide recognition or awards for businesses excelling in innovation and sustainability (the obstacle here is that usually hi-tech sectors win, e.g. automobile industry, medicine, etc.). SPIRIT Slovenia's Ambassador Programme could be expanded to include more ambassadors from various domains, serving as mentors to guide SMEs through the innovation process and could also establish cross-sector category. Additionally, governments could advocate for international collaboration initiatives to expose SMEs to global trends, opening opportunities for exporting innovative Slovenian tourism solutions.

### 3.7. Country Report Spain

Mapped Innovations/Solutions	Innovator/ Provider	CRT Key & Transversal Business Areas	Scope	Current Fields of Application	Addressed SMEs Challenges	TTP Topics	NOV	IMP	COM	SAR
Renewable Energy Communities	Zenit Solar	Energy	G & D	Construction & Building Property Management	Resource efficiency Innovation knowledge-gap Technical capacity	9, 12, 16	M-H	M-H	M-H	M-L
Smart Energy Management System using AI and IoT	Managing the Intelligence – Smart Room	Energy Client Nudging	G & D	Property Management ML Accommodations	Resource efficiency Technical capacity Real-Time monitoring Client nudging	9, 15, 16	M-H	M-H	M-H	M-H
Water-saving tap device to reduce water waste	AquaReturn	Water Energy	G	Property Management Construction & Building	Resource efficiency Waste management Technical capacity High investments	7	M-H	M-H	M-L	M-H
Smart Water Management Platform leveraging IoT	Bitagua WDNA	Water Staff Nudging	G & D	Property Management Agriculture & Forestry ML Accommodations	Resource efficiency Technical capacity Real-Time monitoring Staff nudging	7, 9, 15, 16	M-H	M-H	M-L	M-H
Advanced Water Management Solutions using IoT	Fluidra	Water Energy	G & D	Property Management Events & Entertainment Health & Sanitation	Resource efficiency Technical capacity Real-Time monitoring	7, 9, 15, 16	M-H	M-H	M-L	M-H
Energy efficient indoor climate control using IoT	Trane Technologies	Energy	G & D	Property Management Retail & Consumer Goods Food & Beverage Industry	Resource efficiency Technical capacity Real-Time monitoring	9, 16	M-H	M-L	M-L	M-H
Telemetry digital systems for efficient water management	Contazara	Water	G & D	Property Management Agriculture & Forestry ML Accommodations	Resource efficiency Technical capacity Real-Time monitoring Waste management	7, 9, 15, 16	M-L	M-L	M-L	M-H
App to create connected mobility ecosystem	Meep	Transport Client Nudging	G & D	IT & Digital Services Logistics & Transportation	Technical capacity Client nudging High investments	6, 9, 10, 16	M-L	M-L	M-H	M-L
Eco-friendly packaging solutions for food & beverage	ITC Packaging	Plastic	G	Food & Beverage Industry Events & Entertainment Retail & Consumer Goods	Adopting circularity Waste management	7, 20	M-L	M-L	M-L	M-H
Smart and efficient laundry solutions	Girbau	Water Energy	G & D	Health & Sanitation Property Management Food & Beverage Industry	Resource efficiency Real-Time monitoring	7, 9, 16	M-L	M-L	M-L	M-L
AI-based system for food waste reduction and composting	Effiwaste	Food	G & D	Food & Beverage Industry Health & Sanitation	Adopting circularity Waste management Technical capacity Real-Time monitoring	7, 9, 15, 16	M-H	M-H	M-L	M-H
An assisted pathway towards sustainability in the food industry	EcoCook by Biolia	Water Energy Food Staff Nudging	G & D	Food & Beverage Industry	Resource efficiency Waste management Staff nudging Innovation knowledge-gap	7, 8, 19, 20	M-L	M-H	M-H	M-L

Table 3.43: Market Scan Overview - Spain

[Go to INTERACTIVE MATRIX](#)



Table 3.43 (above) provides a comprehensive overview of innovations mapped in Spain. For each innovation, the right part of the table indicates the associated topic of the Transition Pathway (TTP) and the assessed level (Medium-High vs. Medium-Low) for its novelty within the tourism industry (NOV), its expected impact on the sustainability of SME business operations (IMP), the complexity of its implementation (COM), and an overall evaluation regarding scalability, adaptability, and replicability (SAR) for tourism SMEs.

### 3.7.1. Local context and key features

This section focus on the Catalan innovation landscape and draws insights from two expert interviews, conducted with representatives of the Barcelona Hotel Guild (Gremi d'Hotels de Barcelona) and the Resource Bank (Banc de Recursos). Catalonia's tourism sector heavily relies on Barcelona and coastal regions as main tourism hubs, facing challenges such as mass tourism, overuse of resources, and rising concerns around sustainability and "turismophobia." Water scarcity, exacerbated by states of emergency, has heightened tensions between locals and tourists, prompting urgent regulatory measures and a clear need for industry action. Tourism businesses struggle with limited familiarity with advanced technologies, difficulties in integrating green practices, and the need for cross-sector collaboration. However, Catalonia's robust innovation ecosystem offers opportunities in digital and green sectors, particularly energy, water management, and food conservation. Therefore, resource-saving technologies and innovations in these fields are particularly relevant in the context of Catalonia and highlight actionable pathways for SMEs to implement sustainable practices and adapt to evolving demands.

### Key features of the mapped solutions & innovations

Key Business Area	
Water	6
Energy	7
Transport	1
Food	2
Plastic	1
Furniture & Equipment	0
Transversal Business Area	
Staff Nudging	2
Client Nudging	2
Sustainable & Inclusive Markets	0

**Table 3.44: Frequencies of mapped innovations across KBA and TBA (Spain)**

Table 3.44 shows the frequencies of innovations mapped in Spain across CRT Key Business Areas (KBA) and Transversal Business Areas (TBA). The same innovation can be associated with more than one KBA/TBA, therefore contributing to more of the frequencies indicated in the table. Energy is the most represented KBA (6 innovations related to this specific category), followed by Water (6). These 2 KBA really represent the focus of the solutions mapped in Spain, as other categories (Transport, Food and Plastic) are only relevant for one or two of the mapped innovations. None of them is actually concerning Furniture & Equipment. Regarding TBA, not many of the innovations have

been assessed as potentially useful to nudge staff or clients towards sustainability or to support SMEs in reaching out to sustainable and inclusive markets.

When considering the current field of application of the considered innovations, Table 3.45 on the right shows how most of them have been already applied in the field of Property Management. Some of the mapped innovations have also been applied in sectors that are closer or even part of the tourism industry, such as Food & Beverage (5), larger accommodation providers (3), Events & Entertainment (2). These solutions may help in breaking barriers between tourism SMEs and innovations. As highlighted in other country reports, tourism SMEs might feel more open to adopt solutions that has already been successfully

Challenge	
Resource efficiency	9
Adopting circularity	2
Waste management	5
Innovation knowledge-gap	2
Technical capacity	10
Real-Time monitoring	7
Price/Quality balance	0
High investments	2
Client nudging	2
Staff nudging	2

**Table 3.46: Frequencies of mapped innovations across SMEs' challenges (Spain)**

When looking at this information combined with the insights from Table 3.45, it becomes evident how the innovations mapped in Spain really focus on solutions to guarantee efficient use of water and energy by specific technologies that also enable a real-time monitoring of SMEs consumption, allowing for timely corrective

TP Topic	
Topic 6	1
Topic 7	8
Topic 8	1
Topic 9	9
Topic 10	1
Topic 12	1
Topic 13	0
Topic 15	5
Topic 16	9
Topic 19	1
Topic 20	2

**Table 3.47: Frequencies of mapped innovations across TTP topics (Spain)**

implemented by closer types of businesses.

When considering SMEs' challenges (Table 3.46), mapped solutions may be helpful in providing technical capacity to SMEs to support green and digital transition (10 innovations). By strengthening those capacities, these innovations are also potentially effective in improving resource efficiency (9 innovations have been assessed as useful for this). This may be enabled by many innovations supporting the SMEs' needs to have reliable real-time data on resource consumption.

interventions (that might also be implemented through staff or client nudging). The market scan also points out several innovations that might support the need for SMEs to have tools and instruments to reduce and manage waste.

Table 3.48, on the right, shows a clear prevalence of solutions including both green and digital features, compared to the ones focusing only on green innovations.

Table 3.47, on the left, illustrates how the considered innovations are associated with several of the topics outlined in the Tourism Transition Pathway policy document, especially in relation to topic 9 (data-drive tourism services), topic 16 (support to digitalization of tourism SMEs and destinations) and topic 7 (circularity of

Current Application	
Property Management	8
Construction & Building	2
Manufacturing	0
Logistics & Transportation	1
Retail & Consumer Goods	2
Agriculture & Forestry	2
IT & Digital Services	1
Furniture & Design	0
Human Resources & Training	0
Health & Sanitation	3
Food & Beverage Industry	5
ML Accommodations	3
Events & Entertainment	2

**Table 3.45: Frequencies of mapped innovations across current fields of application (Spain)**

Green / Digital	
G & D	10
G	2

**Table 3.48: Innovations' scope (Spain)**

tourism services). These links seem to be logical and coherent with the analysis of insights provided by previous tables.

Below, Table 3.49 shows the distribution of innovations in terms of their assessed level of novelty within the tourism industry (slight prevalence of innovations assessed as having a Medium-High level of novelty), expected impact of innovations on the sustainability of business operations (slight prevalence of innovations assessed as having a Medium-High impact) and estimated level of complexity of their implementation (clear prevalence of Medium-Low complexity). Table 3.49 also shows a clear prevalence of innovations mapped in Spain and assessed as rather scalable and easy to replicate in different situations and contexts. By looking at the overall picture, the set of mapped innovation in Spain provides a variegated mix of solutions that are mostly new in the tourism sector, they are rather easily replicable and not so complex to implement, although their impact on the sustainability of the business operations might sometimes be limited.

	Assessed level of			
	Novelty	Impact	Complexity	S&R
M-L	5	5	8	4
M-H	7	7	4	8

Table 3.49: Distribution of innovations across assessed criteria (Spain)

### 3.7.2. Best Practices

In the context of Catalonia’s pressing challenges in water and energy management (the areas most prominently discussed during the online dialogues by SMEs), some of the mapped innovations stand out as best practices.

AquaReturn’s [Water-saving tap device to reduce water waste](#) directly addresses water scarcity, a critical issue identified by SMEs in the region. By recirculating cold water back to the boiler until it reaches the desired hot temperature, it ensures that when the user requests hot water, only hot water flows from the tap, preventing unnecessary water waste and offering an effective solution for hotels and resorts struggling with inefficient water management.

Effiwaste’s [AI-based system for food waste reduction and composting](#) also aligns with local sustainability goals. It includes AI-based software tools that measure and analyses food waste, enabling precise adjustments in kitchen and purchasing operations. Additionally, it includes an option for on-site composting machines that transform unavoidable organic waste into eco-friendly fertilizer, promoting a circular economy. Given the challenges around food waste management, particularly in tourist-heavy regions like Barcelona, Effiwaste’s platform helps businesses reduce waste and optimize resource use, while also educating staff and fostering a sustainability culture.

Trane Technologies’ [Energy efficient indoor climate control using IoT](#) addresses the need for energy optimization within the tourism sector, a recurring challenge among SMEs. It provides a range of innovative smart controls and monitoring tools (including IoT and smart monitoring) for HVAC systems (Heating, Ventilation, and Air Conditioning), designed to minimize energy consumption and environmental impact, while providing optimal indoor climate control. Their focus

on reducing energy consumption aligns with local efforts to promote renewable energy sources and decrease the carbon footprint of tourism operations.

These solutions are not only innovative but also have the potential to be replicated across various tourism SMEs in Catalonia, contributing to more sustainable and efficient operations in the sector.

### 3.7.3. Potential for scalability and replicability

The mapped innovations show varying levels of replicability and scalability in Catalonia's tourism sector. As reported by table 3.49, 8 out of 12 solutions have been assessed having a Medium-High level of scalability and replicability. Solutions like [Water-saving tap device to reduce water waste](#), [AI-based system for food waste reduction and composting](#) or [Water-saving tap device to reduce water waste](#) are relatively easy for SMEs to implement. These innovations address pressing challenges such as water conservation, waste management, and energy efficiency, requiring moderate investment and minimal specialized knowledge, making them highly replicable. Contazara's [Telemetry digital systems for efficient water management](#) also fits this category, offering easy integration for SMEs with its resource-efficient technologies that can be adapted to existing operations.

However, innovations such as Meep's [App to create connected mobility ecosystem](#) and Zenit's [Renewable Energy Communities](#) face scalability and replicability challenges due to the need for local collaboration, infrastructure, and public support, which may hinder broader adoption. For example, Meep's platform relies on strong public transportation networks and collaboration with local authorities, which may not be available or fully developed in all areas. Similarly, Zenit's solution requires significant infrastructure investment, and the level of local government support for renewable energy projects can vary.

Other mapped innovations, such as Girbau's [Smart and efficient laundry solutions](#) might also present challenges due to higher investment costs and specialized expertise required for their implementation. While these technologies offer long-term benefits, their scalability may be limited for smaller SMEs with fewer resources.

Overall, innovations focused on water and energy efficiency, such as AquaReturn and Contazara, show the most promising scalability potential, while solutions requiring more complex infrastructure or collaboration need targeted support to overcome adoption barriers.

### 3.7.4. AAT Self-Assessment insights

The CRT AAT platform was used by 22 Catalan SMEs, who self-assessed their current and future (expected) situation, in relation to a set of indicators organized in 3 macro areas and 2 sub-topics for each macro-areas:

- Readiness for green innovation
  - Green Strategic Orientation
  - Green Innovation Capabilities

- Readiness for digital innovation
  - Digital Strategic Orientation
  - Digital Innovation Capabilities
- Current sustainable operation capacities
  - Sustainable capacities in the 6 CRT Key Business areas
  - Capacities in nudging clients and staff towards sustainability and reaching new sustainable and inclusive markets

The chart below (Figure 3.7) provides a visual representation of aggregate results for Spanish SMEs, giving an idea of how participating SMEs are performing in the mentioned macro-areas and sub-topics. Here below some specific insights:

**Best-Performing Metric (Present): Digital strategic orientation.** Spanish SMEs are currently well-oriented towards digital transformation, reflecting a strong strategic orientation towards digital innovation.

**Biggest Shift to Future: Green innovation capabilities.** The biggest increase is projected in green innovation, indicating that Spanish SMEs plan to invest in sustainable innovation efforts, likely focusing on eco-friendly products or efficient resource management.

**Future Goals:** Spanish companies' focus on green innovation suggests a shift toward integrating sustainability with innovation and increasing efforts to nudge clients and staff toward sustainability. By enhancing green practices through innovative approaches, Spanish SMEs are setting themselves up for competitive advantage in the sustainable economy and strengthening their capabilities to reach sustainable and inclusive markets.

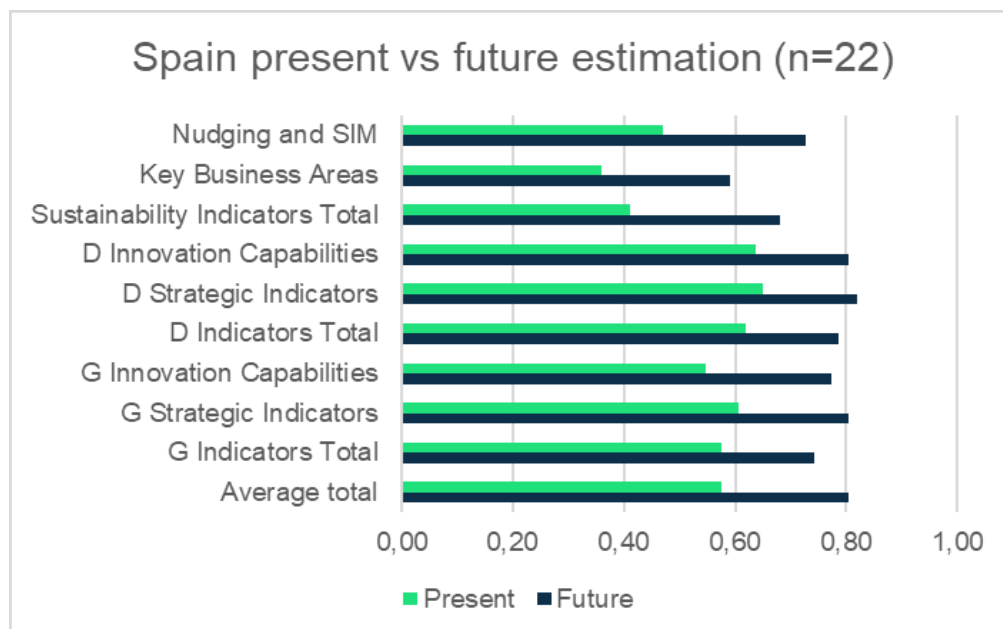


Figure 3.7: AAT Spanish SMEs: assessed current situation VS future estimation



### 3.7.5. Recommendations for SMEs

To boost SMEs' engagement in cross-domain open innovation, the most important step is to get started by focusing on easy-to-implement solutions (low-hanging fruit) that deliver immediate benefits, such as energy and water-saving technologies. SMEs should also allocate a budget for sustainability innovations and seek financing opportunities to support these initiatives. Becoming an early adopter allows SMEs to stay ahead of future regulations and gain a competitive edge.

Collaboration with other sectors, such as energy, food services, and ICT, through industry clusters or associations, is key for accessing expertise, resources, and networking. Finally, engaging with the local community can strengthen partnerships and improve the impact of sustainability efforts. These actions will help SMEs integrate innovation smoothly while maximising cost savings and environmental benefits.

### 3.7.6. Possible solutions at the political level

To boost cross-domain open innovation by tourism SMEs in Catalonia, the government could help smaller SMEs navigate and access fiscal incentives, which are often too technical and bureaucratic for them to take advantage of. Networking initiatives should tap into Catalonia's strong innovation ecosystem, empowering sector associations, clusters, and support organisations to foster connections and knowledge exchange. Regulations should be introduced to promote sustainability, with a focus on ensuring compliance with already existing regulations in areas like plastic use, room temperatures, and water consumption. Capacity-building programmes should also focus on equipping SMEs with the necessary skills to adopt innovative solutions and meet regulatory requirements. These actions would enable SMEs to stay competitive while advancing sustainability.

### 3.8. Country Report The Netherlands

Mapped Innovations/Solutions	Innovator/ Provider	CRT Key & Transversal Business Areas	Scope	Current Fields of Application	Addressed SMEs Challenges	TTP Topics	NOV	IMP	COM	SAR
<b>Hydraloop: In-house water recycling systems</b>	Hydraloop	Water Energy	G & D	Construction & Building Property Management ML Accommodations	Resource efficiency Adopting circularity Waste management Real-Time monitoring	7, 8, 9, 16	M-H	M-H	M-L	M-H
<b>Heat Battery ensuring gas-free heating all year round</b>	CESAR Bulk Energy Storage	Energy	G	Construction & Building Health & Sanitation	Technical capacity Resource efficiency	12	M-H	M-L	M-H	M-L
<b>The Waste Transformers: give a value to food waste</b>	The Waste Transformers	Energy Food	G	Construction & Building Food & Beverage Industry Agriculture & Forestry	Adopting circularity Waste management Technical capacity	7, 12	M-L	M-H	M-H	M-L
<b>Powering low-energy devices with plant-generated electricity</b>	Plant-E BV	Energy	G	Property Management Events & Entertainment Agriculture & Forestry	Adopting circularity Technical capacity Resource efficiency	12	M-H	M-L	M-L	M-H
<b>Blue Energy: creating electricity from fresh and salt water</b>	REDstack	Energy	G	Construction & Building Logistics & Transportation	Resource efficiency Technical capacity	12	M-H	M-H	M-H	M-L
<b>Reduce energy consumption by recovering heat from wastewater</b>	De Warmte	Water Energy	G & D	Construction & Building Property Management	Resource efficiency Adopting circularity Real-Time monitoring Technical capacity	12, 16	M-H	M-L	M-L	M-L
<b>Passive Construction: a building approach focused on energy efficiency</b>	Stichting PassiefBouwen	Energy Furniture & Equipment	G	Construction & Building	Resource efficiency Innovation knowledge-gap Price/Quality balance Technical capacity	12	M-H	M-H	M-H	M-L
<b>Nudging sustainability in staff and customers through serious games</b>	Businessgames	Client Nudging Staff Nudging Sustainable & Inclusive M.	G & D	Human Resources & Training IT & Digital Services	Innovation knowledge-gap Client nudging Staff nudging High investments	8, 15, 16, 19	M-H	M-H	M-L	M-L
<b>AI-supported software for advancing buildings decarbonization</b>	Next Sense	Energy Client Nudging Staff Nudging	G & D	Property Management IT & Digital Services ML Accommodations	Resource efficiency Client nudging Staff nudging Real-Time monitoring	9, 15, 16, 19	M-H	M-H	M-H	M-H
<b>Automated food waste monitoring system</b>	Orbisk	Food Staff Nudging	G & D	Food & Beverage Industry Events & Entertainment ML Accommodations	Waste management Technical capacity Real-Time monitoring Staff nudging	7, 9, 16, 20	M-H	M-L	M-L	M-H
<b>Replacing plastic items in outdoor areas with biobased products</b>	Natural Plastics International	Plastic Furniture & Equipment	G	Agriculture & Forestry Property Management	Adopting circularity Waste management Price/Quality balance High investments	7, 20	M-L	M-L	M-L	M-H
<b>Using nudging and gamification to influence commuting behaviour</b>	Fynch	Transport Staff Nudging	G & D	Human Resources & Training IT & Digital Services Logistics & Transportation	Staff nudging Real-Time monitoring Resource efficiency	6, 9, 16	M-L	M-L	M-L	M-H

Table 3.50: Market Scan Overview - The Netherlands

[Go to INTERACTIVE MATRIX](#)

Table 3.50 (above) provides a comprehensive overview of innovations mapped in The Netherlands. For each innovation, the right part of the table indicates the associated topic of the Transition Pathway (TTP) and the assessed level (Medium-High vs. Medium-Low) for its novelty within the tourism industry (NOV), its expected impact on the sustainability of SME business operations (IMP), the complexity of its implementation (COM), and an overall evaluation regarding scalability, adaptability, and replicability (SAR) for tourism SMEs.

### 3.8.1. Local context and key features

In the Netherlands, the transition to green and digital practices presents significant opportunities for tourism SMEs but also substantial challenges. While the country overall is making significant progress in terms of sustainability efforts, particularly in waste management, energy efficiency and construction of sustainable homes, many issues remain unresolved, especially for smaller enterprises and particularly in the tourism sector. At the macro level, the Netherlands has clear sustainability objectives, but implementing these goals at the SME level proves difficult. Financial constraints and operational limitations make it harder for smaller businesses to align with national strategies.

Dutch SMEs face several sustainability challenges simultaneously, often lacking the knowledge and resources to understand how sustainability impacts their businesses or which actions to prioritize. For most, sustainability remains more of an aspirational goal than a measurable key performance indicator, largely due to limited knowledge, lack of technical capacities and limited ability to understand and monitor their progress. For example, in the holiday park sector, reducing emissions and energy consumption are often a primary focus. Yet small enterprises, in particular, struggle with questions such as whether home insulation should be their first priority.

According to the interviewees, two critical factors are necessary for SMEs to successfully embrace digital and green transitions: the commitment and mindset of management and staff, and adequate financial resources. However, SMEs often lack the time and capacity to engage in detailed planning, apply for project funding, or prepare the necessary documentation for credit applications. Many are unable to participate in sustainability initiatives due to insufficient staff or operational limitations. These challenges are worsened by bureaucratic barriers, making long-term planning and investments a complex and often impossible task.

Despite these challenges, there are promising developments. The energy sector in the Netherlands is a recognized frontrunner in sustainability, and the accommodation sector has also made notable progress. However, these achievements are predominantly driven by larger companies, highlighting the scaling and replicability issues faced by SMEs in terms of innovation.

When looking at solutions, for example, in the energy sector, AI and digital technologies are seen as opportunities to help SMEs monitor and adjust consumption, as well as involve and educate or nudge clients and staff. Nevertheless, the high costs of sustainability solutions might hinder their adoption

by SMEs. Therefore, low-cost and easily replicable solutions could encourage structured sustainability engagement.

### Key features of the mapped solutions & innovations

Key Business Area	
Water	2
Energy	8
Transport	1
Food	2
Plastic	1
Furniture & Equipment	2
Transversal Business Area	
Staff Nudging	4
Client Nudging	2
Sustainable & Inclusive Markets	1

**Table 3.51: Frequencies of mapped innovations across KBA and TBA (The Netherlands)**

Table 3.51 shows the frequencies of innovations mapped in The Netherlands across CRT Key Business Areas (KBA) and Transversal Business Areas (TBA). The same innovation can be associated with multiple KBAs/TBAs, meaning it may contribute to more than one of the frequencies indicated in the table. Energy is the most represented KBA (8 innovations out of 12 can be associated with this specific category), which is in line with the Country's focus on energy efficiency. Some of the innovations can also be related to other KBA, such as Water (2 innovations), Food (2), Furniture & Equipment (2). Only Transport and Plastic are associated with just one innovation. Regarding TBA, many of the innovations mapped in The Netherlands are useful to nudge staff towards sustainability (4 innovations). At the same time, not many have been assessed as potentially useful to nudge customers (2) or to support SMEs in reaching out to sustainable and inclusive markets (only one innovation).

When considering the current field of application of the considered innovations, Table 3.52 shows that Property Management (5 innovations) and Construction & Building (6) are the most represented sectors. Nevertheless, many of the mapped innovations are currently already

Challenge	
Resource efficiency	8
Adopting circularity	5
Waste management	4
Innovation knowledge-gap	2
Technical capacity	7
Real-Time monitoring	5
Price/Quality balance	2
High investments	2
Client nudging	2
Staff nudging	4

**Table 3.53: Frequencies of mapped innovations across SMEs' challenges (The Netherlands)**

implemented in a variety of different sectors and fields of application, from Agriculture & Forestry (3) to IT & Digital Services (3) and Logistics & transportation (2). This is particularly valuable for SMEs willing to consider the potential of cross-domain innovation. Some of the mapped innovations have also been applied in sectors that are closer or even part of the tourism industry, such as larger accommodation providers (3), Food & Beverage (2), Events & Entertainment (2).

If considering SMEs challenges (Table 3.53, on the left), many of the mapped innovations may be helpful in addressing resource efficiency issues (8

Current Application	
Property Management	5
Construction & Building	6
Manufacturing	0
Logistics & Transportation	2
Retail & Consumer Goods	0
Agriculture & Forestry	3
IT & Digital Services	3
Furniture & Design	0
Human Resources & Training	2
Health & Sanitation	1
Food & Beverage Industry	2
ML Accommodations	3
Events & Entertainment	2

**Table 3.52: Frequencies of innovations across current fields of application (Netherlands)**

innovations out of 12) and providing technical capacity to SMEs to support green and digital transition (7 innovations). Coherently, many innovations (5) can also support SMEs in adopting circularity principles in their business operations and in waste management (4). The market scan also points out to several innovations (5) that might support the need of SMEs to have real-time data regarding resource consumptions (e.g. energy), allowing for timely corrective interventions that might also go through staff nudging.

Table 3.54, on the right, shows a perfect balance, among the mapped solutions, between the ones focusing only on green innovation and the ones including both green and digital features.

Green / Digital	
G & D	6
G	6

Table 3.54: Innovations' scope (The Netherlands)

TP Topic	
Topic 6	1
Topic 7	4
Topic 8	2
Topic 9	4
Topic 10	0
Topic 12	6
Topic 13	0
Topic 15	2
Topic 16	6
Topic 19	2
Topic 20	2

Table 3.55: Frequencies of mapped innovations across TTP topics (The Netherlands)

Table 3.55, on the left, illustrates how the considered innovations are associated with several of the topics outlined in the Tourism Transition Pathway policy document, especially in relation to topic 12 (research & innovation on circular and climate-friendly tourism) and topic 16 (support to digitalization of tourism SMEs and destinations), but also to topic 7 (circularity of tourism services), but also in relation to topic 9 (data-drive tourism services), and topic 9 (Data-driven tourism services).

Table 3.56, below, shows the distribution of innovations in terms of their assessed level of novelty within the tourism industry (clear prevalence of innovations assessed as having a Medium-High level of novelty), expected impact of innovations on the sustainability of business operations (perfect balance between innovations assessed as having Medium-Low and Medium-High impact) and estimated level of complexity of their implementation (slight prevalence of Medium-Low complexity). In terms of scalability and replicability of the considered innovations, Table 3.56 also shows a balance between innovations assessed Medium-Low and Medium-High in terms of scalability and replicability. By looking at the overall picture, the set of mapped innovations in the Netherlands provides a variegated mix of solutions that are mostly new in the tourism sector, rather easy to implement and with a different range of scalability & replicability and level of impact on the sustainability of business operations.

	Assessed level of			
	Novelty	Impact	Complexity	S&R
M-L	3	6	7	6
M-H	9	6	5	6

Table 3.56: Distribution of innovations across assessed criteria (The Netherlands)

### 3.8.2. Best Practices

Despite challenges such as financial constraints and operational limitations for SMEs, some of the mapped innovations can really qualify as best practices in the specific context and market conditions of the Netherlands. As mentioned above, energy efficiency is a priority of the Netherlands' sustainability transition path, and several interesting innovations have been developed in a variety of sectors.

When adjusted to the reality of tourism SMEs, these solutions can support their sustainability journey and help them reduce the costs of expensive resources such as energy.

This is the case of the innovations introduced by Next Sense, REDstack and Plant-E. Next Sense's [AI-supported software for advancing buildings decarbonization](#) is an innovative platform tailored to help property managers achieve sustainable energy goals by using advanced data analytics, simulations, and AI-driven controls. REDstack's [Blue Energy: creating electricity from fresh and salt water](#) is an experimental technology focusing on generating sustainable energy through a process called Reverse ElectroDialysis (RED) that uses the natural process of mixing fresh and salt water to produce electricity. Plant-E's [Powering low-energy devices with plant-generated electricity](#) is based on an experimental innovative technology that generates electricity from living plants. By using the excess organic material produced by the plants during photosynthesis, their system captures electrons released by bacteria in the soil. This provides a continuous, sustainable source of power for low-energy applications such as sensors and lighting, reducing the need for traditional power sources.

Other interesting innovations focus more on other fields, such as water or waste management. One standout solution is Hydraloop's [In-house water recycling system](#), which reduces water consumption by up to 45%. These systems recycle greywater for non-potable uses, like toilet flushing and irrigation, leveraging IoT for real-time monitoring. An interesting initiative mapped in The Netherlands is [The Waste Transformers: give a value to food waste](#): special containers, called 'Waste Transformers', are conveniently placed next to a facility and convert food waste into biogas or electricity and heat, while producing liquid natural fertilizer from the transformed food waste. Although the solution is typically adopted by larger organizations and communities, possibilities for the adoption by SMEs, or more realistically a group of SMEs, should be evaluated.

Green and digital transition can be supported through client and staff nudging. In this regard, Businessgames' solution, [Nudging sustainability in staff and customers through serious games](#), represents an innovative and different approach. Businessgames develops and facilitates interactive business management and serious games aimed at enhancing organizational performance through experiential learning. The games could be adjusted to incorporate elements that nudge both staff and customers towards sustainable choices, helping organizations embed sustainability into their operational culture.

These innovations represent best practices for green and digital innovations in the context of The Netherlands. Nevertheless, an appropriate evaluation of the potential adoption of those innovations by tourism SMEs takes into consideration the adaptability, scalability and replicability of these solutions. Further reflections on those aspects are provided in the next section.

### 3.8.3. Potential for scalability and replicability

As illustrated by Table 3.56, half of the innovations mapped in the Netherlands were assessed as having a Medium-High level of scalability and replicability, while the other half were evaluated as having a Medium-Low level of scalability and replicability.

Innovations such as [Replacing plastic items in outdoor areas with biobased products](#), [Automated food waste monitoring system](#), and [AI-supported software for advancing building decarbonization](#) are rather straightforward. They require reasonable initial investments and do not require complex adaptations to be implemented in the context of an SME.

Solutions like Hydraloop's [In-house water recycling system](#) are rather replicable, and its IoT integration enables user-friendly operation and real-time monitoring, making it an attractive option for SMEs to reduce water consumption and energy usage. However, financial constraints may limit its adoption by SMEs. Innovations such as REDstack's [Blue Energy: creating electricity from fresh and salt water](#) are still experimental technologies and it is difficult to envision a short-term adoption by SMEs without expensive testing and adaptations. Similarly, [The Waste Transformers: give a value to food waste](#) offer an innovative way to turn food waste into energy and fertilizer. However, its replicability for smaller SMEs remains challenging unless integrated as a shared solution among partnering businesses.

Less capital-intensive solutions, such as [Nudging sustainability in staff and customers through serious games](#), still require adaptation to an SME's specific context and objectives. However, they are more approachable in the short term by tourism SMEs and can help them take the first steps towards a green and digital transition.

As evident from the outcomes of the interviews, the Netherlands' sustainability landscape stresses the importance of accessible and cost-effective solutions tailored to the operational realities of SMEs. Innovations need to consider financial and bureaucratic barriers, while ensuring adaptability and shared adoption to foster a broader green and digital transition

### 3.8.4. AAT Self-Assessment insights

The CRT AAT platform was used by 20 Dutch SMEs, self-assessing their current and future (expected) situation in relation to a set of indicators organized in 3 macro areas and 2 sub-topics for each macro-areas:

- Readiness for green innovation
  - Green Strategic Orientation
  - Green Innovation Capabilities
- Readiness for digital innovation
  - Digital Strategic Orientation
  - Digital Innovation Capabilities
- Current sustainable operation capacities

- Sustainable capacities in the 6 CRT Key Business areas
- Capacities in nudging clients and staff towards sustainability and reaching new sustainable and inclusive markets

The chart below (Figure 3.8) provides a visual representation of aggregate results for Dutch SMEs, giving an idea of how participating SMEs are performing in the mentioned macro-areas and sub-topics. Here below some specific insights:

**Best-Performing Metric (Present): Green strategic orientation.** The Dutch companies reported a strong strategic orientation toward green innovation, which is higher than their orientation toward digital innovation. This strong foundation reveals a clear commitment to sustainable practices, which is also visible in their current operations.

**Biggest Shift to Future: Green Innovation Capabilities.** The largest future shift is expected in terms of green innovation capabilities, indicating that Dutch SMEs aim to leverage their strong strategic orientation to green innovation to further improve their sustainable practices, also through new technologies and eco-friendly products or services.

**Future Goals:** By focusing on green innovation, SMEs in the Netherlands plan to further integrate sustainability into their business models. This shift suggests a commitment to pioneering eco-friendly solutions that can contribute to both environmental goals and competitive advantage. Dutch SMEs also seem to have strong ambitions in terms of nudging customers and staff towards sustainability and increasing their efforts in reaching out to sustainable and inclusive markets.

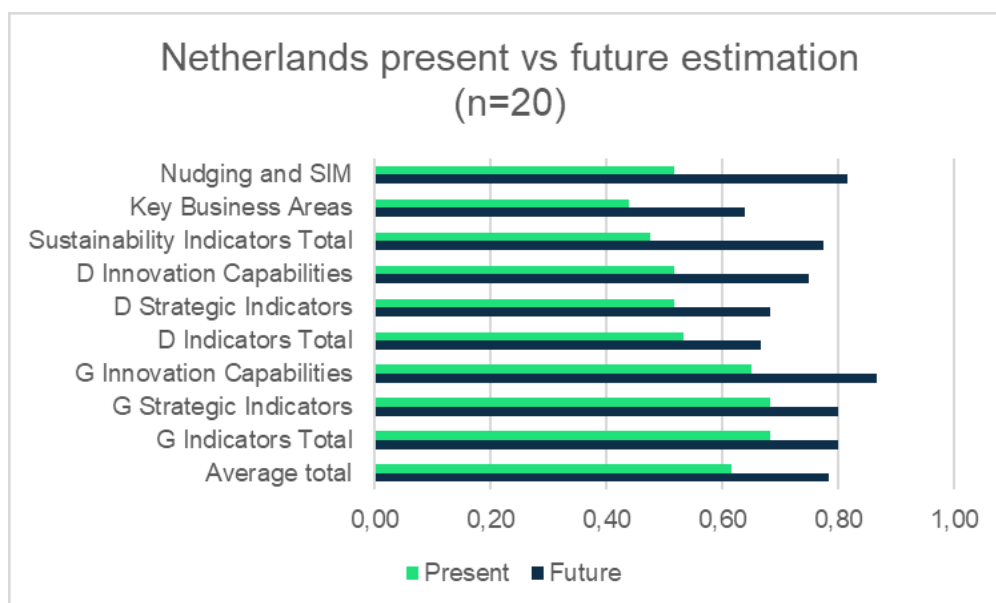


Figure 3.8: AAT Dutch SMEs: assessed current situation VS future estimation



### 3.8.5. Recommendations for SMEs

For Dutch tourism SMEs, embracing the green and digital transition is a critical step toward ensuring the long-term sustainability and competitiveness of their business in an evolving market. Dutch SMEs have the advantage of being embedded in a national system that is often at the forefront of sustainability transition. Nevertheless, financial limitation, lack of knowledge and technical capabilities, and operational constraints are limiting the adoption of green and digital innovations by tourism SMEs.

As mentioned in the previous section, Dutch tourism SMEs reported a strong strategic orientation toward green innovation. This orientation should be further developed to embed green and digital innovation into the company's culture, for example, through staff training and engagement. A well-informed, engaged, and motivated workforce is key to effectively adopting sustainable practices. Realistic and measurable sustainability goals (e.g., reducing energy consumption, minimizing waste, etc.) should be communicated and shared with staff, fostering commitment and joint responsibility.

SMEs should also use digital tools to streamline operations, improve resource management, and gain insights into environmental performance. Digitalization, for instance, can optimize processes and reduce unnecessary resource usage while still maintaining outstanding customer service.

Collaboration can amplify the impact of these efforts. SMEs in close proximity or serving similar markets can share resources, knowledge, and infrastructure to overcome common challenges like financial constraints or limited expertise. Joining regional networks or sustainability initiatives can provide additional support, funding opportunities, and access to best practices.

To achieve a successful transition, SMEs that are unfamiliar with green and digital innovation should start with small steps and focus on achievable goals. By building up expertise and knowledge over time, they can pursue more ambitious sustainability initiatives.

Finally, communicating sustainability efforts to customers and stakeholders is essential. Eco-conscious travellers increasingly value businesses that prioritize sustainability. Transparent messaging and visible green practices can strengthen brand reputation, loyalty, and attract a new segment of environmentally conscious customers.

### 3.8.6. Possible solutions at the political level

Financial constraints are a significant barrier for SMEs to embrace green and digital transition. Public funding mechanisms, such as subsidies, low-interest loans, or tax benefits, can help and support SMEs in adopting more complex sustainable technologies that benefit the community and the environment. This will also support the entire Country in achieving internationally agreed-upon obligations in terms of environmental practices and targets.

To achieve this, simplifying grant applications and reducing bureaucratic barriers can facilitate access to such financial support, especially for smaller businesses with limited resources and capabilities.

Policy measures should also prioritize knowledge-sharing platforms and training programs. Many tourism SMEs lack the technical capacity to implement sustainable practices effectively. By providing funded workshops, digital tools, and on-site consultancy, governments can empower businesses with the skills and knowledge to embrace green and digital transitions. Partnerships with innovators, research institutions, and larger companies could further facilitate the transfer of best practices and technologies.

## 4. List of innovations: KBA and TBA

This chapter provides tables with lists of the mapped innovations, grouped by the CRT Key Business Area (KBA) and Transversal Business Area (TBA) they are associated with. The same innovation can be associated with more KBA/TBA, therefore it might appear multiple times in the following tables. By clicking on the name of each innovation, the reader can access a web page with more information on that specific innovation/solution.

For each innovation, the following tables also include an indication of:

- The Country where the solution was mapped
- The innovation/solution provider
- The assessment of the innovation, in terms of:
  - Novelty of the innovation within the tourism industry (NOV)
  - Impact on the sustainability of SMEs business operations (IMP)
  - Complexity of implementation (COM)
  - Scalability, Adaptability and Replicability (SAR)

### 4.1. Key Business Area 'Water' List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
<a href="#">A Sustainability Management Platform to maximise hotels' resource savings</a>	Germany	Avanera	M-L	M-H	M-L	M-H
<a href="#">Self-sufficient stationary eco-toilets</a>	Germany	EcoToiletten	M-H	M-L	M-L	M-H
<a href="#">Environmentally friendly sewage pipe cleaning</a>	Latvia	Happy Fish	M-H	M-L	M-L	M-H
<a href="#">Near Waterless Laundry system</a>	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
<a href="#">Sustainable kitchenware cleaning</a>	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
<a href="#">Smart Water Genie (SWG): prevent water waste</a>	Malta	SmartGenie Ltd	M-H	M-L	M-L	M-H
<a href="#">Using water filters to get clean drinking water from the tap</a>	Malta	Eco Pro by TAPP Water	M-L	M-L	M-L	M-H
<a href="#">Innovative technologies for hot water and steam generation</a>	Malta	Ecotherm by MI Select	M-H	M-H	M-L	M-H
<a href="#">Bio Toilets: providing off-grid settlements with sanitary facilities</a>	Montenegro	Panarchy research, Borplastika & Ecoplast	M-L	M-L	M-H	M-L
<a href="#">Camping Service Points in rural areas</a>	Montenegro	Camping Association Montenegro	M-H	M-H	M-L	M-L

<b>Certification scheme to promote sustainable business operations</b>	Montenegro	Green Destination	M-L	M-H	M-H	M-H
<b>BioBlu System: collecting and re-using rainwater</b>	Montenegro	Eco Nova	M-H	M-H	M-H	M-L
<b>Waterless toilets for off-grid settlements</b>	Montenegro	Separett AB	M-H	M-L	M-H	M-H
<b>Reduce waste of water dispensed at undesired temperature</b>	Portugal	Aqva More	M-H	M-H	M-L	M-H
<b>Smart irrigation management software</b>	Portugal	Hidrosoph	M-H	M-L	M-H	M-L
<b>Automate and optimize water usage for irrigation</b>	Portugal	Trigger Systems	M-H	M-L	M-H	M-L
<b>Healthy aquatic ecosystems</b>	Portugal	Bluemater	M-H	M-L	M-L	M-L
<b>Planet Positive Event: Assess the sustainability of events</b>	Slovenia	Toleranca Marketing	M-H	M-L	M-L	M-H
<b>Green Direction: sustainable cleaning practices</b>	Slovenia	Barjans, obvladovanje čistoče	M-L	M-L	M-L	M-H
<b>Improve resource efficiency by using a staff collaboration platform</b>	Slovenia	Flexkeeping by Creatriks	M-H	M-L	M-L	M-L
<b>Water-saving tap device to reduce water waste</b>	Spain	AquaReturn	M-H	M-H	M-L	M-H
<b>Smart Water Management Platform leveraging IoT</b>	Spain	Bitagua WDNA	M-H	M-H	M-L	M-H
<b>Advanced Water Management Solutions using IoT</b>	Spain	Fluidra	M-H	M-H	M-L	M-H
<b>Telemetry digital systems for efficient water management</b>	Spain	Contazara	M-L	M-L	M-L	M-H
<b>Smart and efficient laundry solutions</b>	Spain	Girbau	M-L	M-L	M-L	M-L
<b>An assisted pathway towards sustainability in the food industry</b>	Spain	EcoCook by Biolia	M-L	M-H	M-H	M-L
<b>Hydraloop: In-house water recycling systems</b>	The Netherlands	Hydraloop	M-H	M-H	M-L	M-H
<b>Reduce energy consumption by recovering heat from wastewater</b>	The Netherlands	De Warmte	M-H	M-L	M-L	M-L

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## 4.2. Key Business Area: Energy – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Sustainability Management Platform to maximise hotels' resource savings	Germany	Avanera	M-L	M-H	M-L	M-H
Circular Living: a climate-friendly hotel room concept	Germany	Fritz Schlecht	M-H	M-L	M-H	M-L
Self-sufficient stationary eco-toilets	Germany	EcoToiletten	M-H	M-L	M-L	M-H
Using seaweed as insulation material	Germany	Seegrashandel	M-H	M-L	M-L	M-L
Machine Learning Technology for Smart energy usage	Latvia	Peaksave	M-H	M-H	M-H	M-H
Ecowool as thermal insulation material	Latvia	Balticfloc	M-H	M-L	M-L	M-L
Autonomous Robotic Kitchen System	Latvia	RoboEatz	M-H	M-H	M-H	M-L
Near Waterless Laundry system	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
Sustainable kitchenware cleaning	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
Energy and carbon management digital platform	Malta	ClearVUE	M-H	M-H	M-L	M-H
Innovative technologies for hot water and steam generation	Malta	Ecotherm by MI Select	M-H	M-H	M-L	M-H
Solar-powered water heating in off-grid settlements	Montenegro	Panarchy & Elektrovod	M-L	M-H	M-L	M-H
Certification scheme to promote sustainable business operations	Montenegro	Green Destination	M-L	M-H	M-H	M-H
SunChef Solar Oven	Montenegro	Metalac Market	M-H	M-L	M-L	M-H
IT-based tools to improve resource efficiency and sustainability	Montenegro	Montora	M-H	M-H	M-H	M-H
Reduce waste of water dispensed at undesired temperature	Portugal	Aqva More	M-H	M-H	M-L	M-H
Smart irrigation management software	Portugal	Hidrosoph	M-H	M-L	M-H	M-L
Digital platform to manage and monitor the energy consumption	Portugal	Smartwatt	M-L	M-H	M-L	M-H
Automate and optimize water usage for irrigation	Portugal	Trigger Systems	M-H	M-L	M-H	M-L
AI-driven Virtual Energy Manager	Portugal	Watt-Is	M-H	M-H	M-L	M-H

<b>iQwood eco-friendly wood construction system</b>	Slovenia	iQwood	M-L	M-L	M-H	M-H
<b>Planet Positive Event: Assess the sustainability of events</b>	Slovenia	Toleranca Marketing	M-H	M-L	M-L	M-H
<b>Green Direction: sustainable cleaning practices</b>	Slovenia	Barjans, obvladovanje čistoče, d.o.o.	M-L	M-L	M-L	M-H
<b>Comprehensive energy solutions for sustainable hospitality</b>	Slovenia	Resalta	M-L	M-H	M-H	M-L
<b>Eco-friendly glamping cabins</b>	Slovenia	Lushna	M-L	M-L	M-L	M-H
<b>Improve resource efficiency by using a staff collaboration platform</b>	Slovenia	Flexkeeping by Creatriks	M-H	M-L	M-L	M-L
<b>Renewable Energy Communities</b>	Spain	Zenit Solar	M-H	M-H	M-H	M-L
<b>Smart Energy Management System using AI and IoT</b>	Spain	Managing the Intelligence – Smart Room	M-H	M-H	M-H	M-H
<b>Water-saving tap device to reduce water waste</b>	Spain	AquaReturn	M-H	M-H	M-L	M-H
<b>Advanced Water Management Solutions using IoT</b>	Spain	Fluidra	M-H	M-H	M-L	M-H
<b>Energy efficient indoor climate control using IoT</b>	Spain	Trane Technologies	M-H	M-L	M-L	M-H
<b>Smart and efficient laundry solutions</b>	Spain	Girbau	M-L	M-L	M-L	M-L
<b>An assisted pathway towards sustainability in the food industry</b>	Spain	EcoCook by Biolia	M-L	M-H	M-H	M-L
<b>Hydraloop: In-house water recycling systems</b>	The Netherlands	Hydraloop	M-H	M-H	M-L	M-H
<b>Heat Battery ensuring gas-free heating all year round</b>	The Netherlands	CESAR Bulk Energy Storage	M-H	M-L	M-H	M-L
<b>The Waste Transformers: give a value to food waste</b>	The Netherlands	The Waste Transformers	M-L	M-H	M-H	M-L
<b>Powering low-energy devices with plant-generated electricity</b>	The Netherlands	Plant-E BV	M-H	M-L	M-L	M-H
<b>Blue Energy: creating electricity from fresh and salt water</b>	The Netherlands	REDstack	M-H	M-H	M-H	M-L
<b>Reduce energy consumption by recovering heat from wastewater</b>	The Netherlands	De Warmte	M-H	M-L	M-L	M-L
<b>Passive Construction: a building approach focused on energy efficiency</b>	The Netherlands	Stichting PassiefBouwen	M-H	M-H	M-H	M-L
<b>AI-supported software for advancing buildings decarbonization</b>	The Netherlands	Next Sense	M-H	M-H	M-H	M-H

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### 4.3. Key Business Area: Transport – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Mosphera Electric Scooters to enhance exploring opportunities	Latvia	Global Wolf Motors	M-H	M-H	M-L	M-H
Electric Mobility Solutions for logistics & outdoor activities	Latvia	Bruntor	M-H	M-H	M-L	M-L
Electric amphibious vehicle for land & water explorations	Latvia	BeTriton	M-H	M-H	M-L	M-L
Bamboo Bicycles for sustainable mobility	Portugal	bam•bu bicycles	M-H	M-L	M-L	M-H
Fostering sustainability through Corporate Social Responsibility projects	Portugal	Sair da Casca	M-L	M-H	M-L	M-H
AI-driven personalized digital guides	Slovenia	Giro Car Share	M-H	M-L	M-H	M-L
App to create connected mobility ecosystem	Spain	Meep	M-L	M-L	M-H	M-L
Using nudging and gamification to influence commuting behaviour	The Netherlands	Fynch	M-L	M-L	M-L	M-H

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### 4.4. Key Business Area: Food – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Kitchen Cooking Robotics: A fully autonomous kitchen ecosystem	Germany	CIRCUS Group	M-H	M-H	M-H	M-L
Best practices to reduce food waste	Germany	United Against Waste	M-L	M-H	M-L	M-H
Recycling coffee waste into sustainable products	Latvia	Koffeco	M-H	M-L	M-L	M-H
Autonomous Robotic Kitchen System	Latvia	RoboEatz	M-H	M-H	M-H	M-L
Applying oil filters to extend the life of cooking oil	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
Paperless Smart Kitchen automated HACCP plan	Malta	Memcon Solutions	M-H	M-H	M-H	M-L
Community Corporate Garden	Portugal	Noocity	M-H	M-L	M-L	M-L
Fostering sustainability through Corporate Social Responsibility projects	Portugal	Sair da Casca	M-L	M-H	M-L	M-H

<b>Planet Positive Event: Assess the sustainability of events</b>	Slovenia	Toleranca Marketing	M-H	M-L	M-L	M-H
<b>Bokashi composting solutions for organic waste management</b>	Slovenia	Plastika Skaza	M-H	M-H	M-L	M-H
<b>App to reduce food waste by connecting food providers &amp; consumers</b>	Slovenia	Kročnik	M-H	M-L	M-L	M-H
<b>AI-based system for food waste reduction and composting</b>	Spain	Effiwaste	M-H	M-H	M-L	M-H
<b>An assisted pathway towards sustainability in the food industry</b>	Spain	EcoCook by Biolia	M-L	M-H	M-H	M-L
<b>The Waste Transformers: give a value to food waste</b>	The Netherlands	The Waste Transformers	M-L	M-H	M-H	M-L
<b>Automated food waste monitoring system</b>	The Netherlands	Orbisk	M-H	M-L	M-L	M-H

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## 4.5. Key Business Area: Plastic – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
<b>Implementing a 'Cradle to Cradle' design concept</b>	Germany	Braungart EPEA	M-H	M-H	M-H	M-L
<b>ReCup: an integrated network for reusable cups and bowls</b>	Germany	reCup	M-L	M-H	M-L	M-H
<b>Circular Living: a climate-friendly hotel room concept</b>	Germany	Fritz Schlecht	M-H	M-L	M-H	M-L
<b>Eco-friendly biodegradable clothing hangers</b>	Latvia	Trepel	M-L	M-L	M-L	M-H
<b>Restoring and upcycling old furniture</b>	Latvia	Pavasara Mēbeles	M-L	M-L	M-L	M-L
<b>CHUM - compostable &amp; eatable tableware</b>	Latvia	Dabas Trauks	M-H	M-L	M-L	M-H
<b>Autonomous Robotic Kitchen System</b>	Latvia	RoboEatz	M-H	M-H	M-H	M-L
<b>Eco-friendly packaging solutions</b>	Malta	InServ	M-L	M-L	M-L	M-H
<b>Using water filters to get clean drinking water from the tap</b>	Malta	Eco Pro by TAPP Water	M-L	M-L	M-L	M-H
<b>Eco-Board outdoor furniture made of recycled plastic</b>	Montenegro	Ekodaska powered by 3D Soba	M-H	M-L	M-L	M-H
<b>Certification scheme to promote sustainable business operations</b>	Montenegro	Green Destination	M-L	M-H	M-H	M-H
<b>AI-powered smart waste management system</b>	Montenegro	Bin-e Smart Waste Bins	M-H	M-L	M-L	M-L



<b>Implementing measures to reduce plastic waste</b>	Montenegro	Zero Waste Montenegro and CZIP	M-L	M-H	M-L	M-L
<b>Sustainable plastic packaging</b>	Portugal	Logoplaste	M-L	M-L	M-L	M-H
<b>App-based reusable food packaging system</b>	Portugal	Ecoceno	M-H	M-H	M-L	M-L
<b>Heritage-inspired sustainable furniture</b>	Portugal	DAM Portugal	M-L	M-L	M-L	M-L
<b>Transforming waste into valuable products</b>	Portugal	Flowco Lab	M-H	M-H	M-H	M-H
<b>Sustainable footwear for guests</b>	Slovenia	Kaaita	M-L	M-L	M-L	M-H
<b>Circular LAB: Develop and implement circular economy solutions</b>	Slovenia	Zavod Knof	M-L	M-H	M-H	M-L
<b>Planet Positive Event: Assess the sustainability of events</b>	Slovenia	Toleranca Marketing	M-H	M-L	M-L	M-H
<b>Eco-friendly packaging solutions for food &amp; beverage</b>	Spain	ITC Packaging	M-L	M-L	M-L	M-H
<b>Replacing plastic items in outdoor areas with biobased products</b>	The Netherlands	Natural Plastics International	M-L	M-L	M-L	M-H

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## 4.6. Key Business Area: Furniture & Equipment – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
<b>Kitchen Cooking Robotics: A fully autonomous kitchen ecosystem</b>	Germany	CIRCUS Group	M-H	M-H	M-H	M-L
<b>Implementing a 'Cradle to Cradle' design concept</b>	Germany	Braungart EPEA	M-H	M-H	M-H	M-L
<b>Circular Living: a climate-friendly hotel room concept</b>	Germany	Fritz Schlecht	M-H	M-L	M-H	M-L
<b>Using seaweed as insulation material</b>	Germany	Seegrashandel	M-H	M-L	M-L	M-L
<b>Eco-friendly seaweed pillows</b>	Germany	Strandmanufaktur	M-H	M-L	M-L	M-L
<b>Restoring and upcycling old furniture</b>	Latvia	Pavasara Mēbeles	M-L	M-L	M-L	M-L
<b>Ecowool as thermal insulation material</b>	Latvia	Balticfloc	M-H	M-L	M-L	M-L
<b>Autonomous Robotic Kitchen System</b>	Latvia	RoboEatz	M-H	M-H	M-H	M-L
<b>Innovative materials for sustainable mattresses</b>	Malta	Smart Material	M-H	M-L	M-L	M-H

Eco-Board outdoor furniture made of recycled plastic	Montenegro	Ekodaska powered by 3D Soba	M-H	M-L	M-L	M-H
SunChef Solar Oven	Montenegro	Metalac Market	M-H	M-L	M-L	M-H
AI-powered smart waste management system	Montenegro	Bin-e Smart Waste Bins	M-H	M-L	M-L	M-L
Waterless toilets for off-grid settlements	Montenegro	Separett AB	M-H	M-L	M-H	M-H
Heritage-inspired sustainable furniture	Portugal	DAM Portugal	M-L	M-L	M-L	M-L
Transforming waste into valuable products	Portugal	Flowco Lab	M-H	M-H	M-H	M-H
iQwood eco-friendly wood construction system	Slovenia	iQwood	M-L	M-L	M-H	M-H
Circular LAB: Develop and implement circular economy solutions	Slovenia	Zavod Knof	M-L	M-H	M-H	M-L
Eco-friendly glamping cabins	Slovenia	Lushna	M-L	M-L	M-L	M-H
Passive Construction: a building approach focused on energy efficiency	The Netherlands	Stichting PassiefBouwen	M-H	M-H	M-H	M-L
Replacing plastic items in outdoor areas with biobased products	The Netherlands	Natural Plastics International	M-L	M-L	M-L	M-H

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## 4.7. Transversal Business Area: Staff Nudging- List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Using 'gaming' to enhance HR practices	Germany	lvup!HR	M-H	M-H	M-L	M-L
Property Management System for Holiday Homes	Germany	vOFFICE	M-L	M-L	M-L	M-H
Sustainability Management Platform to maximise hotels' resource savings	Germany	Avanera	M-L	M-H	M-L	M-H
Best practices to reduce food waste	Germany	United Against Waste	M-L	M-H	M-L	M-H
SDG-Scouts Training employees on sustainability	Germany	B.A.U.M.	M-H	M-H	M-L	M-H
Engaging and educational activities to nudge staff & customers towards sustainability	Latvia	ieber.lv & Efectio	M-H	M-L	M-L	M-H
Certification scheme to promote sustainable business operations	Montenegro	Green Destination	M-L	M-H	M-H	M-H
IT-based tools to improve resource efficiency and sustainability	Montenegro	Montora	M-H	M-H	M-H	M-H

<b>Implementing measures to reduce plastic waste</b>	Montenegro	Zero Waste Montenegro and CZIP	M-L	M-H	M-L	M-L
<b>Digital platform to manage and monitor the energy consumption</b>	Portugal	Smartwatt	M-L	M-H	M-L	M-H
<b>AI-driven Virtual Energy Manager</b>	Portugal	Watt-Is	M-H	M-H	M-L	M-H
<b>Community Corporate Garden</b>	Portugal	Noocity	M-H	M-L	M-L	M-L
<b>Fostering sustainability through Corporate Social Responsibility projects</b>	Portugal	Sair da Casca	M-L	M-H	M-L	M-H
<b>Green Direction: sustainable cleaning practices</b>	Slovenia	Barjans, obvladovanje čistoče, d.o.o.	M-L	M-L	M-L	M-H
<b>Improve resource efficiency by using a staff collaboration platform</b>	Slovenia	Flexkeeping by Creatriks	M-H	M-L	M-L	M-L
<b>Smart Water Management Platform leveraging IoT</b>	Spain	Bitagua WDNA	M-H	M-H	M-L	M-H
<b>An assisted pathway towards sustainability in the food industry</b>	Spain	EcoCook by Biolia	M-L	M-H	M-H	M-L
<b>Nudging sustainability in staff and customers through serious games</b>	The Netherlands	Businessgames	M-H	M-H	M-L	M-L
<b>AI-supported software for advancing buildings decarbonization</b>	The Netherlands	Next Sense	M-H	M-H	M-H	M-H
<b>Automated food waste monitoring system</b>	The Netherlands	Orbisk	M-H	M-L	M-L	M-H
<b>Using nudging and gamification to influence commuting behaviour</b>	The Netherlands	Fynch	M-L	M-L	M-L	M-H

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## 4.8. Transversal Business Area: Client Nudging– List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
<b>Property Management System for Holiday Homes</b>	Germany	vOFFICE	M-L	M-L	M-L	M-H
<b>ReCup: an integrated network for reusable cups and bowls</b>	Germany	reCup	M-L	M-H	M-L	M-H
<b>Mosphera Electric Scooters to enhance exploring opportunities</b>	Latvia	Global Wolf Motors	M-H	M-H	M-L	M-H
<b>Engaging and educational activities to nudge staff &amp; customers towards sustainability</b>	Latvia	ieber.lv & Efectio	M-H	M-L	M-L	M-H
<b>Using real-time customer insights to foster sustainability</b>	Malta	Hotjar by Contentsquare	M-L	M-H	M-H	M-L
<b>Using a loyalty platform to encourage sustainable choices</b>	Malta	Loyale	M-H	M-H	M-H	M-L

Camping Service Points in rural areas	Montenegro	Camping Association Montenegro	M-H	M-H	M-L	M-L
Incorporating sustainability nudges into AR experiences	Montenegro	PastView by Sebka Technology	M-H	M-L	M-H	M-H
AI-driven Virtual Energy Manager	Portugal	Watt-Is	M-H	M-H	M-L	M-H
App-based reusable food packaging system	Portugal	Ecoceno	M-H	M-H	M-L	M-L
Fostering sustainability through Corporate Social Responsibility projects	Portugal	Sair da Casca	M-L	M-H	M-L	M-H
AI-driven personalized digital guides	Slovenia	Giro Car Share	M-H	M-L	M-H	M-L
Sustainable footwear for guests	Slovenia	Kaaita	M-L	M-L	M-L	M-H
Bokashi composting solutions for organic waste management	Slovenia	Plastika Skaza	M-H	M-H	M-L	M-H
App to reduce food waste by connecting food providers & consumers	Slovenia	Kročnik	M-H	M-L	M-L	M-H
Using gamified experiences to stimulate sustainable choices	Slovenia	Nexto	M-H	M-H	M-H	M-L
Smart Energy Management System using AI and IoT	Spain	Managing the Intelligence – Smart Room	M-H	M-H	M-H	M-H
App to create connected mobility ecosystem	Spain	Meep	M-L	M-L	M-H	M-L
Nudging sustainability in staff and customers through serious games	The Netherlands	Businessgames	M-H	M-H	M-L	M-L
AI-supported software for advancing buildings decarbonization	The Netherlands	Next Sense	M-H	M-H	M-H	M-H

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## 4.9. Transversal Business Area: Sustainable & Inclusive Markets – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
ReCup: an integrated network for reusable cups and bowls	Germany	reCup	M-L	M-H	M-L	M-H
CHUM - compostable & eatable tableware	Latvia	Dabas Trauks	M-H	M-L	M-L	M-H
Electric amphibious vehicle for land & water explorations	Latvia	BeTriton	M-H	M-H	M-L	M-L
Eco-friendly packaging solutions	Malta	InServ	M-L	M-L	M-L	M-H

<b>Digital tools to enhance your online sustainability reputation</b>	Malta	Polzify	M-H	M-L	M-H	M-L
<b>Using real-time customer insights to foster sustainability</b>	Malta	Hotjar by Contentsquare	M-L	M-H	M-H	M-L
<b>Using a loyalty platform to encourage sustainable choices</b>	Malta	Loyale	M-H	M-H	M-H	M-L
<b>Camping Service Points in rural areas</b>	Montenegro	Camping Association Montenegro	M-H	M-H	M-L	M-L
<b>Certification scheme to promote sustainable business operations</b>	Montenegro	Green Destination	M-L	M-H	M-H	M-H
<b>Waterless toilets for off-grid settlements</b>	Montenegro	Separett AB	M-H	M-L	M-H	M-H
<b>Incorporating sustainability nudges into AR experiences</b>	Montenegro	PastView by Sebka Technology	M-H	M-L	M-H	M-H
<b>Implementing measures to reduce plastic waste</b>	Montenegro	Zero Waste Montenegro and CZIP	M-L	M-H	M-L	M-L
<b>Bamboo Bicycles for sustainable mobility</b>	Portugal	bam•bu bicycles	M-H	M-L	M-L	M-H
<b>App-based reusable food packaging system</b>	Portugal	Ecoceno	M-H	M-H	M-L	M-L
<b>Fostering sustainability through Corporate Social Responsibility projects</b>	Portugal	Sair da Casca	M-L	M-H	M-L	M-H
<b>Heritage-inspired sustainable furniture</b>	Portugal	DAM Portugal	M-L	M-L	M-L	M-L
<b>Eco-friendly glamping cabins</b>	Slovenia	Lushna	M-L	M-L	M-L	M-H
<b>Using gamified experiences to stimulate sustainable choices</b>	Slovenia	Nexto	M-H	M-H	M-H	M-L
<b>Nudging sustainability in staff and customers through serious games</b>	The Netherlands	Businessgames	M-H	M-H	M-L	M-L

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## 5. List of innovations: SMEs' challenges

This chapter provides tables with lists of the mapped innovations grouped by the SMEs' challenges that innovations may help to address. The considered set of possible challenges is based on the outcome of CRT WP2 activities and results, such as the Online Dialogue. Since the same innovation can be associated with more challenges, it might appear multiple times in the following tables. By clicking on the name of each innovation, the reader can access a web page with more information on that specific innovation/solution.

For each innovation, the following tables also include an indication of:

- The Country where the solution was mapped
- The innovation/solution provider
- The assessment of the innovation, in terms of:
  - Novelty of the innovation within the tourism industry (NOV)
  - Impact on the sustainability of SMEs business operations (IMP)
  - Complexity of implementation (COM)
  - Scalability, Adaptability and replicability (SAR)

### 5.1. Challenge: Resource Efficiency – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Property Management System for Holiday Homes	Germany	vOFFICE	M-L	M-L	M-L	M-H
Sustainability Management Platform to maximise hotels' resource savings	Germany	Avanera	M-L	M-H	M-L	M-H
Kitchen Cooking Robotics: A fully autonomous kitchen ecosystem	Germany	CIRCUS Group	M-H	M-H	M-H	M-L
Circular Living: a climate-friendly hotel room concept	Germany	Fritz Schlecht	M-H	M-L	M-H	M-L
Self-sufficient stationary eco-toilets	Germany	EcoToiletten	M-H	M-L	M-L	M-H
Mosphera Electric Scooters to enhance exploring opportunities	Latvia	Global Wolf Motors	M-H	M-H	M-L	M-H
Machine Learning Technology for Smart energy usage	Latvia	Peaksave	M-H	M-H	M-H	M-H
Electric Mobility Solutions for logistics & outdoor activities	Latvia	Bruntor	M-H	M-H	M-L	M-L

<b>Electric amphibious vehicle for land &amp; water explorations</b>	Latvia	BeTriton	M-H	M-H	M-L	M-L
<b>Autonomous Robotic Kitchen System</b>	Latvia	RoboEatz	M-H	M-H	M-H	M-L
<b>Applying oil filters to extend the life of cooking oil</b>	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
<b>Near Waterless Laundry system</b>	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
<b>Sustainable kitchenware cleaning</b>	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
<b>Smart Water Genie (SWG): prevent water waste</b>	Malta	SmartGenie Ltd	M-H	M-L	M-L	M-H
<b>Paperless Smart Kitchen automated HACCP plan</b>	Malta	Memcon Solutions	M-H	M-H	M-H	M-L
<b>Using water filters to get clean drinking water from the tap</b>	Malta	Eco Pro by TAPP Water	M-L	M-L	M-L	M-H
<b>Energy and carbon management digital platform</b>	Malta	ClearVUE	M-H	M-H	M-L	M-H
<b>Innovative technologies for hot water and steam generation</b>	Malta	Ecotherm by MI Select	M-H	M-H	M-L	M-H
<b>Camping Service Points in rural areas</b>	Montenegro	Camping Association Montenegro	M-H	M-H	M-L	M-L
<b>Solar-powered water heating in off-grid settlements</b>	Montenegro	Panarchy & Elektrovod	M-L	M-H	M-L	M-H
<b>Certification scheme to promote sustainable business operations</b>	Montenegro	Green Destination	M-L	M-H	M-H	M-H
<b>BioBlu System: collecting and re-using rainwater</b>	Montenegro	Eco Nova	M-H	M-H	M-H	M-L
<b>SunChef Solar Oven</b>	Montenegro	Metalac Market	M-H	M-L	M-L	M-H
<b>IT-based tools to improve resource efficiency and sustainability</b>	Montenegro	Montora	M-H	M-H	M-H	M-H
<b>Waterless toilets for off-grid settlements</b>	Montenegro	Separett AB	M-H	M-L	M-H	M-H
<b>Reduce waste of water dispensed at undesired temperature</b>	Portugal	Aqva More	M-H	M-H	M-L	M-H
<b>Smart irrigation management software</b>	Portugal	Hidrosoph	M-H	M-L	M-H	M-L
<b>Digital platform to manage and monitor the energy consumption</b>	Portugal	Smartwatt	M-L	M-H	M-L	M-H
<b>Automate and optimize water usage for irrigation</b>	Portugal	Trigger Systems	M-H	M-L	M-H	M-L
<b>AI-driven Virtual Energy Manager</b>	Portugal	Watt-Is	M-H	M-H	M-L	M-H
<b>iQwood eco-friendly wood construction system</b>	Slovenia	iQwood	M-L	M-L	M-H	M-H

<b>Green Direction: sustainable cleaning practices</b>	Slovenia	Barjans, obvladovanje čistoče, d.o.o.	M-L	M-L	M-L	M-H
<b>Comprehensive energy solutions for sustainable hospitality</b>	Slovenia	Resalta	M-L	M-H	M-H	M-L
<b>Eco-friendly glamping cabins</b>	Slovenia	Lushna	M-L	M-L	M-L	M-H
<b>Using gamified experiences to stimulate sustainable choices</b>	Slovenia	Nexto	M-H	M-H	M-H	M-L
<b>Improve resource efficiency by using a staff collaboration platform</b>	Slovenia	Flexkeeping by Creatriks	M-H	M-L	M-L	M-L
<b>Renewable Energy Communities</b>	Spain	Zenit Solar	M-H	M-H	M-H	M-L
<b>Smart Energy Management System using AI and IoT</b>	Spain	Managing the Intelligence – Smart Room	M-H	M-H	M-H	M-H
<b>Water-saving tap device to reduce water waste</b>	Spain	AquaReturn	M-H	M-H	M-L	M-H
<b>Smart Water Management Platform leveraging IoT</b>	Spain	Bitagua WDNA	M-H	M-H	M-L	M-H
<b>Advanced Water Management Solutions using IoT</b>	Spain	Fluidra	M-H	M-H	M-L	M-H
<b>Energy efficient indoor climate control using IoT</b>	Spain	Trane Technologies	M-H	M-L	M-L	M-H
<b>Telemetry digital systems for efficient water management</b>	Spain	Contazara	M-L	M-L	M-L	M-H
<b>Smart and efficient laundry solutions</b>	Spain	Girbau	M-L	M-L	M-L	M-L
<b>An assisted pathway towards sustainability in the food industry</b>	Spain	EcoCook by Biolia	M-L	M-H	M-H	M-L
<b>Hydraloop: In-house water recycling systems</b>	The Netherlands	Hydraloop	M-H	M-H	M-L	M-H
<b>Heat Battery ensuring gas-free heating all year round</b>	The Netherlands	CESAR Bulk Energy Storage	M-H	M-L	M-H	M-L
<b>Powering low-energy devices with plant-generated electricity</b>	The Netherlands	Plant-E BV	M-H	M-L	M-L	M-H
<b>Blue Energy: creating electricity from fresh and salt water</b>	The Netherlands	REDstack	M-H	M-H	M-H	M-L
<b>Reduce energy consumption by recovering heat from wastewater</b>	The Netherlands	De Warmte	M-H	M-L	M-L	M-L
<b>Passive Construction: a building approach focused on energy efficiency</b>	The Netherlands	Stichting PassiefBouwen	M-H	M-H	M-H	M-L
<b>AI-supported software for advancing buildings decarbonization</b>	The Netherlands	Next Sense	M-H	M-H	M-H	M-H
<b>Using nudging and gamification to influence commuting behaviour</b>	The Netherlands	Fynch	M-L	M-L	M-L	M-H

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## 5.2. Challenge: Adopting Circularity – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Implementing a 'Cradle to Cradle' design concept	Germany	Braungart EPEA	M-H	M-H	M-H	M-L
ReCup: an integrated network for reusable cups and bowls	Germany	reCup	M-L	M-H	M-L	M-H
Circular Living: a climate-friendly hotel room concept	Germany	Fritz Schlecht	M-H	M-L	M-H	M-L
Self-sufficient stationary eco-toilets	Germany	EcoToiletten	M-H	M-L	M-L	M-H
Using seaweed as insulation material	Germany	Seegrashandel	M-H	M-L	M-L	M-L
Eco-friendly seaweed pillows	Germany	Strandmanufaktur	M-H	M-L	M-L	M-L
Eco-friendly biodegradable clothing hangers	Latvia	Trempel	M-L	M-L	M-L	M-H
Restoring and upcycling old furniture	Latvia	Pavasara Mēbeles	M-L	M-L	M-L	M-L
Recycling coffee waste into sustainable products	Latvia	Koffeco	M-H	M-L	M-L	M-H
CHUM - compostable & eatable tableware	Latvia	Dabas Trauks	M-H	M-L	M-L	M-H
Ecowool as thermal insulation material	Latvia	Balticfloc	M-H	M-L	M-L	M-L
Eco-friendly packaging solutions	Malta	InServ	M-L	M-L	M-L	M-H
Using water filters to get clean drinking water from the tap	Malta	Eco Pro by TAPP Water	M-L	M-L	M-L	M-H
Innovative materials for sustainable mattresses	Malta	Smart Material	M-H	M-L	M-L	M-H
Eco-Board outdoor furniture made of recycled plastic	Montenegro	Ekodaska powered by 3D Soba	M-H	M-L	M-L	M-H
BioBlu System: collecting and re-using rainwater	Montenegro	Eco Nova	M-H	M-H	M-H	M-L
AI-powered smart waste management system	Montenegro	Bin-e Smart Waste Bins	M-H	M-L	M-L	M-L
Waterless toilets for off-grid settlements	Montenegro	Separett AB	M-H	M-L	M-H	M-H
Implementing measures to reduce plastic waste	Montenegro	Zero Waste Montenegro and CZIP	M-L	M-H	M-L	M-L
Sustainable plastic packaging	Portugal	Logoplaste	M-L	M-L	M-L	M-H

<b>Community Corporate Garden</b>	Portugal	Noocity	M-H	M-L	M-L	M-L
<b>Bamboo Bicycles for sustainable mobility</b>	Portugal	bam•bu bicycles	M-H	M-L	M-L	M-H
<b>App-based reusable food packaging system</b>	Portugal	Ecoceno	M-H	M-H	M-L	M-L
<b>Heritage-inspired sustainable furniture</b>	Portugal	DAM Portugal	M-L	M-L	M-L	M-L
<b>Transforming waste into valuable products</b>	Portugal	Flowco Lab	M-H	M-H	M-H	M-H
<b>Sustainable footwear for guests</b>	Slovenia	Kaaita	M-L	M-L	M-L	M-H
<b>Circular LAB: Develop and implement circular economy solutions</b>	Slovenia	Zavod Knof	M-L	M-H	M-H	M-L
<b>Bokashi composting solutions for organic waste management</b>	Slovenia	Plastika Skaza	M-H	M-H	M-L	M-H
<b>Eco-friendly packaging solutions for food &amp; beverage</b>	Spain	ITC Packaging	M-L	M-L	M-L	M-H
<b>AI-based system for food waste reduction and composting</b>	Spain	Effiwaste	M-H	M-H	M-L	M-H
<b>Hydraloop: In-house water recycling systems</b>	The Netherlands	Hydraloop	M-H	M-H	M-L	M-H
<b>The Waste Transformers: give a value to food waste</b>	The Netherlands	The Waste Transformers	M-L	M-H	M-H	M-L
<b>Powering low-energy devices with plant-generated electricity</b>	The Netherlands	Plant-E BV	M-H	M-L	M-L	M-H
<b>Reduce energy consumption by recovering heat from wastewater</b>	The Netherlands	De Warmte	M-H	M-L	M-L	M-L
<b>Replacing plastic items in outdoor areas with biobased products</b>	The Netherlands	Natural Plastics International	M-L	M-L	M-L	M-H

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### 5.3. Challenge: Waste Management – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
<b>Kitchen Cooking Robotics: A fully autonomous kitchen ecosystem</b>	Germany	CIRCUS Group	M-H	M-H	M-H	M-L
<b>Implementing a 'Cradle to Cradle' design concept</b>	Germany	Braungart EPEA	M-H	M-H	M-H	M-L
<b>Best practices to reduce food waste</b>	Germany	United Against Waste	M-L	M-H	M-L	M-H
<b>ReCup: an integrated network for reusable cups and bowls</b>	Germany	reCup	M-L	M-H	M-L	M-H

<b>Circular Living: a climate-friendly hotel room concept</b>	Germany	Fritz Schlecht	M-H	M-L	M-H	M-L
<b>Self-sufficient stationary eco-toilets</b>	Germany	EcoToiletten	M-H	M-L	M-L	M-H
<b>Using seaweed as insulation material</b>	Germany	Seegrashandel	M-H	M-L	M-L	M-L
<b>Eco-friendly seaweed pillows</b>	Germany	Strandmanufaktur	M-H	M-L	M-L	M-L
<b>Eco-friendly biodegradable clothing hangers</b>	Latvia	Trempel	M-L	M-L	M-L	M-H
<b>Restoring and upcycling old furniture</b>	Latvia	Pavasara Mēbeles	M-L	M-L	M-L	M-L
<b>Recycling coffee waste into sustainable products</b>	Latvia	Koffeco	M-H	M-L	M-L	M-H
<b>CHUM - compostable &amp; eatable tableware</b>	Latvia	Dabas Trauks	M-H	M-L	M-L	M-H
<b>Ecowool as thermal insulation material</b>	Latvia	Balticfloc	M-H	M-L	M-L	M-L
<b>Environmentally friendly sewage pipe cleaning</b>	Latvia	Happy Fish	M-H	M-L	M-L	M-H
<b>Autonomous Robotic Kitchen System</b>	Latvia	RoboEatz	M-H	M-H	M-H	M-L
<b>Applying oil filters to extend the life of cooking oil</b>	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
<b>Near Waterless Laundry system</b>	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
<b>Sustainable kitchenware cleaning</b>	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
<b>Paperless Smart Kitchen automated HACCP plan</b>	Malta	Memcon Solutions	M-H	M-H	M-H	M-L
<b>Eco-friendly packaging solutions</b>	Malta	InServ	M-L	M-L	M-L	M-H
<b>Using water filters to get clean drinking water from the tap</b>	Malta	Eco Pro by TAPP Water	M-L	M-L	M-L	M-H
<b>Innovative materials for sustainable mattresses</b>	Malta	Smart Material	M-H	M-L	M-L	M-H
<b>Bio Toilets: providing off-grid settlements with sanitary facilities</b>	Montenegro	Panarchy research, Borplastika & Ecoplast	M-L	M-L	M-H	M-L
<b>Camping Service Points in rural areas</b>	Montenegro	Camping Association Montenegro	M-H	M-H	M-L	M-L
<b>Eco-Board outdoor furniture made of recycled plastic</b>	Montenegro	Ekodaska powered by 3D Soba	M-H	M-L	M-L	M-H
<b>Certification scheme to promote sustainable business operations</b>	Montenegro	Green Destination	M-L	M-H	M-H	M-H

<b>AI-powered smart waste management system</b>	Montenegro	Bin-e Smart Waste Bins	M-H	M-L	M-L	M-L
<b>Waterless toilets for off-grid settlements</b>	Montenegro	Separett AB	M-H	M-L	M-H	M-H
<b>Incorporating sustainability nudges into AR experiences</b>	Montenegro	PastView by Sebka Technology	M-H	M-L	M-H	M-H
<b>Implementing measures to reduce plastic waste</b>	Montenegro	Zero Waste Montenegro and CZIP	M-L	M-H	M-L	M-L
<b>Sustainable plastic packaging</b>	Portugal	Logoplaste	M-L	M-L	M-L	M-H
<b>Reduce waste of water dispensed at undesired temperature</b>	Portugal	Aqva More	M-H	M-H	M-L	M-H
<b>Bamboo Bicycles for sustainable mobility</b>	Portugal	bam•bu bicycles	M-H	M-L	M-L	M-H
<b>App-based reusable food packaging system</b>	Portugal	Ecoceno	M-H	M-H	M-L	M-L
<b>Fostering sustainability through Corporate Social Responsibility projects</b>	Portugal	Sair da Casca	M-L	M-H	M-L	M-H
<b>Heritage-inspired sustainable furniture</b>	Portugal	DAM Portugal	M-L	M-L	M-L	M-L
<b>Transforming waste into valuable products</b>	Portugal	Flowco Lab	M-H	M-H	M-H	M-H
<b>iQwood eco-friendly wood construction system</b>	Slovenia	iQwood	M-L	M-L	M-H	M-H
<b>Sustainable footwear for guests</b>	Slovenia	Kaaita	M-L	M-L	M-L	M-H
<b>Circular LAB: Develop and implement circular economy solutions</b>	Slovenia	Zavod Knof	M-L	M-H	M-H	M-L
<b>Bokashi composting solutions for organic waste management</b>	Slovenia	Plastika Skaza	M-H	M-H	M-L	M-H
<b>App to reduce food waste by connecting food providers &amp; consumers</b>	Slovenia	Krožnik	M-H	M-L	M-L	M-H
<b>Water-saving tap device to reduce water waste</b>	Spain	AquaReturn	M-H	M-H	M-L	M-H
<b>Telemetering digital systems for efficient water management</b>	Spain	Contazara	M-L	M-L	M-L	M-H
<b>Eco-friendly packaging solutions for food &amp; beverage</b>	Spain	ITC Packaging	M-L	M-L	M-L	M-H
<b>AI-based system for food waste reduction and composting</b>	Spain	Effiwaste	M-H	M-H	M-L	M-H
<b>An assisted pathway towards sustainability in the food industry</b>	Spain	EcoCook by Biolia	M-L	M-H	M-H	M-L
<b>Hydraloop: In-house water recycling systems</b>	The Netherlands	Hydraloop	M-H	M-H	M-L	M-H
<b>The Waste Transformers: give a value to food waste</b>	The Netherlands	The Waste Transformers	M-L	M-H	M-H	M-L

Automated food waste monitoring system	The Netherlands	Orbisk	M-H	M-L	M-L	M-H
Replacing plastic items in outdoor areas with biobased products	The Netherlands	Natural Plastics International	M-L	M-L	M-L	M-H

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## 5.4. Challenge: Innovation Knowledge Gap – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Using 'gaming' to enhance HR practices	Germany	lvlp!HR	M-H	M-H	M-L	M-L
Implementing a 'Cradle to Cradle' design concept	Germany	Braungart EPEA	M-H	M-H	M-H	M-L
SDG-Scouts Training employees on sustainability	Germany	B.A.U.M.	M-H	M-H	M-L	M-H
Engaging and educational activities to nudge staff & customers towards sustainability	Latvia	ieber.lv & Efectio	M-H	M-L	M-L	M-H
Using real-time customer insights to foster sustainability	Malta	Hotjar by Contentsquare	M-L	M-H	M-H	M-L
Innovative technologies for hot water and steam generation	Malta	Ecotherm by MI Select	M-H	M-H	M-L	M-H
Certification scheme to promote sustainable business operations	Montenegro	Green Destination	M-L	M-H	M-H	M-H
Implementing measures to reduce plastic waste	Montenegro	Zero Waste Montenegro and CZIP	M-L	M-H	M-L	M-L
Community Corporate Garden	Portugal	Noocity	M-H	M-L	M-L	M-L
Fostering sustainability through Corporate Social Responsibility projects	Portugal	Sair da Casca	M-L	M-H	M-L	M-H
Planet Positive Event: Assess the sustainability of events	Slovenia	Toleranca Marketing	M-H	M-L	M-L	M-H
Comprehensive energy solutions for sustainable hospitality	Slovenia	Resalta	M-L	M-H	M-H	M-L
Renewable Energy Communities	Spain	Zenit Solar	M-H	M-H	M-H	M-L
An assisted pathway towards sustainability in the food industry	Spain	EcoCook by Biolia	M-L	M-H	M-H	M-L
Passive Construction: a building approach focused on energy efficiency	The Netherlands	Stichting PassiefBouwen	M-H	M-H	M-H	M-L
Nudging sustainability in staff and customers through serious games	The Netherlands	Businessgames	M-H	M-H	M-L	M-L

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## 5.5. Challenge: Technical Capacity – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Using 'gaming' to enhance HR practices	Germany	Ivluv!HR	M-H	M-H	M-L	M-L
Implementing a 'Cradle to Cradle' design concept	Germany	Braungart EPEA	M-H	M-H	M-H	M-L
Best practices to reduce food waste	Germany	United Against Waste	M-L	M-H	M-L	M-H
SDG-Scouts Training employees on sustainability	Germany	B.A.U.M.	M-H	M-H	M-L	M-H
Circular Living: a climate-friendly hotel room concept	Germany	Fritz Schlecht	M-H	M-L	M-H	M-L
Using seaweed as insulation material	Germany	Seegrashandel	M-H	M-L	M-L	M-L
Restoring and upcycling old furniture	Latvia	Pavasara Mēbeles	M-L	M-L	M-L	M-L
Recycling coffee waste into sustainable products	Latvia	Koffeco	M-H	M-L	M-L	M-H
Machine Learning Technology for Smart energy usage	Latvia	Peaksave	M-H	M-H	M-H	M-H
Engaging and educational activities to nudge staff & customers towards sustainability	Latvia	ieber.lv & Efectio	M-H	M-L	M-L	M-H
Environmentally friendly sewage pipe cleaning	Latvia	Happy Fish	M-H	M-L	M-L	M-H
Paperless Smart Kitchen automated HACCP plan	Malta	Memcon Solutions	M-H	M-H	M-H	M-L
Digital tools to enhance your online sustainability reputation	Malta	Polzify	M-H	M-L	M-H	M-L
Energy and carbon management digital platform	Malta	ClearVUE	M-H	M-H	M-L	M-H
Innovative technologies for hot water and steam generation	Malta	Ecotherm by MI Select	M-H	M-H	M-L	M-H
Bio Toilets: providing off-grid settlements with sanitary facilities	Montenegro	Panarchy research, Borplastika & Ecoplast	M-L	M-L	M-H	M-L
Solar-powered water heating in off-grid settlements	Montenegro	Panarchy & Elektrovod	M-L	M-H	M-L	M-H
IT-based tools to improve resource efficiency and sustainability	Montenegro	Montora	M-H	M-H	M-H	M-H
Incorporating sustainability nudges into AR experiences	Montenegro	PastView by Sebka Technology	M-H	M-L	M-H	M-H
Sustainable plastic packaging	Portugal	Logoplaste	M-L	M-L	M-L	M-H

<b>Reduce waste of water dispensed at undesired temperature</b>	Portugal	Aqva More	M-H	M-H	M-L	M-H
<b>Digital platform to manage and monitor the energy consumption</b>	Portugal	Smartwatt	M-L	M-H	M-L	M-H
<b>AI-driven Virtual Energy Manager</b>	Portugal	Watt-Is	M-H	M-H	M-L	M-H
<b>Fostering sustainability through Corporate Social Responsibility projects</b>	Portugal	Sair da Casca	M-L	M-H	M-L	M-H
<b>Transforming waste into valuable products</b>	Portugal	Flowco Lab	M-H	M-H	M-H	M-H
<b>AI-driven personalized digital guides</b>	Slovenia	Giro Car Share	M-H	M-L	M-H	M-L
<b>Planet Positive Event: Assess the sustainability of events</b>	Slovenia	Toleranca Marketing	M-H	M-L	M-L	M-H
<b>Bokashi composting solutions for organic waste management</b>	Slovenia	Plastika Skaza	M-H	M-H	M-L	M-H
<b>App to reduce food waste by connecting food providers &amp; consumers</b>	Slovenia	Kročnik	M-H	M-L	M-L	M-H
<b>Green Direction: sustainable cleaning practices</b>	Slovenia	Barjans, obvladovanje čistoče	M-L	M-L	M-L	M-H
<b>Comprehensive energy solutions for sustainable hospitality</b>	Slovenia	Resalta	M-L	M-H	M-H	M-L
<b>Eco-friendly glamping cabins</b>	Slovenia	Lushna	M-L	M-L	M-L	M-H
<b>Using gamified experiences to stimulate sustainable choices</b>	Slovenia	Nexto	M-H	M-H	M-H	M-L
<b>Improve resource efficiency by using a staff collaboration platform</b>	Slovenia	Flexkeeping by Creatriks	M-H	M-L	M-L	M-L
<b>Renewable Energy Communities</b>	Spain	Zenit Solar	M-H	M-H	M-H	M-L
<b>Smart Energy Management System using AI and IoT</b>	Spain	Managing the Intelligence – Smart Room	M-H	M-H	M-H	M-H
<b>Water-saving tap device to reduce water waste</b>	Spain	AquaReturn	M-H	M-H	M-L	M-H
<b>Smart Water Management Platform leveraging IoT</b>	Spain	Bitagua WDNA	M-H	M-H	M-L	M-H
<b>Advanced Water Management Solutions using IoT</b>	Spain	Fluidra	M-H	M-H	M-L	M-H
<b>Energy efficient indoor climate control using IoT</b>	Spain	Trane Technologies	M-H	M-L	M-L	M-H
<b>Telemetry digital systems for efficient water management</b>	Spain	Contazara	M-L	M-L	M-L	M-H
<b>App to create connected mobility ecosystem</b>	Spain	Meep	M-L	M-L	M-H	M-L
<b>AI-based system for food waste reduction and composting</b>	Spain	Effiwaste	M-H	M-H	M-L	M-H

An assisted pathway towards sustainability in the food industry	Spain	EcoCook by Biolia	M-L	M-H	M-H	M-L
Heat Battery ensuring gas-free heating all year round	The Netherlands	CESAR Bulk Energy Storage	M-H	M-L	M-H	M-L
The Waste Transformers: give a value to food waste	The Netherlands	The Waste Transformers	M-L	M-H	M-H	M-L
Powering low-energy devices with plant-generated electricity	The Netherlands	Plant-E BV	M-H	M-L	M-L	M-H
Blue Energy: creating electricity from fresh and salt water	The Netherlands	REDstack	M-H	M-H	M-H	M-L
Reduce energy consumption by recovering heat from wastewater	The Netherlands	De Warmte	M-H	M-L	M-L	M-L
Passive Construction: a building approach focused on energy efficiency	The Netherlands	Stichting PassiefBouwen	M-H	M-H	M-H	M-L
AI-supported software for advancing buildings decarbonization	The Netherlands	Next Sense	M-H	M-H	M-H	M-H
Automated food waste monitoring system	The Netherlands	Orbisk	M-H	M-L	M-L	M-H

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## 5.6. Challenge: Real Time Monitoring – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
ReCup: an integrated network for reusable cups and bowls	Germany	reCup	M-L	M-H	M-L	M-H
Mosphera Electric Scooters to enhance exploring opportunities	Latvia	Global Wolf Motors	M-H	M-H	M-L	M-H
CHUM - compostable & eatable tableware	Latvia	Dabas Trauks	M-H	M-L	M-L	M-H
Electric Mobility Solutions for logistics & outdoor activities	Latvia	Bruntor	M-H	M-H	M-L	M-L
Electric amphibious vehicle for land & water explorations	Latvia	BeTriton	M-H	M-H	M-L	M-L
Eco-friendly packaging solutions	Malta	InServ	M-L	M-L	M-L	M-H
Using water filters to get clean drinking water from the tap	Malta	Eco Pro by TAPP Water	M-L	M-L	M-L	M-H
Using real-time customer insights to foster sustainability	Malta	Hotjar by Contentsquare	M-L	M-H	M-H	M-L
Using a loyalty platform to encourage sustainable choices	Malta	Loyale	M-H	M-H	M-H	M-L
Eco-Board outdoor furniture made of recycled plastic	Montenegro	Ekodaska powered by 3D Soba	M-H	M-L	M-L	M-H



<b>SunChef Solar Oven</b>	Montenegro	Metalac Market	M-H	M-L	M-L	M-H
<b>Healthy aquatic ecosystems</b>	Portugal	Bluemater	M-H	M-L	M-L	M-L
<b>Bamboo Bicycles for sustainable mobility</b>	Portugal	bam•bu bicycles	M-H	M-L	M-L	M-H
<b>Sustainable footwear for guests</b>	Slovenia	Kaaita	M-L	M-L	M-L	M-H
<b>App to reduce food waste by connecting food providers &amp; consumers</b>	Slovenia	Krožnik	M-H	M-L	M-L	M-H
<b>Eco-friendly glamping cabins</b>	Slovenia	Lushna	M-L	M-L	M-L	M-H
<b>Using gamified experiences to stimulate sustainable choices</b>	Slovenia	Nexto	M-H	M-H	M-H	M-L
<b>Passive Construction: a building approach focused on energy efficiency</b>	The Netherlands	Stichting PassiefBouwen	M-H	M-H	M-H	M-L
<b>Replacing plastic items in outdoor areas with biobased products</b>	The Netherlands	Natural Plastics International	M-L	M-L	M-L	M-H

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## 5.7. Challenge: Price/Quality balance – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
<b>Property Management System for Holiday Homes</b>	Germany	vOFFICE	M-L	M-L	M-L	M-H
<b>Sustainability Management Platform to maximise hotels' resource savings</b>	Germany	Avanera	M-L	M-H	M-L	M-H
<b>Kitchen Cooking Robotics: A fully autonomous kitchen ecosystem</b>	Germany	CIRCUS Group	M-H	M-H	M-H	M-L
<b>Circular Living: a climate-friendly hotel room concept</b>	Germany	Fritz Schlecht	M-H	M-L	M-H	M-L
<b>Self-sufficient stationary eco-toilets</b>	Germany	EcoToiletten	M-H	M-L	M-L	M-H
<b>Mosphera Electric Scooters to enhance exploring opportunities</b>	Latvia	Global Wolf Motors	M-H	M-H	M-L	M-H
<b>Machine Learning Technology for Smart energy usage</b>	Latvia	Peaksave	M-H	M-H	M-H	M-H
<b>Electric Mobility Solutions for logistics &amp; outdoor activities</b>	Latvia	Bruntor	M-H	M-H	M-L	M-L
<b>Electric amphibious vehicle for land &amp; water explorations</b>	Latvia	BeTriton	M-H	M-H	M-L	M-L
<b>Autonomous Robotic Kitchen System</b>	Latvia	RoboEatz	M-H	M-H	M-H	M-L

<b>Applying oil filters to extend the life of cooking oil</b>	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
<b>Near Waterless Laundry system</b>	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
<b>Sustainable kitchenware cleaning</b>	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
<b>Smart Water Genie (SWG): prevent water waste</b>	Malta	SmartGenie Ltd	M-H	M-L	M-L	M-H
<b>Paperless Smart Kitchen automated HACCP plan</b>	Malta	Memcon Solutions	M-H	M-H	M-H	M-L
<b>Using water filters to get clean drinking water from the tap</b>	Malta	Eco Pro by TAPP Water	M-L	M-L	M-L	M-H
<b>Energy and carbon management digital platform</b>	Malta	ClearVUE	M-H	M-H	M-L	M-H
<b>Innovative technologies for hot water and steam generation</b>	Malta	Ecotherm by MI Select	M-H	M-H	M-L	M-H
<b>Camping Service Points in rural areas</b>	Montenegro	Camping Association Montenegro	M-H	M-H	M-L	M-L
<b>Solar-powered water heating in off-grid settlements</b>	Montenegro	Panarchy & Elektrovod	M-L	M-H	M-L	M-H
<b>Certification scheme to promote sustainable business operations</b>	Montenegro	Green Destination	M-L	M-H	M-H	M-H
<b>BioBlu System: collecting and re-using rainwater</b>	Montenegro	Eco Nova	M-H	M-H	M-H	M-L
<b>SunChef Solar Oven</b>	Montenegro	Metalac Market	M-H	M-L	M-L	M-H
<b>IT-based tools to improve resource efficiency and sustainability</b>	Montenegro	Montora	M-H	M-H	M-H	M-H
<b>Waterless toilets for off-grid settlements</b>	Montenegro	Seperett AB	M-H	M-L	M-H	M-H
<b>Reduce waste of water dispensed at undesired temperature</b>	Portugal	Aqva More	M-H	M-H	M-L	M-H
<b>Smart irrigation management software</b>	Portugal	Hidrosoph	M-H	M-L	M-H	M-L
<b>Digital platform to manage and monitor the energy consumption</b>	Portugal	Smartwatt	M-L	M-H	M-L	M-H
<b>Automate and optimize water usage for irrigation</b>	Portugal	Trigger Systems	M-H	M-L	M-H	M-L
<b>AI-driven Virtual Energy Manager</b>	Portugal	Watt-Is	M-H	M-H	M-L	M-H
<b>iQwood eco-friendly wood construction system</b>	Slovenia	iQwood	M-L	M-L	M-H	M-H
<b>Green Direction: sustainable cleaning practices</b>	Slovenia	Barjans, obvladovanje čistoče, d.o.o.	M-L	M-L	M-L	M-H
<b>Comprehensive energy solutions for sustainable hospitality</b>	Slovenia	Resalta	M-L	M-H	M-H	M-L

Eco-friendly glamping cabins	Slovenia	Lushna	M-L	M-L	M-L	M-H
Using gamified experiences to stimulate sustainable choices	Slovenia	Nexto	M-H	M-H	M-H	M-L
Improve resource efficiency by using a staff collaboration platform	Slovenia	Flexkeeping by Creatriks	M-H	M-L	M-L	M-L
Renewable Energy Communities	Spain	Zenit Solar	M-H	M-H	M-H	M-L
Smart Energy Management System using AI and IoT	Spain	Managing the Intelligence – Smart Room	M-H	M-H	M-H	M-H
Water-saving tap device to reduce water waste	Spain	AquaReturn	M-H	M-H	M-L	M-H
Smart Water Management Platform leveraging IoT	Spain	Bitagua WDNA	M-H	M-H	M-L	M-H
Advanced Water Management Solutions using IoT	Spain	Fluidra	M-H	M-H	M-L	M-H
Energy efficient indoor climate control using IoT	Spain	Trane Technologies	M-H	M-L	M-L	M-H
Telemetry digital systems for efficient water management	Spain	Contazara	M-L	M-L	M-L	M-H
Smart and efficient laundry solutions	Spain	Girbau	M-L	M-L	M-L	M-L
An assisted pathway towards sustainability in the food industry	Spain	EcoCook by Biolia	M-L	M-H	M-H	M-L
Hydraloop: In-house water recycling systems	The Netherlands	Hydraloop	M-H	M-H	M-L	M-H
Heat Battery ensuring gas-free heating all year round	The Netherlands	CESAR Bulk Energy Storage	M-H	M-L	M-H	M-L
Powering low-energy devices with plant-generated electricity	The Netherlands	Plant-E BV	M-H	M-L	M-L	M-H
Blue Energy: creating electricity from fresh and salt water	The Netherlands	REDstack	M-H	M-H	M-H	M-L
Reduce energy consumption by recovering heat from wastewater	The Netherlands	De Warmte	M-H	M-L	M-L	M-L
Passive Construction: a building approach focused on energy efficiency	The Netherlands	Stichting PassiefBouwen	M-H	M-H	M-H	M-L
AI-supported software for advancing buildings decarbonization	The Netherlands	Next Sense	M-H	M-H	M-H	M-H
Using nudging and gamification to influence commuting behaviour	The Netherlands	Fynch	M-L	M-L	M-L	M-H

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## 5.8. Challenge: High Investments – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Best practices to reduce food waste	Germany	United Against Waste	M-L	M-H	M-L	M-H
ReCup: an integrated network for reusable cups and bowls	Germany	reCup	M-L	M-H	M-L	M-H
Self-sufficient stationary eco-toilets	Germany	EcoToiletten	M-H	M-L	M-L	M-H
Digital tools to enhance your online sustainability reputation	Malta	Polzify	M-H	M-L	M-H	M-L
Using water filters to get clean drinking water from the tap	Malta	Eco Pro by TAPP Water	M-L	M-L	M-L	M-H
Certification scheme to promote sustainable business operations	Montenegro	Green Destination	M-L	M-H	M-H	M-H
Reduce waste of water dispensed at undesired temperature	Portugal	Aqva More	M-H	M-H	M-L	M-H
Community Corporate Garden	Portugal	Noocity	M-H	M-L	M-L	M-L
Transforming waste into valuable products	Portugal	Flowco Lab	M-H	M-H	M-H	M-H
App to reduce food waste by connecting food providers & consumers	Slovenia	Kročnik	M-H	M-L	M-L	M-H
Comprehensive energy solutions for sustainable hospitality	Slovenia	Resalta	M-L	M-H	M-H	M-L
Eco-friendly glamping cabins	Slovenia	Lushna	M-L	M-L	M-L	M-H
Water-saving tap device to reduce water waste	Spain	AquaReturn	M-H	M-H	M-L	M-H
App to create connected mobility ecosystem	Spain	Meep	M-L	M-L	M-H	M-L
Nudging sustainability in staff and customers through serious games	The Netherlands	Businessgames	M-H	M-H	M-L	M-L
Replacing plastic items in outdoor areas with biobased products	The Netherlands	Natural Plastics International	M-L	M-L	M-L	M-H

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## 5.9. Challenge: Client Nudging – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
ReCup: an integrated network for reusable cups and bowls	Germany	reCup	M-L	M-H	M-L	M-H
Mosphera Electric Scooters to enhance exploring opportunities	Latvia	Global Wolf Motors	M-H	M-H	M-L	M-H

<b>Engaging and educational activities to nudge staff &amp; customers towards sustainability</b>	Latvia	ieber.lv & Efectio	M-H	M-L	M-L	M-H
<b>Using real-time customer insights to foster sustainability</b>	Malta	Hotjar by Contentsquare	M-L	M-H	M-H	M-L
<b>Using a loyalty platform to encourage sustainable choices</b>	Malta	Loyale	M-H	M-H	M-H	M-L
<b>Camping Service Points in rural areas</b>	Montenegro	Camping Association Montenegro	M-H	M-H	M-L	M-L
<b>Incorporating sustainability nudges into AR experiences</b>	Montenegro	PastView by Sebka Technology	M-H	M-L	M-H	M-H
<b>AI-driven Virtual Energy Manager</b>	Portugal	Watt-Is	M-H	M-H	M-L	M-H
<b>App-based reusable food packaging system</b>	Portugal	Ecoceno	M-H	M-H	M-L	M-L
<b>Fostering sustainability through Corporate Social Responsibility projects</b>	Portugal	Sair da Casca	M-L	M-H	M-L	M-H
<b>AI-driven personalized digital guides</b>	Slovenia	Giro Car Share	M-H	M-L	M-H	M-L
<b>Sustainable footwear for guests</b>	Slovenia	Kaaita	M-L	M-L	M-L	M-H
<b>Bokashi composting solutions for organic waste management</b>	Slovenia	Plastika Skaza	M-H	M-H	M-L	M-H
<b>App to reduce food waste by connecting food providers &amp; consumers</b>	Slovenia	Krožnik	M-H	M-L	M-L	M-H
<b>Using gamified experiences to stimulate sustainable choices</b>	Slovenia	Nexto	M-H	M-H	M-H	M-L
<b>Smart Energy Management System using AI and IoT</b>	Spain	Managing the Intelligence – Smart Room	M-H	M-H	M-H	M-H
<b>App to create connected mobility ecosystem</b>	Spain	Meep	M-L	M-L	M-H	M-L
<b>Nudging sustainability in staff and customers through serious games</b>	The Netherlands	Businessgames	M-H	M-H	M-L	M-L
<b>AI-supported software for advancing buildings decarbonization</b>	The Netherlands	Next Sense	M-H	M-H	M-H	M-H

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## 5.10. Challenge: Staff Nudging – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
<b>Using ‘gaming’ to enhance HR practices</b>	Germany	lvlp!HR	M-H	M-H	M-L	M-L
<b>Property Management System for Holiday Homes</b>	Germany	vOFFICE	M-L	M-L	M-L	M-H

<b>Sustainability Management Platform to maximise hotels' resource savings</b>	Germany	Avanera	M-L	M-H	M-L	M-H
<b>Best practices to reduce food waste</b>	Germany	United Against Waste	M-L	M-H	M-L	M-H
<b>SDG-Scouts Training employees on sustainability</b>	Germany	B.A.U.M.	M-H	M-H	M-L	M-H
<b>Engaging and educational activities to nudge staff &amp; customers towards sustainability</b>	Latvia	ieber.lv & Efectio	M-H	M-L	M-L	M-H
<b>Certification scheme to promote sustainable business operations</b>	Montenegro	Green Destination	M-L	M-H	M-H	M-H
<b>IT-based tools to improve resource efficiency and sustainability</b>	Montenegro	Montora	M-H	M-H	M-H	M-H
<b>Implementing measures to reduce plastic waste</b>	Montenegro	Zero Waste Montenegro and CZIP	M-L	M-H	M-L	M-L
<b>Digital platform to manage and monitor the energy consumption</b>	Portugal	Smartwatt	M-L	M-H	M-L	M-H
<b>AI-driven Virtual Energy Manager</b>	Portugal	Watt-Is	M-H	M-H	M-L	M-H
<b>Community Corporate Garden</b>	Portugal	Noocity	M-H	M-L	M-L	M-L
<b>Fostering sustainability through Corporate Social Responsibility projects</b>	Portugal	Sair da Casca	M-L	M-H	M-L	M-H
<b>Green Direction: sustainable cleaning practices</b>	Slovenia	Barjans, obvladovanje čistoče.	M-L	M-L	M-L	M-H
<b>Improve resource efficiency by using a staff collaboration platform</b>	Slovenia	Flexkeeping by Creatriks	M-H	M-L	M-L	M-L
<b>Smart Water Management Platform leveraging IoT</b>	Spain	Bitagua WDNA	M-H	M-H	M-L	M-H
<b>An assisted pathway towards sustainability in the food industry</b>	Spain	EcoCook by Biolia	M-L	M-H	M-H	M-L
<b>Nudging sustainability in staff and customers through serious games</b>	The Netherlands	Businessgames	M-H	M-H	M-L	M-L
<b>AI-supported software for advancing buildings decarbonization</b>	The Netherlands	Next Sense	M-H	M-H	M-H	M-H
<b>Automated food waste monitoring system</b>	The Netherlands	Orbisk	M-H	M-L	M-L	M-H
<b>Using nudging and gamification to influence commuting behaviour</b>	The Netherlands	Fynch	M-L	M-L	M-L	M-H

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## 6. List of innovations: current field of application

This chapter provides tables with lists of the mapped innovations, grouped by their current field of application. The same innovation can be associated with more fields of application, therefore it might appear multiple times in the following tables. By clicking on the name of each innovation, the reader can access a web page with more information on that specific innovation/solution.

For each innovation, the following tables also include an indication of of:

- The Country where the solution was mapped
- The innovation/solution provider
- The assessment of the innovation, in terms of:
  - Novelty of the innovation within the tourism industry (NOV)
  - Impact on the sustainability of SMEs business operations (IMP)
  - Complexity of implementation (COM)
  - Scalability, Adaptability and replicability (SAR)

### 6.1. Field of Application: Property Management - List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Self-sufficient stationary eco-toilets	Germany	EcoToiletten	M-H	M-L	M-L	M-H
Restoring and upcycling old furniture	Latvia	Pavasara Mēbeles	M-L	M-L	M-L	M-L
Machine Learning Technology for Smart energy usage	Latvia	Peaksave	M-H	M-H	M-H	M-H
Environmentally friendly sewage pipe cleaning	Latvia	Happy Fish	M-H	M-L	M-L	M-H
Smart Water Genie (SWG): prevent water waste	Malta	SmartGenie Ltd	M-H	M-L	M-L	M-H
Using water filters to get clean drinking water from the tap	Malta	Eco Pro by TAPP Water	M-L	M-L	M-L	M-H
Energy and carbon management digital platform	Malta	ClearVUE	M-H	M-H	M-L	M-H
Solar-powered water heating in off-grid settlements	Montenegro	Panarchy & Elektrovod	M-L	M-H	M-L	M-H
Eco-Board outdoor furniture made of recycled plastic	Montenegro	Ekodaska powered by 3D Soba	M-H	M-L	M-L	M-H

BioBlu System: collecting and re-using rainwater	Montenegro	Eco Nova	M-H	M-H	M-H	M-L
AI-powered smart waste management system	Montenegro	Bin-e Smart Waste Bins	M-H	M-L	M-L	M-L
Reduce waste of water dispensed at undesired temperature	Portugal	Aqva More	M-H	M-H	M-L	M-H
Smart irrigation management software	Portugal	Hidrosoph	M-H	M-L	M-H	M-L
Digital platform to manage and monitor the energy consumption	Portugal	Smartwatt	M-L	M-H	M-L	M-H
AI-driven Virtual Energy Manager	Portugal	Watt-Is	M-H	M-H	M-L	M-H
Circular LAB: Develop and implement circular economy solutions	Slovenia	Zavod Knof	M-L	M-H	M-H	M-L
Comprehensive energy solutions for sustainable hospitality	Slovenia	Resalta	M-L	M-H	M-H	M-L
Improve resource efficiency by using a staff collaboration platform	Slovenia	Flexkeeping by Creatriks	M-H	M-L	M-L	M-L
Renewable Energy Communities	Spain	Zenit Solar	M-H	M-H	M-H	M-L
Smart Energy Management System using AI and IoT	Spain	Managing the Intelligence – Smart Room	M-H	M-H	M-H	M-H
Water-saving tap device to reduce water waste	Spain	AquaReturn	M-H	M-H	M-L	M-H
Smart Water Management Platform leveraging IoT	Spain	Bitaquá WDNA	M-H	M-H	M-L	M-H
Advanced Water Management Solutions using IoT	Spain	Fluidra	M-H	M-H	M-L	M-H
Energy efficient indoor climate control using IoT	Spain	Trane Technologies	M-H	M-L	M-L	M-H
Telemetering digital systems for efficient water management	Spain	Contazara	M-L	M-L	M-L	M-H
Smart and efficient laundry solutions	Spain	Girbau	M-L	M-L	M-L	M-L
Hydraloop: In-house water recycling systems	The Netherlands	Hydraloop	M-H	M-H	M-L	M-H
Powering low-energy devices with plant-generated electricity	The Netherlands	Plant-E BV	M-H	M-L	M-L	M-H
Reduce energy consumption by recovering heat from wastewater	The Netherlands	De Warmte	M-H	M-L	M-L	M-L
AI-supported software for advancing buildings decarbonization	The Netherlands	Next Sense	M-H	M-H	M-H	M-H
Replacing plastic items in outdoor areas with biobased products	The Netherlands	Natural Plastics International	M-L	M-L	M-L	M-H

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## 6.2. Field of Application: Construction & Building – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Implementing a 'Cradle to Cradle' design concept	Germany	Braungart EPEA	M-H	M-H	M-H	M-L
Circular Living: a climate-friendly hotel room concept	Germany	Fritz Schlecht	M-H	M-L	M-H	M-L
Using seaweed as insulation material	Germany	Seegrashandel	M-H	M-L	M-L	M-L
Ecowool as thermal insulation material	Latvia	Balticfloc	M-H	M-L	M-L	M-L
Smart Water Genie (SWG): prevent water waste	Malta	SmartGenie Ltd	M-H	M-L	M-L	M-H
Innovative technologies for hot water and steam generation	Malta	Ecotherm by MI Select	M-H	M-H	M-L	M-H
Bio Toilets: providing off-grid settlements with sanitary facilities	Montenegro	Panarchy research, Borplastika & Ecoplast	M-L	M-L	M-H	M-L
Solar-powered water heating in off-grid settlements	Montenegro	Panarchy & Elektrovod	M-L	M-H	M-L	M-H
Eco-Board outdoor furniture made of recycled plastic	Montenegro	Ekodaska powered by 3D Soba	M-H	M-L	M-L	M-H
BioBlu System: collecting and re-using rainwater	Montenegro	Eco Nova	M-H	M-H	M-H	M-L
Waterless toilets for off-grid settlements	Montenegro	Separett AB	M-H	M-L	M-H	M-H
Reduce waste of water dispensed at undesired temperature	Portugal	Aqva More	M-H	M-H	M-L	M-H
iQwood eco-friendly wood construction system	Slovenia	iQwood	M-L	M-L	M-H	M-H
Eco-friendly glamping cabins	Slovenia	Lushna	M-L	M-L	M-L	M-H
Renewable Energy Communities	Spain	Zenit Solar	M-H	M-H	M-H	M-L
Water-saving tap device to reduce water waste	Spain	AquaReturn	M-H	M-H	M-L	M-H
Hydraloop: In-house water recycling systems	The Netherlands	Hydraloop	M-H	M-H	M-L	M-H
Heat Battery ensuring gas-free heating all year round	The Netherlands	CESAR Bulk Energy Storage	M-H	M-L	M-H	M-L
The Waste Transformers: give a value to food waste	The Netherlands	The Waste Transformers	M-L	M-H	M-H	M-L
Blue Energy: creating electricity from fresh and salt water	The Netherlands	REDstack	M-H	M-H	M-H	M-L

Reduce energy consumption by recovering heat from wastewater	The Netherlands	De Warmte	M-H	M-L	M-L	M-L
Passive Construction: a building approach focused on energy efficiency	The Netherlands	Stichting PassiefBouwen	M-H	M-H	M-H	M-L

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### 6.3. Field of Application: Manufacturing – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Implementing a 'Cradle to Cradle' design concept	Germany	Braungart EPEA	M-H	M-H	M-H	M-L
Recycling coffee waste into sustainable products	Latvia	Koffeco	M-H	M-L	M-L	M-H
Eco-friendly packaging solutions	Malta	InServ	M-L	M-L	M-L	M-H
Innovative technologies for hot water and steam generation	Malta	Ecotherm by MI Select	M-H	M-H	M-L	M-H
Sustainable plastic packaging	Portugal	Logoplaste	M-L	M-L	M-L	M-H
Heritage-inspired sustainable furniture	Portugal	DAM Portugal	M-L	M-L	M-L	M-L
Transforming waste into valuable products	Portugal	Flowco Lab	M-H	M-H	M-H	M-H

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### 6.4. Field of Application: Logistics & Transportation – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Mosphera Electric Scooters to enhance exploring opportunities	Latvia	Global Wolf Motors	M-H	M-H	M-L	M-H
Electric Mobility Solutions for logistics & outdoor activities	Latvia	Bruntor	M-H	M-H	M-L	M-L
Electric amphibious vehicle for land & water explorations	Latvia	BeTriton	M-H	M-H	M-L	M-L
Bamboo Bicycles for sustainable mobility	Portugal	bam•bu bicycles	M-H	M-L	M-L	M-H
App to create connected mobility ecosystem	Spain	Meep	M-L	M-L	M-H	M-L
Blue Energy: creating electricity from fresh and salt water	The Netherlands	REDstack	M-H	M-H	M-H	M-L
Using nudging and gamification to influence commuting behaviour	The Netherlands	Fynch	M-L	M-L	M-L	M-H

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## 6.5. Field of Application: Retail & Consumer Goods – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Eco-friendly seaweed pillows	Germany	Strandmanufaktur	M-H	M-L	M-L	M-L
Eco-friendly biodegradable clothing hangers	Latvia	Trempel	M-L	M-L	M-L	M-H
Restoring and upcycling old furniture	Latvia	Pavasara Mēbeles	M-L	M-L	M-L	M-L
Recycling coffee waste into sustainable products	Latvia	Koffeco	M-H	M-L	M-L	M-H
CHUM - compostable & eatable tableware	Latvia	Dabas Trauks	M-H	M-L	M-L	M-H
Engaging and educational activities to nudge staff & customers towards sustainability	Latvia	ieber.lv & Efectio	M-H	M-L	M-L	M-H
Autonomous Robotic Kitchen System	Latvia	RoboEatz	M-H	M-H	M-H	M-L
Eco-friendly packaging solutions	Malta	InServ	M-L	M-L	M-L	M-H
Digital tools to enhance your online sustainability reputation	Malta	Polzify	M-H	M-L	M-H	M-L
Using real-time customer insights to foster sustainability	Malta	Hotjar by Contentsquare	M-L	M-H	M-H	M-L
Using a loyalty platform to encourage sustainable choices	Malta	Loyale	M-H	M-H	M-H	M-L
Implementing measures to reduce plastic waste	Montenegro	Zero Waste Montenegro and CZIP	M-L	M-H	M-L	M-L
Sustainable plastic packaging	Portugal	Logoplaste	M-L	M-L	M-L	M-H
App-based reusable food packaging system	Portugal	Ecoceno	M-H	M-H	M-L	M-L
Heritage-inspired sustainable furniture	Portugal	DAM Portugal	M-L	M-L	M-L	M-L
Transforming waste into valuable products	Portugal	Flowco Lab	M-H	M-H	M-H	M-H
Green Direction: sustainable cleaning practices	Slovenia	Barjans, obvladovanje čistoče, d.o.o.	M-L	M-L	M-L	M-H
Energy efficient indoor climate control using IoT	Spain	Trane Technologies	M-H	M-L	M-L	M-H
Eco-friendly packaging solutions for food & beverage	Spain	ITC Packaging	M-L	M-L	M-L	M-H

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## 6.6. Field of Application: Agriculture & Forestry – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Mosphera Electric Scooters to enhance exploring opportunities	Latvia	Global Wolf Motors	M-H	M-H	M-L	M-H
BioBlu System: collecting and re-using rainwater	Montenegro	Eco Nova	M-H	M-H	M-H	M-L
Smart irrigation management software	Portugal	Hidrosoph	M-H	M-L	M-H	M-L
Automate and optimize water usage for irrigation	Portugal	Trigger Systems	M-H	M-L	M-H	M-L
Healthy aquatic ecosystems	Portugal	Bluemater	M-H	M-L	M-L	M-L
Community Corporate Garden	Portugal	Noocity	M-H	M-L	M-L	M-L
Bokashi composting solutions for organic waste management	Slovenia	Plastika Skaza	M-H	M-H	M-L	M-H
Smart Water Management Platform leveraging IoT	Spain	Bitagua WDNA	M-H	M-H	M-L	M-H
Telemetering digital systems for efficient water management	Spain	Contazara	M-L	M-L	M-L	M-H
The Waste Transformers: give a value to food waste	The Netherlands	The Waste Transformers	M-L	M-H	M-H	M-L
Powering low-energy devices with plant-generated electricity	The Netherlands	Plant-E BV	M-H	M-L	M-L	M-H
Replacing plastic items in outdoor areas with biobased products	The Netherlands	Natural Plastics International	M-L	M-L	M-L	M-H

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## 6.7. Field of Application: IT & Digital Services – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Machine Learning Technology for Smart energy usage	Latvia	Peaksave	M-H	M-H	M-H	M-H
Engaging and educational activities to nudge staff & customers towards sustainability	Latvia	ieber.lv & Efectio	M-H	M-L	M-L	M-H
Digital tools to enhance your online sustainability reputation	Malta	Polzify	M-H	M-L	M-H	M-L
Using real-time customer insights to foster sustainability	Malta	Hotjar by Contentsquare	M-L	M-H	M-H	M-L

Using a loyalty platform to encourage sustainable choices	Malta	Loyale	M-H	M-H	M-H	M-L
Energy and carbon management digital platform	Malta	ClearVUE	M-H	M-H	M-L	M-H
IT-based tools to improve resource efficiency and sustainability	Montenegro	Montora	M-H	M-H	M-H	M-H
Incorporating sustainability nudges into AR experiences	Montenegro	PastView by Sebka Technology	M-H	M-L	M-H	M-H
AI-driven personalized digital guides	Slovenia	Giro Car Share	M-H	M-L	M-H	M-L
Planet Positive Event: Assess the sustainability of events	Slovenia	Toleranca Marketing	M-H	M-L	M-L	M-H
Using gamified experiences to stimulate sustainable choices	Slovenia	Nexto	M-H	M-H	M-H	M-L
App to create connected mobility ecosystem	Spain	Meep	M-L	M-L	M-H	M-L
Nudging sustainability in staff and customers through serious games	The Netherlands	Businessgames	M-H	M-H	M-L	M-L
AI-supported software for advancing buildings decarbonization	The Netherlands	Next Sense	M-H	M-H	M-H	M-H
Using nudging and gamification to influence commuting behaviour	The Netherlands	Fynch	M-L	M-L	M-L	M-H

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## 6.8. Field of Application: Furniture & Design – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Implementing a 'Cradle to Cradle' design concept	Germany	Braungart EPEA	M-H	M-H	M-H	M-L
Circular Living: a climate-friendly hotel room concept	Germany	Fritz Schlecht	M-H	M-L	M-H	M-L
Eco-friendly seaweed pillows	Germany	Strandmanufaktur	M-H	M-L	M-L	M-L
Eco-friendly biodegradable clothing hangers	Latvia	Trempel	M-L	M-L	M-L	M-H
Restoring and upcycling old furniture	Latvia	Pavasara Mēbeles	M-L	M-L	M-L	M-L
Innovative materials for sustainable mattresses	Malta	Smart Material	M-H	M-L	M-L	M-H
Eco-Board outdoor furniture made of recycled plastic	Montenegro	Ekodaska powered by 3D Soba	M-H	M-L	M-L	M-H
Healthy aquatic ecosystems	Portugal	Bluemater	M-H	M-L	M-L	M-L

<b>Heritage-inspired sustainable furniture</b>	Portugal	DAM Portugal	M-L	M-L	M-L	M-L
<b>Transforming waste into valuable products</b>	Portugal	Flowco Lab	M-H	M-H	M-H	M-H
<b>iQwood eco-friendly wood construction system</b>	Slovenia	iQwood	M-L	M-L	M-H	M-H
<b>Sustainable footwear for guests</b>	Slovenia	Kaaita	M-L	M-L	M-L	M-H
<b>Circular LAB: Develop and implement circular economy solutions</b>	Slovenia	Zavod Knof	M-L	M-H	M-H	M-L
<b>Eco-friendly glamping cabins</b>	Slovenia	Lushna	M-L	M-L	M-L	M-H

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## 6.9. Field of Application: Human Resources & Training – List of innovations

<b>Mapped Innovations/Solutions</b>	<b>Country</b>	<b>Innovator/ Provider</b>	<b>NOV</b>	<b>IMP</b>	<b>COM</b>	<b>SAR</b>
<b>Best practices to reduce food waste</b>	Germany	United Against Waste	M-L	M-H	M-L	M-H
<b>SDG-Scouts Training employees on sustainability</b>	Germany	B.A.U.M.	M-H	M-H	M-L	M-H
<b>Engaging and educational activities to nudge staff &amp; customers towards sustainability</b>	Latvia	ieber.lv & Efectio	M-H	M-L	M-L	M-H
<b>Community Corporate Garden</b>	Portugal	Noocity	M-H	M-L	M-L	M-L
<b>Fostering sustainability through Corporate Social Responsibility projects</b>	Portugal	Sair da Casca	M-L	M-H	M-L	M-H
<b>Improve resource efficiency by using a staff collaboration platform</b>	Slovenia	Flexkeeping by Creatriks	M-H	M-L	M-L	M-L
<b>Nudging sustainability in staff and customers through serious games</b>	The Netherlands	Businessgames	M-H	M-H	M-L	M-L
<b>Using nudging and gamification to influence commuting behaviour</b>	The Netherlands	Fynch	M-L	M-L	M-L	M-H

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## 6.10. Field of Application: Health & Sanitation – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Self-sufficient stationary eco-toilets	Germany	EcoToiletten	M-H	M-L	M-L	M-H
Environmentally friendly sewage pipe cleaning	Latvia	Happy Fish	M-H	M-L	M-L	M-H
Near Waterless Laundry system	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
Paperless Smart Kitchen automated HACCP plan	Malta	Memcon Solutions	M-H	M-H	M-H	M-L
Using water filters to get clean drinking water from the tap	Malta	Eco Pro by TAPP Water	M-L	M-L	M-L	M-H
Innovative materials for sustainable mattresses	Malta	Smart Material	M-H	M-L	M-L	M-H
Innovative technologies for hot water and steam generation	Malta	Ecotherm by MI Select	M-H	M-H	M-L	M-H
Bio Toilets: providing off-grid settlements with sanitary facilities	Montenegro	Panarchy research, Borplastika & Ecoplast (Collaboration)	M-L	M-L	M-H	M-L
Camping Service Points in rural areas	Montenegro	Camping Association Montenegro	M-H	M-H	M-L	M-L
Waterless toilets for off-grid settlements	Montenegro	Separett AB	M-H	M-L	M-H	M-H
Implementing measures to reduce plastic waste	Montenegro	Zero Waste Montenegro and CZIP	M-L	M-H	M-L	M-L
Healthy aquatic ecosystems	Portugal	Bluemater	M-H	M-L	M-L	M-L
Green Direction: sustainable cleaning practices	Slovenia	Barjans, obvladovanje čistoče, d.o.o.	M-L	M-L	M-L	M-H
Advanced Water Management Solutions using IoT	Spain	Fluidra	M-H	M-H	M-L	M-H
Smart and efficient laundry solutions	Spain	Girbau	M-L	M-L	M-L	M-L
AI-based system for food waste reduction and composting	Spain	Effiwaste	M-H	M-H	M-L	M-H
Heat Battery ensuring gas-free heating all year round	The Netherlands	CESAR Bulk Energy Storage	M-H	M-L	M-H	M-L

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## 6.11. Field of Application: Food & Beverage industry – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
<b>Kitchen Cooking Robotics: A fully autonomous kitchen ecosystem</b>	Germany	CIRCUS Group	M-H	M-H	M-H	M-L
<b>Best practices to reduce food waste</b>	Germany	United Against Waste	M-L	M-H	M-L	M-H
<b>ReCup: an integrated network for reusable cups and bowls</b>	Germany	reCup	M-L	M-H	M-L	M-H
<b>Recycling coffee waste into sustainable products</b>	Latvia	Koffeco	M-H	M-L	M-L	M-H
<b>CHUM - compostable &amp; eatable tableware</b>	Latvia	Dabas Trauks	M-H	M-L	M-L	M-H
<b>Autonomous Robotic Kitchen System</b>	Latvia	RoboEatz	M-H	M-H	M-H	M-L
<b>Applying oil filters to extend the life of cooking oil</b>	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
<b>Sustainable kitchenware cleaning</b>	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
<b>Paperless Smart Kitchen automated HACCP plan</b>	Malta	Memcon Solutions	M-H	M-H	M-H	M-L
<b>Using water filters to get clean drinking water from the tap</b>	Malta	Eco Pro by TAPP Water	M-L	M-L	M-L	M-H
<b>SunChef Solar Oven</b>	Montenegro	Metalac Market	M-H	M-L	M-L	M-H
<b>AI-powered smart waste management system</b>	Montenegro	Bin-e Smart Waste Bins	M-H	M-L	M-L	M-L
<b>IT-based tools to improve resource efficiency and sustainability</b>	Montenegro	Montora	M-H	M-H	M-H	M-H
<b>Implementing measures to reduce plastic waste</b>	Montenegro	Zero Waste Montenegro and CZIP	M-L	M-H	M-L	M-L
<b>Sustainable plastic packaging</b>	Portugal	Logoplaste	M-L	M-L	M-L	M-H
<b>App-based reusable food packaging system</b>	Portugal	Ecoceno	M-H	M-H	M-L	M-L
<b>Bokashi composting solutions for organic waste management</b>	Slovenia	Plastika Skaza	M-H	M-H	M-L	M-H
<b>App to reduce food waste by connecting food providers &amp; consumers</b>	Slovenia	Kročnik	M-H	M-L	M-L	M-H
<b>Green Direction: sustainable cleaning practices</b>	Slovenia	Barjans, obvladovanje čistoče, d.o.o.	M-L	M-L	M-L	M-H
<b>Energy efficient indoor climate control using IoT</b>	Spain	Trane Technologies	M-H	M-L	M-L	M-H



<b>Eco-friendly packaging solutions for food &amp; beverage</b>	Spain	ITC Packaging	M-L	M-L	M-L	M-H
Smart and efficient laundry solutions	Spain	Girbau	M-L	M-L	M-L	M-L
<b>AI-based system for food waste reduction and composting</b>	Spain	Effiwaste	M-H	M-H	M-L	M-H
An assisted pathway towards sustainability in the food industry	Spain	EcoCook by Biolia	M-L	M-H	M-H	M-L
<b>The Waste Transformers: give a value to food waste</b>	The Netherlands	The Waste Transformers	M-L	M-H	M-H	M-L
Automated food waste monitoring system	The Netherlands	Orbisk	M-H	M-L	M-L	M-H

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## 6.12. Field of Application: ML Accommodations – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
<b>Circular Living: a climate-friendly hotel room concept</b>	Germany	Fritz Schlecht	M-H	M-L	M-H	M-L
Near Waterless Laundry system	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
<b>Smart Water Genie (SWG): prevent water waste</b>	Malta	SmartGenie Ltd	M-H	M-L	M-L	M-H
Digital tools to enhance your online sustainability reputation	Malta	Polzify	M-H	M-L	M-H	M-L
<b>Using a loyalty platform to encourage sustainable choices</b>	Malta	Loyale	M-H	M-H	M-H	M-L
Certification scheme to promote sustainable business operations	Montenegro	Green Destination	M-L	M-H	M-H	M-H
<b>IT-based tools to improve resource efficiency and sustainability</b>	Montenegro	Montora	M-H	M-H	M-H	M-H
Digital platform to manage and monitor the energy consumption	Portugal	Smartwatt	M-L	M-H	M-L	M-H
<b>AI-driven Virtual Energy Manager</b>	Portugal	Watt-Is	M-H	M-H	M-L	M-H
Fostering sustainability through Corporate Social Responsibility projects	Portugal	Sair da Casca	M-L	M-H	M-L	M-H
<b>Sustainable footwear for guests</b>	Slovenia	Kaaita	M-L	M-L	M-L	M-H
Comprehensive energy solutions for sustainable hospitality	Slovenia	Resalta	M-L	M-H	M-H	M-L
<b>Eco-friendly glamping cabins</b>	Slovenia	Lushna	M-L	M-L	M-L	M-H

Improve resource efficiency by using a staff collaboration platform	Slovenia	Flexkeeping by Creatriks	M-H	M-L	M-L	M-L
Smart Energy Management System using AI and IoT	Spain	Managing the Intelligence – Smart Room	M-H	M-H	M-H	M-H
Smart Water Management Platform leveraging IoT	Spain	Bitagua WDNA	M-H	M-H	M-L	M-H
Telemetry digital systems for efficient water management	Spain	Contazara	M-L	M-L	M-L	M-H
Hydraloop: In-house water recycling systems	The Netherlands	Hydraloop	M-H	M-H	M-L	M-H
AI-supported software for advancing buildings decarbonization	The Netherlands	Next Sense	M-H	M-H	M-H	M-H
Automated food waste monitoring system	The Netherlands	Orbisk	M-H	M-L	M-L	M-H

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## 6.13. Field of Application: Events & Entertainment – List of innovations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Self-sufficient stationary eco-toilets	Germany	EcoToiletten	M-H	M-L	M-L	M-H
CHUM - compostable & eatable tableware	Latvia	Dabas Trauks	M-H	M-L	M-L	M-H
Electric Mobility Solutions for logistics & outdoor activities	Latvia	Bruntor	M-H	M-H	M-L	M-L
Electric amphibious vehicle for land & water explorations	Latvia	BeTriton	M-H	M-H	M-L	M-L
Autonomous Robotic Kitchen System	Latvia	RoboEatz	M-H	M-H	M-H	M-L
Sustainable kitchenware cleaning	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
Paperless Smart Kitchen automated HACCP plan	Malta	Memcon Solutions	M-H	M-H	M-H	M-L
Eco-friendly packaging solutions	Malta	InServ	M-L	M-L	M-L	M-H
Using real-time customer insights to foster sustainability	Malta	Hotjar by Contentsquare	M-L	M-H	M-H	M-L
Certification scheme to promote sustainable business operations	Montenegro	Green Destination	M-L	M-H	M-H	M-H
SunChef Solar Oven	Montenegro	Metalac Market	M-H	M-L	M-L	M-H
Incorporating sustainability nudges into AR experiences	Montenegro	PastView by Sebka Technology	M-H	M-L	M-H	M-H
Digital platform to manage and monitor the energy consumption	Portugal	Smartwatt	M-L	M-H	M-L	M-H

<b>Bamboo Bicycles for sustainable mobility</b>	Portugal	bam•bu bicycles	M-H	M-L	M-L	M-H
<b>AI-driven personalized digital guides</b>	Slovenia	Giro Car Share	M-H	M-L	M-H	M-L
<b>Planet Positive Event: Assess the sustainability of events</b>	Slovenia	Toleranca Marketing	M-H	M-L	M-L	M-H
<b>Using gamified experiences to stimulate sustainable choices</b>	Slovenia	Nexto	M-H	M-H	M-H	M-L
<b>Advanced Water Management Solutions using IoT</b>	Spain	Fluidra	M-H	M-H	M-L	M-H
<b>Eco-friendly packaging solutions for food &amp; beverage</b>	Spain	ITC Packaging	M-L	M-L	M-L	M-H
<b>Powering low-energy devices with plant-generated electricity</b>	The Netherlands	Plant-E BV	M-H	M-L	M-L	M-H
<b>Automated food waste monitoring system</b>	The Netherlands	Orbisk	M-H	M-L	M-L	M-H

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# 7. List of innovations: Transition Pathway topic

This chapter provides tables with lists of the mapped innovations, grouped by topic of the Tourism Transition Pathway (TTP) policy document. The same innovation can be associated with more topics, therefore it might appear multiple times in the following tables. By clicking on the name of each innovation, the reader can access a web page with more information on that specific innovation/solution.

For each innovation, the following tables also include an indication of:

- The Country where the solution was mapped
- The innovation/solution provider
- The assessment of the innovation, in terms of:
  - Novelty of the innovation within the tourism industry (NOV)
  - Impact on the sustainability of SMEs business operations (IMP)
  - Complexity of implementation (COM)
  - Scalability, Adaptability and replicability (SAR)

## 7.1. Topic 6: Sustainable mobility

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
<a href="#">Mosphera Electric Scooters to enhance exploring opportunities</a>	Latvia	Global Wolf Motors	M-H	M-H	M-L	M-H
<a href="#">Electric Mobility Solutions for logistics &amp; outdoor activities</a>	Latvia	Bruntor	M-H	M-H	M-L	M-L
<a href="#">Bamboo Bicycles for sustainable mobility</a>	Portugal	bam•bu bicycles	M-H	M-L	M-L	M-H
<a href="#">App to create connected mobility ecosystem</a>	Spain	Meep	M-L	M-L	M-H	M-L
<a href="#">Using nudging and gamification to influence commuting behaviour</a>	The Netherlands	Fynch	M-L	M-L	M-L	M-H

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## 7.2. Topic 7: Circularity of tourism services

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Kitchen Cooking Robotics: A fully autonomous kitchen ecosystem	Germany	CIRCUS Group	M-H	M-H	M-H	M-L
Implementing a 'Cradle to Cradle' design concept	Germany	Braungart EPEA	M-H	M-H	M-H	M-L
ReCup: an integrated network for reusable cups and bowls	Germany	reCup	M-L	M-H	M-L	M-H
Circular Living: a climate-friendly hotel room concept	Germany	Fritz Schlecht	M-H	M-L	M-H	M-L
Self-sufficient stationary eco-toilets	Germany	EcoToiletten	M-H	M-L	M-L	M-H
Using seaweed as insulation material	Germany	Seegrashandel	M-H	M-L	M-L	M-L
Eco-friendly seaweed pillows	Germany	Strandmanufaktur	M-H	M-L	M-L	M-L
Eco-friendly biodegradable clothing hangers	Latvia	Trempel	M-L	M-L	M-L	M-H
Restoring and upcycling old furniture	Latvia	Pavasara Mēbeles	M-L	M-L	M-L	M-L
Recycling coffee waste into sustainable products	Latvia	Koffeco	M-H	M-L	M-L	M-H
CHUM - compostable & eatable tableware	Latvia	Dabas Trauks	M-H	M-L	M-L	M-H
Engaging and educational activities to nudge staff & customers towards sustainability	Latvia	ieber.lv & Efectio	M-H	M-L	M-L	M-H
Ecowool as thermal insulation material	Latvia	Balticfloc	M-H	M-L	M-L	M-L
Electric amphibious vehicle for land & water explorations	Latvia	BeTriton	M-H	M-H	M-L	M-L
Environmentally friendly sewage pipe cleaning	Latvia	Happy Fish	M-H	M-L	M-L	M-H
Autonomous Robotic Kitchen System	Latvia	RoboEatz	M-H	M-H	M-H	M-L
Applying oil filters to extend the life of cooking oil	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
Near Waterless Laundry system	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
Sustainable kitchenware cleaning	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
Smart Water Genie (SWG): prevent water waste	Malta	SmartGenie Ltd	M-H	M-L	M-L	M-H
Paperless Smart Kitchen automated HACCP plan	Malta	Memcon Solutions	M-H	M-H	M-H	M-L

Eco-friendly packaging solutions	Malta	InServ	M-L	M-L	M-L	M-H
Using water filters to get clean drinking water from the tap	Malta	Eco Pro by TAPP Water	M-L	M-L	M-L	M-H
Using a loyalty platform to encourage sustainable choices	Malta	Loyale	M-H	M-H	M-H	M-L
Innovative materials for sustainable mattresses	Malta	Smart Material	M-H	M-L	M-L	M-H
Bio Toilets: providing off-grid settlements with sanitary facilities	Montenegro	Panarchy research, Borplastika & Ecoplast	M-L	M-L	M-H	M-L
Camping Service Points in rural areas	Montenegro	Camping Association Montenegro	M-H	M-H	M-L	M-L
Solar-powered water heating in off-grid settlements	Montenegro	Panarchy & Elektrovod	M-L	M-H	M-L	M-H
Eco-Board outdoor furniture made of recycled plastic	Montenegro	Ekodaska powered by 3D Soba	M-H	M-L	M-L	M-H
Certification scheme to promote sustainable business operations	Montenegro	Green Destination	M-L	M-H	M-H	M-H
BioBlu System: collecting and re-using rainwater	Montenegro	Eco Nova	M-H	M-H	M-H	M-L
SunChef Solar Oven	Montenegro	Metalac Market	M-H	M-L	M-L	M-H
AI-powered smart waste management system	Montenegro	Bin-e Smart Waste Bins	M-H	M-L	M-L	M-L
IT-based tools to improve resource efficiency and sustainability	Montenegro	Montora	M-H	M-H	M-H	M-H
Waterless toilets for off-grid settlements	Montenegro	Separett AB	M-H	M-L	M-H	M-H
Implementing measures to reduce plastic waste	Montenegro	Zero Waste Montenegro and CZIP	M-L	M-H	M-L	M-L
Sustainable plastic packaging	Portugal	Logoplaste	M-L	M-L	M-L	M-H
Reduce waste of water dispensed at undesired temperature	Portugal	Aqva More	M-H	M-H	M-L	M-H
Smart irrigation management software	Portugal	Hidrosoph	M-H	M-L	M-H	M-L
Automate and optimize water usage for irrigation	Portugal	Trigger Systems	M-H	M-L	M-H	M-L
Healthy aquatic ecosystems	Portugal	Bluemater	M-H	M-L	M-L	M-L
Community Corporate Garden	Portugal	Noocity	M-H	M-L	M-L	M-L
Bamboo Bicycles for sustainable mobility	Portugal	bam•bu bicycles	M-H	M-L	M-L	M-H

App-based reusable food packaging system	Portugal	Ecoceno	M-H	M-H	M-L	M-L
Fostering sustainability through Corporate Social Responsibility projects	Portugal	Sair da Casca	M-L	M-H	M-L	M-H
Heritage-inspired sustainable furniture	Portugal	DAM Portugal	M-L	M-L	M-L	M-L
Transforming waste into valuable products	Portugal	Flowco Lab	M-H	M-H	M-H	M-H
iQwood eco-friendly wood construction system	Slovenia	iQwood	M-L	M-L	M-H	M-H
Sustainable footwear for guests	Slovenia	Kaaita	M-L	M-L	M-L	M-H
Circular LAB: Develop and implement circular economy solutions	Slovenia	Zavod Knof	M-L	M-H	M-H	M-L
Planet Positive Event: Assess the sustainability of events	Slovenia	Toleranca Marketing	M-H	M-L	M-L	M-H
Bokashi composting solutions for organic waste management	Slovenia	Plastika Skaza	M-H	M-H	M-L	M-H
App to reduce food waste by connecting food providers & consumers	Slovenia	Kročnik	M-H	M-L	M-L	M-H
Green Direction: sustainable cleaning practices	Slovenia	Barjans, obvladovanje čistoče, d.o.o.	M-L	M-L	M-L	M-H
Using gamified experiences to stimulate sustainable choices	Slovenia	Nexto	M-H	M-H	M-H	M-L
Water-saving tap device to reduce water waste	Spain	AquaReturn	M-H	M-H	M-L	M-H
Smart Water Management Platform leveraging IoT	Spain	Bitagua WDNA	M-H	M-H	M-L	M-H
Advanced Water Management Solutions using IoT	Spain	Fluidra	M-H	M-H	M-L	M-H
Telemetry digital systems for efficient water management	Spain	Contazara	M-L	M-L	M-L	M-H
Eco-friendly packaging solutions for food & beverage	Spain	ITC Packaging	M-L	M-L	M-L	M-H
Smart and efficient laundry solutions	Spain	Girbau	M-L	M-L	M-L	M-L
AI-based system for food waste reduction and composting	Spain	Effiwaste	M-H	M-H	M-L	M-H
An assisted pathway towards sustainability in the food industry	Spain	EcoCook by Biolia	M-L	M-H	M-H	M-L
Hydraloop: In-house water recycling systems	The Netherlands	Hydraloop	M-H	M-H	M-L	M-H
The Waste Transformers: give a value to food waste	The Netherlands	The Waste Transformers	M-L	M-H	M-H	M-L
Automated food waste monitoring system	The Netherlands	Orbisk	M-H	M-L	M-L	M-H
Replacing plastic items in outdoor areas with biobased products	The Netherlands	Natural Plastics International	M-L	M-L	M-L	M-H

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## 7.3. Topic 8: Green transition of tourism companies and SMEs

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Implementing a 'Cradle to Cradle' design concept	Germany	Braungart EPEA	M-H	M-H	M-H	M-L
Best practices to reduce food waste	Germany	United Against Waste	M-L	M-H	M-L	M-H
SDG-Scouts Training employees on sustainability	Germany	B.A.U.M.	M-H	M-H	M-L	M-H
Restoring and upcycling old furniture	Latvia	Pavasara Mēbeles	M-L	M-L	M-L	M-L
Engaging and educational activities to nudge staff & customers towards sustainability	Latvia	ieber.lv & Efectio	M-H	M-L	M-L	M-H
Certification scheme to promote sustainable business operations	Montenegro	Green Destination	M-L	M-H	M-H	M-H
Implementing measures to reduce plastic waste	Montenegro	Zero Waste Montenegro and CZIP	M-L	M-H	M-L	M-L
Community Corporate Garden	Portugal	Noocity	M-H	M-L	M-L	M-L
Fostering sustainability through Corporate Social Responsibility projects	Portugal	Sair da Casca	M-L	M-H	M-L	M-H
Planet Positive Event: Assess the sustainability of events	Slovenia	Toleranca Marketing	M-H	M-L	M-L	M-H
Green Direction: sustainable cleaning practices	Slovenia	Barjans, obvladovanje čistoče, d.o.o.	M-L	M-L	M-L	M-H
Comprehensive energy solutions for sustainable hospitality	Slovenia	Resalta	M-L	M-H	M-H	M-L
An assisted pathway towards sustainability in the food industry	Spain	EcoCook by Biolia	M-L	M-H	M-H	M-L
Hydraloop: In-house water recycling systems	The Netherlands	Hydraloop	M-H	M-H	M-L	M-H
Nudging sustainability in staff and customers through serious games	The Netherlands	Businessgames	M-H	M-H	M-L	M-L

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## 7.4. Topic 9: Data-driven tourism services

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Property Management System for Holiday Homes	Germany	vOFFICE	M-L	M-L	M-L	M-H
Sustainability Management Platform to maximise hotels' resource savings	Germany	Avanera	M-L	M-H	M-L	M-H



<b>Kitchen Cooking Robotics: A fully autonomous kitchen ecosystem</b>	Germany	CIRCUS Group	M-H	M-H	M-H	M-L
<b>ReCup: an integrated network for reusable cups and bowls</b>	Germany	reCup	M-L	M-H	M-L	M-H
<b>Machine Learning Technology for Smart energy usage</b>	Latvia	Peaksave	M-H	M-H	M-H	M-H
<b>Autonomous Robotic Kitchen System</b>	Latvia	RoboEatz	M-H	M-H	M-H	M-L
<b>Smart Water Genie (SWG): prevent water waste</b>	Malta	SmartGenie Ltd	M-H	M-L	M-L	M-H
<b>Paperless Smart Kitchen automated HACCP plan</b>	Malta	Memcon Solutions	M-H	M-H	M-H	M-L
<b>Digital tools to enhance your online sustainability reputation</b>	Malta	Polzify	M-H	M-L	M-H	M-L
<b>Using real-time customer insights to foster sustainability</b>	Malta	Hotjar by Contentsquare	M-L	M-H	M-H	M-L
<b>Energy and carbon management digital platform</b>	Malta	ClearVUE	M-H	M-H	M-L	M-H
<b>Innovative technologies for hot water and steam generation</b>	Malta	Ecotherm by MI Select	M-H	M-H	M-L	M-H
<b>AI-powered smart waste management system</b>	Montenegro	Bin-e Smart Waste Bins	M-H	M-L	M-L	M-L
<b>IT-based tools to improve resource efficiency and sustainability</b>	Montenegro	Montora	M-H	M-H	M-H	M-H
<b>Incorporating sustainability nudges into AR experiences</b>	Montenegro	PastView by Sebka Technology	M-H	M-L	M-H	M-H
<b>Smart irrigation management software</b>	Portugal	Hidrosoph	M-H	M-L	M-H	M-L
<b>Digital platform to manage and monitor the energy consumption</b>	Portugal	Smartwatt	M-L	M-H	M-L	M-H
<b>Automate and optimize water usage for irrigation</b>	Portugal	Trigger Systems	M-H	M-L	M-H	M-L
<b>AI-driven Virtual Energy Manager</b>	Portugal	Watt-Is	M-H	M-H	M-L	M-H
<b>App-based reusable food packaging system</b>	Portugal	Ecoceno	M-H	M-H	M-L	M-L
<b>AI-driven personalized digital guides</b>	Slovenia	Giro Car Share	M-H	M-L	M-H	M-L
<b>App to reduce food waste by connecting food providers &amp; consumers</b>	Slovenia	Krožnik	M-H	M-L	M-L	M-H
<b>Comprehensive energy solutions for sustainable hospitality</b>	Slovenia	Resalta	M-L	M-H	M-H	M-L
<b>Improve resource efficiency by using a staff collaboration platform</b>	Slovenia	Flexkeeping by Creatriks	M-H	M-L	M-L	M-L
<b>Renewable Energy Communities</b>	Spain	Zenit Solar	M-H	M-H	M-H	M-L

Smart Energy Management System using AI and IoT	Spain	Managing the Intelligence – Smart Room	M-H	M-H	M-H	M-H
Smart Water Management Platform leveraging IoT	Spain	Bitacqua WDNA	M-H	M-H	M-L	M-H
Advanced Water Management Solutions using IoT	Spain	Fluidra	M-H	M-H	M-L	M-H
Energy efficient indoor climate control using IoT	Spain	Trane Technologies	M-H	M-L	M-L	M-H
Telemetering digital systems for efficient water management	Spain	Contazara	M-L	M-L	M-L	M-H
App to create connected mobility ecosystem	Spain	Meep	M-L	M-L	M-H	M-L
Smart and efficient laundry solutions	Spain	Girbau	M-L	M-L	M-L	M-L
AI-based system for food waste reduction and composting	Spain	Effiwaste	M-H	M-H	M-L	M-H
Hydraloop: In-house water recycling systems	The Netherlands	Hydraloop	M-H	M-H	M-L	M-H
AI-supported software for advancing buildings decarbonization	The Netherlands	Next Sense	M-H	M-H	M-H	M-H
Automated food waste monitoring system	The Netherlands	Orbisk	M-H	M-L	M-L	M-H
Using nudging and gamification to influence commuting behaviour	The Netherlands	Fynch	M-L	M-L	M-L	M-H

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## 7.5. Topic 10: Availability of online information on tourism offer

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
ReCup: an integrated network for reusable cups and bowls	Germany	reCup	M-L	M-H	M-L	M-H
Using real-time customer insights to foster sustainability	Malta	Hotjar by Contentsquare	M-L	M-H	M-H	M-L
Using a loyalty platform to encourage sustainable choices	Malta	Loyale	M-H	M-H	M-H	M-L
Incorporating sustainability nudges into AR experiences	Montenegro	PastView by Sebka Technology	M-H	M-L	M-H	M-H
App to reduce food waste by connecting food providers & consumers	Slovenia	Krožnik	M-H	M-L	M-L	M-H
Using gamified experiences to stimulate sustainable choices	Slovenia	Nexto	M-H	M-H	M-H	M-L
App to create connected mobility ecosystem	Spain	Meep	M-L	M-L	M-H	M-L

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## 7.6. Topic 12: R&I and pilots on circular and climate friendly tourism

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Best practices to reduce food waste	Germany	United Against Waste	M-L	M-H	M-L	M-H
Circular Living: a climate-friendly hotel room concept	Germany	Fritz Schlecht	M-H	M-L	M-H	M-L
Using seaweed as insulation material	Germany	Seegrashandel	M-H	M-L	M-L	M-L
Eco-friendly seaweed pillows	Germany	Strandmanufaktur	M-H	M-L	M-L	M-L
Eco-friendly biodegradable clothing hangers	Latvia	Trempel	M-L	M-L	M-L	M-H
Restoring and upcycling old furniture	Latvia	Pavasara Mēbeles	M-L	M-L	M-L	M-L
Recycling coffee waste into sustainable products	Latvia	Koffeco	M-H	M-L	M-L	M-H
Mosphera Electric Scooters to enhance exploring opportunities	Latvia	Global Wolf Motors	M-H	M-H	M-L	M-H
CHUM - compostable & eatable tableware	Latvia	Dabas Trauks	M-H	M-L	M-L	M-H
Ecowool as thermal insulation material	Latvia	Balticfloc	M-H	M-L	M-L	M-L
Electric amphibious vehicle for land & water explorations	Latvia	BeTriton	M-H	M-H	M-L	M-L
Innovative materials for sustainable mattresses	Malta	Smart Material	M-H	M-L	M-L	M-H
Camping Service Points in rural areas	Montenegro	Camping Association Montenegro	M-H	M-H	M-L	M-L
Eco-Board outdoor furniture made of recycled plastic	Montenegro	Ekodaska powered by 3D Soba	M-H	M-L	M-L	M-H
BioBlu System: collecting and re-using rainwater	Montenegro	Eco Nova	M-H	M-H	M-H	M-L
SunChef Solar Oven	Montenegro	Metalac Market	M-H	M-L	M-L	M-H
Community Corporate Garden	Portugal	Noocity	M-H	M-L	M-L	M-L
Bamboo Bicycles for sustainable mobility	Portugal	bam•bu bicycles	M-H	M-L	M-L	M-H
App-based reusable food packaging system	Portugal	Ecoceno	M-H	M-H	M-L	M-L
Heritage-inspired sustainable furniture	Portugal	DAM Portugal	M-L	M-L	M-L	M-L

<b>Transforming waste into valuable products</b>	Portugal	Flowco Lab	M-H	M-H	M-H	M-H
<b>Circular LAB: Develop and implement circular economy solutions</b>	Slovenia	Zavod Knof	M-L	M-H	M-H	M-L
<b>Bokashi composting solutions for organic waste management</b>	Slovenia	Plastika Skaza	M-H	M-H	M-L	M-H
<b>Eco-friendly glamping cabins</b>	Slovenia	Lushna	M-L	M-L	M-L	M-H
<b>Renewable Energy Communities</b>	Spain	Zenit Solar	M-H	M-H	M-H	M-L
<b>Heat Battery ensuring gas-free heating all year round</b>	The Netherlands	CESAR Bulk Energy Storage	M-H	M-L	M-H	M-L
<b>The Waste Transformers: give a value to food waste</b>	The Netherlands	The Waste Transformers	M-L	M-H	M-H	M-L
<b>Powering low-energy devices with plant-generated electricity</b>	The Netherlands	Plant-E BV	M-H	M-L	M-L	M-H
<b>Blue Energy: creating electricity from fresh and salt water</b>	The Netherlands	REDstack	M-H	M-H	M-H	M-L
<b>Reduce energy consumption by recovering heat from wastewater</b>	The Netherlands	De Warmte	M-H	M-L	M-L	M-L
<b>Passive Construction: a building approach focused on energy efficiency</b>	The Netherlands	Stichting PassiefBouwen	M-H	M-H	M-H	M-L

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## 7.7. Topic 13: PEF methodology & category rules for tourism ecosystem

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
<b>Energy and carbon management digital platform</b>	Malta	ClearVUE	M-H	M-H	M-L	M-H
<b>Planet Positive Event: Assess the sustainability of events</b>	Slovenia	Toleranca Marketing	M-H	M-L	M-L	M-H

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## 7.8. Topic 15: R&I for digital tools and services in tourism

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Incorporating sustainability nudges into AR experiences	Montenegro	PastView by Sebka Technology	M-H	M-L	M-H	M-H
AI-driven personalized digital guides	Slovenia	Giro Car Share	M-H	M-L	M-H	M-L
Using gamified experiences to stimulate sustainable choices	Slovenia	Nexto	M-H	M-H	M-H	M-L
Smart Energy Management System using AI and IoT	Spain	Managing the Intelligence – Smart Room	M-H	M-H	M-H	M-H
Smart Water Management Platform leveraging IoT	Spain	Bitagua WDNA	M-H	M-H	M-L	M-H
Advanced Water Management Solutions using IoT	Spain	Fluidra	M-H	M-H	M-L	M-H
Telemetry digital systems for efficient water management	Spain	Contazara	M-L	M-L	M-L	M-H
AI-based system for food waste reduction and composting	Spain	Effiwaste	M-H	M-H	M-L	M-H
Nudging sustainability in staff and customers through serious games	The Netherlands	Businessgames	M-H	M-H	M-L	M-L
AI-supported software for advancing buildings decarbonization	The Netherlands	Next Sense	M-H	M-H	M-H	M-H

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## 7.9. Topic 16: Support for digitalisation of tourism SMEs and destinations

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Using 'gaming' to enhance HR practices	Germany	lv!up!HR	M-H	M-H	M-L	M-L
Property Management System for Holiday Homes	Germany	vOFFICE	M-L	M-L	M-L	M-H
Sustainability Management Platform to maximise hotels' resource savings	Germany	Avanera	M-L	M-H	M-L	M-H
Kitchen Cooking Robotics: A fully autonomous kitchen ecosystem	Germany	CIRCUS Group	M-H	M-H	M-H	M-L
ReCup: an integrated network for reusable cups and bowls	Germany	reCup	M-L	M-H	M-L	M-H
Machine Learning Technology for Smart energy usage	Latvia	Peaksave	M-H	M-H	M-H	M-H

<b>Electric Mobility Solutions for logistics &amp; outdoor activities</b>	Latvia	Bruntor	M-H	M-H	M-L	M-L
<b>Autonomous Robotic Kitchen System</b>	Latvia	RoboEatz	M-H	M-H	M-H	M-L
<b>Paperless Smart Kitchen automated HACCP plan</b>	Malta	Memcon Solutions	M-H	M-H	M-H	M-L
<b>Digital tools to enhance your online sustainability reputation</b>	Malta	Polzify	M-H	M-L	M-H	M-L
<b>Using real-time customer insights to foster sustainability</b>	Malta	Hotjar by Contentsquare	M-L	M-H	M-H	M-L
<b>Using a loyalty platform to encourage sustainable choices</b>	Malta	Loyale	M-H	M-H	M-H	M-L
<b>Energy and carbon management digital platform</b>	Malta	ClearVUE	M-H	M-H	M-L	M-H
<b>Innovative technologies for hot water and steam generation</b>	Malta	Ecotherm by MI Select	M-H	M-H	M-L	M-H
<b>IT-based tools to improve resource efficiency and sustainability</b>	Montenegro	Montora	M-H	M-H	M-H	M-H
<b>Incorporating sustainability nudges into AR experiences</b>	Montenegro	PastView by Sebka Technology	M-H	M-L	M-H	M-H
<b>Reduce waste of water dispensed at undesired temperature</b>	Portugal	Aqva More	M-H	M-H	M-L	M-H
<b>Smart irrigation management software</b>	Portugal	Hidrosoph	M-H	M-L	M-H	M-L
<b>Digital platform to manage and monitor the energy consumption</b>	Portugal	Smartwatt	M-L	M-H	M-L	M-H
<b>Automate and optimize water usage for irrigation</b>	Portugal	Trigger Systems	M-H	M-L	M-H	M-L
<b>AI-driven Virtual Energy Manager</b>	Portugal	Watt-Is	M-H	M-H	M-L	M-H
<b>App-based reusable food packaging system</b>	Portugal	Ecoceno	M-H	M-H	M-L	M-L
<b>AI-driven personalized digital guides</b>	Slovenia	Giro Car Share	M-H	M-L	M-H	M-L
<b>App to reduce food waste by connecting food providers &amp; consumers</b>	Slovenia	Krožnik	M-H	M-L	M-L	M-H
<b>Comprehensive energy solutions for sustainable hospitality</b>	Slovenia	Resalta	M-L	M-H	M-H	M-L
<b>Using gamified experiences to stimulate sustainable choices</b>	Slovenia	Nexto	M-H	M-H	M-H	M-L
<b>Improve resource efficiency by using a staff collaboration platform</b>	Slovenia	Flexkeeping by Creatriks	M-H	M-L	M-L	M-L
<b>Renewable Energy Communities</b>	Spain	Zenit Solar	M-H	M-H	M-H	M-L
<b>Smart Energy Management System using AI and IoT</b>	Spain	Managing the Intelligence – Smart Room	M-H	M-H	M-H	M-H

Smart Water Management Platform leveraging IoT	Spain	Bitagua WDNA	M-H	M-H	M-L	M-H
Advanced Water Management Solutions using IoT	Spain	Fluidra	M-H	M-H	M-L	M-H
Energy efficient indoor climate control using IoT	Spain	Trane Technologies	M-H	M-L	M-L	M-H
Telemetering digital systems for efficient water management	Spain	Contazara	M-L	M-L	M-L	M-H
App to create connected mobility ecosystem	Spain	Meep	M-L	M-L	M-H	M-L
Smart and efficient laundry solutions	Spain	Girbau	M-L	M-L	M-L	M-L
AI-based system for food waste reduction and composting	Spain	Effiwaste	M-H	M-H	M-L	M-H
Hydraloop: In-house water recycling systems	The Netherlands	Hydraloop	M-H	M-H	M-L	M-H
Reduce energy consumption by recovering heat from wastewater	The Netherlands	De Warmte	M-H	M-L	M-L	M-L
Nudging sustainability in staff and customers through serious games	The Netherlands	Businessgames	M-H	M-H	M-L	M-L
AI-supported software for advancing buildings decarbonization	The Netherlands	Next Sense	M-H	M-H	M-H	M-H
Automated food waste monitoring system	The Netherlands	Orbisk	M-H	M-L	M-L	M-H
Using nudging and gamification to influence commuting behaviour	The Netherlands	Fynch	M-L	M-L	M-L	M-H

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## 7.10. Topic 19: Awareness on skills needs for twin transition in tourism

Mapped Innovations/Solutions	Country	Innovator/ Provider	NOV	IMP	COM	SAR
Using 'gaming' to enhance HR practices	Germany	lvup!HR	M-H	M-H	M-L	M-L
Implementing a 'Cradle to Cradle' design concept	Germany	Braungart EPEA	M-H	M-H	M-H	M-L
SDG-Scouts Training employees on sustainability	Germany	B.A.U.M.	M-H	M-H	M-L	M-H
Engaging and educational activities to nudge staff & customers towards sustainability	Latvia	ieber.lv & Efectio	M-H	M-L	M-L	M-H
Certification scheme to promote sustainable business operations	Montenegro	Green Destination	M-L	M-H	M-H	M-H
Implementing measures to reduce plastic waste	Montenegro	Zero Waste Montenegro and CZIP	M-L	M-H	M-L	M-L

<b>AI-driven Virtual Energy Manager</b>	Portugal	Watt-Is	M-H	M-H	M-L	M-H
<b>Fostering sustainability through Corporate Social Responsibility projects</b>	Portugal	Sair da Casca	M-L	M-H	M-L	M-H
<b>Green Direction: sustainable cleaning practices</b>	Slovenia	Barjans, obvladovanje čistoče, d.o.o.	M-L	M-L	M-L	M-H
<b>Comprehensive energy solutions for sustainable hospitality</b>	Slovenia	Resalta	M-L	M-H	M-H	M-L
<b>Improve resource efficiency by using a staff collaboration platform</b>	Slovenia	Flexkeeping by Creatriks	M-H	M-L	M-L	M-L
<b>An assisted pathway towards sustainability in the food industry</b>	Spain	EcoCook by Biolia	M-L	M-H	M-H	M-L
<b>Nudging sustainability in staff and customers through serious games</b>	The Netherlands	Businessgames	M-H	M-H	M-L	M-L
<b>AI-supported software for advancing buildings decarbonization</b>	The Netherlands	Next Sense	M-H	M-H	M-H	M-H

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## 7.11. Topic 20: Awareness on changes in tourism demand & opportunities of twin transition

<b>Mapped Innovations/Solutions</b>	<b>Country</b>	<b>Innovator/ Provider</b>	<b>NOV</b>	<b>IMP</b>	<b>COM</b>	<b>SAR</b>
<b>Using 'gaming' to enhance HR practices</b>	Germany	Ivluv!HR	M-H	M-H	M-L	M-L
<b>Best practices to reduce food waste</b>	Germany	United Against Waste	M-L	M-H	M-L	M-H
<b>SDG-Scouts Training employees on sustainability</b>	Germany	B.A.U.M.	M-H	M-H	M-L	M-H
<b>Self-sufficient stationary eco-toilets</b>	Germany	EcoToiletten	M-H	M-L	M-L	M-H
<b>Eco-friendly seaweed pillows</b>	Germany	Strandmanufaktur	M-H	M-L	M-L	M-L
<b>Recycling coffee waste into sustainable products</b>	Latvia	Koffeco	M-H	M-L	M-L	M-H
<b>Mosphera Electric Scooters to enhance exploring opportunities</b>	Latvia	Global Wolf Motors	M-H	M-H	M-L	M-H
<b>CHUM - compostable &amp; eatable tableware</b>	Latvia	Dabas Trauks	M-H	M-L	M-L	M-H
<b>Engaging and educational activities to nudge staff &amp; customers towards sustainability</b>	Latvia	ieber.lv & Efectio	M-H	M-L	M-L	M-H
<b>Electric Mobility Solutions for logistics &amp; outdoor activities</b>	Latvia	Bruntor	M-H	M-H	M-L	M-L



<b>Electric amphibious vehicle for land &amp; water explorations</b>	Latvia	BeTriton	M-H	M-H	M-L	M-L
<b>Environmentally friendly sewage pipe cleaning</b>	Latvia	Happy Fish	M-H	M-L	M-L	M-H
<b>Applying oil filters to extend the life of cooking oil</b>	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
<b>Near Waterless Laundry system</b>	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
<b>Sustainable kitchenware cleaning</b>	Malta	Memcon Solutions	M-H	M-L	M-L	M-H
<b>Eco-friendly packaging solutions</b>	Malta	InServ	M-L	M-L	M-L	M-H
<b>Digital tools to enhance your online sustainability reputation</b>	Malta	Polzify	M-H	M-L	M-H	M-L
<b>Using water filters to get clean drinking water from the tap</b>	Malta	Eco Pro by TAPP Water	M-L	M-L	M-L	M-H
<b>Using real-time customer insights to foster sustainability</b>	Malta	Hotjar by Contentsquare	M-L	M-H	M-H	M-L
<b>Using a loyalty platform to encourage sustainable choices</b>	Malta	Loyale	M-H	M-H	M-H	M-L
<b>Camping Service Points in rural areas</b>	Montenegro	Camping Association Montenegro	M-H	M-H	M-L	M-L
<b>Certification scheme to promote sustainable business operations</b>	Montenegro	Green Destination	M-L	M-H	M-H	M-H
<b>SunChef Solar Oven</b>	Montenegro	Metalac Market	M-H	M-L	M-L	M-H
<b>AI-powered smart waste management system</b>	Montenegro	Bin-e Smart Waste Bins	M-H	M-L	M-L	M-L
<b>Implementing measures to reduce plastic waste</b>	Montenegro	Zero Waste Montenegro and CZIP	M-L	M-H	M-L	M-L
<b>Healthy aquatic ecosystems</b>	Portugal	Bluemater	M-H	M-L	M-L	M-L
<b>Community Corporate Garden</b>	Portugal	Noocity	M-H	M-L	M-L	M-L
<b>Bamboo Bicycles for sustainable mobility</b>	Portugal	bam•bu bicycles	M-H	M-L	M-L	M-H
<b>Fostering sustainability through Corporate Social Responsibility projects</b>	Portugal	Sair da Casca	M-L	M-H	M-L	M-H
<b>Heritage-inspired sustainable furniture</b>	Portugal	DAM Portugal	M-L	M-L	M-L	M-L
<b>Transforming waste into valuable products</b>	Portugal	Flowco Lab	M-H	M-H	M-H	M-H
<b>AI-driven personalized digital guides</b>	Slovenia	Giro Car Share	M-H	M-L	M-H	M-L
<b>iQwood eco-friendly wood construction system</b>	Slovenia	iQwood	M-L	M-L	M-H	M-H

Sustainable footwear for guests	Slovenia	Kaaita	M-L	M-L	M-L	M-H
<b>Circular LAB: Develop and implement circular economy solutions</b>	Slovenia	Zavod Knof	M-L	M-H	M-H	M-L
Planet Positive Event: Assess the sustainability of events	Slovenia	Toleranca Marketing	M-H	M-L	M-L	M-H
<b>Bokashi composting solutions for organic waste management</b>	Slovenia	Plastika Skaza	M-H	M-H	M-L	M-H
Eco-friendly glamping cabins	Slovenia	Lushna	M-L	M-L	M-L	M-H
<b>Eco-friendly packaging solutions for food &amp; beverage</b>	Spain	ITC Packaging	M-L	M-L	M-L	M-H
An assisted pathway towards sustainability in the food industry	Spain	EcoCook by Biolia	M-L	M-H	M-H	M-L
<b>Automated food waste monitoring system</b>	The Netherlands	Orbisk	M-H	M-L	M-L	M-H
Replacing plastic items in outdoor areas with biobased products	The Netherlands	Natural Plastics International	M-L	M-L	M-L	M-H

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## 8. Interactive Innovation Matrix

By embarking on an ambitious attempt to provide a comprehensive overview of mapped solutions, this chapter introduces an extensive “Interactive Innovations Matrix” which gives the reader the opportunity to interactively navigate among different categorizations of innovations mapped through the CRT Market Scan.

The matrix includes different categories to which innovations have been associated. On the left-hand part of the matrix, the reader can locate the CRT Key Business Area (KBA) or Transversal Business Area (TBA) of interest, and then visualize on the right all the solutions mapped and associated with that specific KBA or TBA, further sub-divided based on the SMEs’ challenges that those innovations might be able to address, and the country where the innovation has been identified.

Innovations can be associated with more than one KBA/TBA and with more than one challenge. This means the same innovation might appear multiple times in different sections of the matrix.

Every time an innovation is mentioned, the matrix also indicates current fields of application of that innovation and the Transition Pathway topics the solution has been associated with, together with the assessed level (Medium-Low vs Medium-High) in terms of a) *Novelty* of the innovation within the tourism industry (NOV) b) *Impact* on the sustainability of SMEs business operations (IMP) d) *Complexity* of implementation (COM) e) *Scalability, Adaptability and Replicability* (SAR)

Every element in the matrix is interactive and ‘clickable’:

- By clicking on one of the KBA or TBA, the reader can access a separate list (Chapter 4 of this document) that includes all the innovations mapped related to that specific KBA/TBA.
- By clicking on one of the SMEs challenges or one of the current fields of application, the reader can access separate lists (chapters 5 and 6 of this document) including all the innovations mapped and associated with a certain field of application or a specific SMEs challenge.
- By clicking on a country, the reader can access the Country Report including more details about the innovations mapped in that specific country.
- By clicking on the name of the innovations, the reader can access a webpage on the CRT website designed to provide more insights into that specific solution.
- By clicking on the number of the Transition Pathway Topic, the reader can access separate lists (chapter 7 of this document) including all the innovations mapped and associated with that specific topic.

Due to the large size of the matrix, to ensure its accessibility, **the tables below include clickable shortcuts that allow readers to directly access relevant sections of the matrix.** By clicking on a specific combination of KBA/FBA and SMEs challenges, the reader can access that specific part of the Interactive Innovation Matrix.

## INTERACTIVE INNOVATIONS MATRIX: CLICK BELOW ON THE LINKS TO BUSINESS AREAS & SMEs CHALLENGES

	KBA - SMEs Challenges	KBA - SMEs Challenges	TBA - SMEs Challenges
WATER	Water - Resource efficiency	Food - Resource efficiency	Staff Nudging - Resource efficiency
	Water - Adopting circularity	Food - Adopting circularity	Staff Nudging - Adopting circularity
	Water - Waste management	Food - Waste management	Staff Nudging - Waste management
	Water - Innovation knowledge-gap	Food - Innovation knowledge-gap	Staff Nudging - Innovation knowledge-gap
	Water - Technical capacity	Food - Technical capacity	Staff Nudging - Technical capacity
	Water - Real-Time monitoring	Food - Real-Time monitoring	Staff Nudging - Real-Time monitoring
	Water - Price/Quality balance	Food - Price/Quality balance	Staff Nudging - Price/Quality balance
	Water - High investments	Food - High investments	Staff Nudging - High investments
	Water - Client nudging	Food - Client nudging	Staff Nudging - Client nudging
	Water - Staff nudging	Food - Staff nudging	Staff Nudging - Staff nudging
ENERGY	Energy - Resource efficiency	Plastic - Resource efficiency	Client Nudging - Resource efficiency
	Energy - Adopting circularity	Plastic - Adopting circularity	Client Nudging - Adopting circularity
	Energy - Waste management	Plastic - Waste management	Client Nudging - Waste management
	Energy - Innovation knowledge-gap	Plastic - Innovation knowledge-gap	Client Nudging - Innovation knowledge-gap
	Energy - Technical capacity	Plastic - Technical capacity	Client Nudging - Technical capacity
	Energy - Real-Time monitoring	Plastic - Real-Time monitoring	Client Nudging - Real-Time monitoring
	Energy - Price/Quality balance	Plastic - Price/Quality balance	Client Nudging - Price/Quality balance
	Energy - High investments	Plastic - High investments	Client Nudging - High investments
	Energy - Client nudging	Plastic - Client nudging	Client Nudging - Client nudging
	Energy - Staff nudging	Plastic - Staff nudging	Client Nudging - Staff nudging
TRANSPORT	Transport - Resource efficiency	Furniture & Equipment - Resource efficiency	Sustainable & Inclusive M. - Resource efficiency
	Transport - Adopting circularity	Furniture & Equipment - Adopting circularity	Sustainable & Inclusive Markets - Adopting circularity
	Transport - Waste management	Furniture & Equipment - Waste management	Sustainable & Inclusive Markets - Waste management
	Transport - Innovation knowledge-gap	Furniture & Equipment - Innovation knowledge-gap	Sustainable & Inclusive Markets - Innovation knowledge-gap
	Transport - Technical capacity	Furniture & Equipment - Technical capacity	Sustainable & Inclusive Markets - Technical capacity
	Transport - Real-Time monitoring	Furniture & Equipment - Real-Time monitoring	Sustainable & Inclusive Markets - Real-Time monitoring
	Transport - Price/Quality balance	Furniture & Equipment - Price/Quality balance	Sustainable & Inclusive Markets - Price/Quality balance
	Transport - High investments	Furniture & Equipment - High investments	Sustainable & Inclusive Markets - High investments
	Transport - Client nudging	Furniture & Equipment - Client nudging	Sustainable & Inclusive Markets - Client nudging
	Transport - Staff nudging	Furniture & Equipment - Staff nudging	Sustainable & Inclusive Markets - Staff nudging

KBA/ TBA	Challenge	Country	Mapped Innovations/Solutions	Current Applications	TTP	NOV	IMP	COM	SAR
WATER	Resource efficiency	Germany	Sustainability Management Platform to maximise hotels' resource savings	Property Management IT & Digital Services ML Accommodations	9, 16	M-L	M-H	M-L	M-H
			Self-sufficient stationary eco-toilets	Health & Sanitation Events & Entertainment Property Management	7, 20	M-H	M-L	M-L	M-H
		Malta	Near Waterless Laundry system	Health & Sanitation ML Accommodations	7, 20	M-H	M-L	M-L	M-H
			Sustainable kitchenware cleaning	Food & Beverage Industry Events & Entertainment	7, 20	M-H	M-L	M-L	M-H
			Smart Water Genie (SWG): prevent water waste	Construction & Building Property Management ML Accommodations	7, 9	M-H	M-L	M-L	M-H
			Using water filters to get clean drinking water from the tap	Health & Sanitation Food & Beverage Industry Property Management	7, 20	M-L	M-L	M-L	M-H
			Innovative technologies for hot water and steam generation	Construction & Building Manufacturing Health & Sanitation	9, 16	M-H	M-H	M-L	M-H
		Montenegro	Camping Service Points in rural areas	Health & Sanitation	7, 12, 20	M-H	M-H	M-L	M-L
			Certification scheme to promote sustainable business operations	ML Accommodations Events & Entertainment	7, 8, 19, 20	M-L	M-H	M-H	M-H
			BioBlu System: collecting and re-using rainwater	Construction & Building Agriculture & Forestry Property Management	7, 12	M-H	M-H	M-H	M-L
			Waterless toilets for off-grid settlements	Health & Sanitation Construction & Building	7	M-H	M-L	M-H	M-H
		Portugal	Reduce waste of water dispensed at undesired temperature	Construction & Building Property Management	7, 16	M-H	M-H	M-L	M-H
			Smart irrigation management software	Agriculture & Forestry Property Management	7, 9, 16	M-H	M-L	M-H	M-L
			Automate and optimize water usage for irrigation	Agriculture & Forestry	7, 9, 16	M-H	M-L	M-H	M-L
		Slovenia	Green Direction: sustainable cleaning practices	Health & Sanitation Food & Beverage Industry Retail & Consumer Goods	7, 8, 19	M-L	M-L	M-L	M-H

<b>WATER</b>			Improve resource efficiency by using a staff collaboration platform	Human Resources & Training ML Accommodations Property Management	9, 16, 19	M-H	M-L	M-L	M-L	
		<b>Spain</b>		Water-saving tap device to reduce water waste	Property Management Construction & Building	7	M-H	M-H	M-L	M-H
				Smart Water Management Platform leveraging IoT	Property Management Agriculture & Forestry ML Accommodations	7, 9, 15, 16	M-H	M-H	M-L	M-H
				Advanced Water Management Solutions using IoT	Property Management Events & Entertainment Health & Sanitation	7, 9, 15, 16	M-H	M-H	M-L	M-H
				Telemetry digital systems for efficient water management	Property Management Agriculture & Forestry ML Accommodations	7, 9, 15, 16	M-L	M-L	M-L	M-H
				Smart and efficient laundry solutions	Health & Sanitation Property Management Food & Beverage Industry	7, 9, 16	M-L	M-L	M-L	M-L
				An assisted pathway towards sustainability in the food industry	Food & Beverage Industry	7, 8, 19, 20	M-L	M-H	M-H	M-L
		<b>The Netherlands</b>		Hydraloop: In-house water recycling systems	Construction & Building Property Management ML Accommodations	7, 8, 9, 16	M-H	M-H	M-L	M-H
			Reduce energy consumption by recovering heat from wastewater	Construction & Building Property Management	12, 16	M-H	M-L	M-L	M-L	
	<b>Adopting circularity</b>	<b>Germany</b>		Self-sufficient stationary eco-toilets	Health & Sanitation Events & Entertainment Property Management	7, 20	M-H	M-L	M-L	M-H
		<b>Malta</b>		Using water filters to get clean drinking water from the tap	Health & Sanitation Food & Beverage Industry Property Management	7, 20	M-L	M-L	M-L	M-H
		<b>Montenegro</b>		BioBlu System: collecting and re-using rainwater	Construction & Building Agriculture & Forestry Property Management	7, 12	M-H	M-H	M-H	M-L
				Waterless toilets for off-grid settlements	Health & Sanitation Construction & Building	7	M-H	M-L	M-H	M-H
		<b>The Netherlands</b>		Hydraloop: In-house water recycling systems	Construction & Building Property Management ML Accommodations	7, 8, 9, 16	M-H	M-H	M-L	M-H
				Reduce energy consumption by recovering heat from wastewater	Construction & Building Property Management	12, 16	M-H	M-L	M-L	M-L

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<b>WATER</b>	<b>Waste management</b>	<b>Germany</b>	<b>Self-sufficient stationary eco-toilets</b>	Health & Sanitation Events & Entertainment Property Management	7, 20	M-H	M-L	M-L	M-H
		<b>Latvia</b>	<b>Environmentally friendly sewage pipe cleaning</b>	Health & Sanitation Property Management	7, 20	M-H	M-L	M-L	M-H
		<b>Malta</b>	<b>Near Waterless Laundry system</b>	Health & Sanitation ML Accommodations	7, 20	M-H	M-L	M-L	M-H
			<b>Sustainable kitchenware cleaning</b>	Food & Beverage Industry Events & Entertainment	7, 20	M-H	M-L	M-L	M-H
			<b>Using water filters to get clean drinking water from the tap</b>	Health & Sanitation Food & Beverage Industry Property Management	7, 20	M-L	M-L	M-L	M-H
		<b>Montenegro</b>	<b>Bio Toilets: providing off-grid settlements with sanitary facilities</b>	Health & Sanitation Construction & Building	7	M-L	M-L	M-H	M-L
			<b>Camping Service Points in rural areas</b>	Health & Sanitation	7, 12, 20	M-H	M-H	M-L	M-L
			<b>Certification scheme to promote sustainable business operations</b>	ML Accommodations Events & Entertainment	7, 8, 19, 20	M-L	M-H	M-H	M-H
			<b>Waterless toilets for off-grid settlements</b>	Health & Sanitation Construction & Building	7	M-H	M-L	M-H	M-H
		<b>Portugal</b>	<b>Reduce waste of water dispensed at undesired temperature</b>	Construction & Building Property Management	7, 16	M-H	M-H	M-L	M-H
		<b>Spain</b>	<b>Water-saving tap device to reduce water waste</b>	Property Management Construction & Building	7	M-H	M-H	M-L	M-H
			<b>Telemetry digital systems for efficient water management</b>	Property Management Agriculture & Forestry ML Accommodations	7, 9, 15, 16	M-L	M-L	M-L	M-H
			<b>An assisted pathway towards sustainability in the food industry</b>	Food & Beverage Industry	7, 8, 19, 20	M-L	M-H	M-H	M-L
	<b>The Netherlands</b>	<b>Hydraloop: In-house water recycling systems</b>	Construction & Building Property Management ML Accommodations	7, 8, 9, 16	M-H	M-H	M-L	M-H	
	<b>Innovation knowledge-gap</b>	<b>Malta</b>	<b>Innovative technologies for hot water and steam generation</b>	Construction & Building Manufacturing Health & Sanitation	9, 16	M-H	M-H	M-L	M-H
		<b>Montenegro</b>	<b>Certification scheme to promote sustainable business operations</b>	ML Accommodations Events & Entertainment	7, 8, 19, 20	M-L	M-H	M-H	M-H
		<b>Slovenia</b>	<b>Planet Positive Event: Assess the sustainability of events</b>	Events & Entertainment IT & Digital Services	7, 8, 13, 20	M-H	M-L	M-L	M-H
		<b>Spain</b>	<b>An assisted pathway towards sustainability in the food industry</b>	Food & Beverage Industry	7, 8, 19, 20	M-L	M-H	M-H	M-L

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WATER	Technical capacity	Latvia	Environmentally friendly sewage pipe cleaning	Health & Sanitation Property Management	7, 20	M-H	M-L	M-L	M-H
		Malta	Innovative technologies for hot water and steam generation	Construction & Building Manufacturing Health & Sanitation	9, 16	M-H	M-H	M-L	M-H
		Montenegro	Bio Toilets: providing off-grid settlements with sanitary facilities	Health & Sanitation Construction & Building	7	M-L	M-L	M-H	M-L
		Slovenia	Planet Positive Event: Assess the sustainability of events	Events & Entertainment IT & Digital Services	7, 8, 13, 20	M-H	M-L	M-L	M-H
			Green Direction: sustainable cleaning practices	Health & Sanitation Food & Beverage Industry Retail & Consumer Goods	7, 8, 19	M-L	M-L	M-L	M-H
			Improve resource efficiency by using a staff collaboration platform	Human Resources & Training ML Accommodations Property Management	9, 16, 19	M-H	M-L	M-L	M-L
		Spain	Water-saving tap device to reduce water waste	Property Management Construction & Building	7	M-H	M-H	M-L	M-H
			Smart Water Management Platform leveraging IoT	Property Management Agriculture & Forestry ML Accommodations	7, 9, 15, 16	M-H	M-H	M-L	M-H
			Advanced Water Management Solutions using IoT	Property Management Events & Entertainment Health & Sanitation	7, 9, 15, 16	M-H	M-H	M-L	M-H
			Telemetry digital systems for efficient water management	Property Management Agriculture & Forestry ML Accommodations	7, 9, 15, 16	M-L	M-L	M-L	M-H
	The Netherlands	Reduce energy consumption by recovering heat from wastewater	Construction & Building Property Management	12, 16	M-H	M-L	M-L	M-L	
	Real-Time monitoring	Germany	Sustainability Management Platform to maximise hotels' resource savings	Property Management IT & Digital Services ML Accommodations	9, 16	M-L	M-H	M-L	M-H
		Malta	Smart Water Genie (SWG): prevent water waste	Construction & Building Property Management ML Accommodations	7, 9	M-H	M-L	M-L	M-H
			Innovative technologies for hot water and steam generation	Construction & Building Manufacturing Health & Sanitation	9, 16	M-H	M-H	M-L	M-H
		Portugal	Reduce waste of water dispensed at undesired temperature	Construction & Building Property Management	7, 16	M-H	M-H	M-L	M-H
			Smart irrigation management software	Agriculture & Forestry Property Management	7, 9, 16	M-H	M-L	M-H	M-L
			Automate and optimize water usage for irrigation	Agriculture & Forestry	7, 9, 16	M-H	M-L	M-H	M-L



<b>WATER</b>	<b>Price/ Quality balance</b>	<b>Slovenia</b>	Improve resource efficiency by using a staff collaboration platform	Human Resources & Training ML Accommodations Property Management	9, 16, 19	M-H	M-L	M-L	M-L
		<b>Spain</b>	Smart Water Management Platform leveraging IoT	Property Management Agriculture & Forestry ML Accommodations	7, 9, 15, 16	M-H	M-H	M-L	M-H
			Advanced Water Management Solutions using IoT	Property Management Events & Entertainment Health & Sanitation	7, 9, 15, 16	M-H	M-H	M-L	M-H
			Telemetry digital systems for efficient water management	Property Management Agriculture & Forestry ML Accommodations	7, 9, 15, 16	M-L	M-L	M-L	M-H
			Smart and efficient laundry solutions	Health & Sanitation Property Management Food & Beverage Industry	7, 9, 16	M-L	M-L	M-L	M-L
		<b>The Netherlands</b>	Hyraloop: In-house water recycling systems	Construction & Building Property Management ML Accommodations	7, 8, 9, 16	M-H	M-H	M-L	M-H
			Reduce energy consumption by recovering heat from wastewater	Construction & Building Property Management	12, 16	M-H	M-L	M-L	M-L
	<b>Malta</b>	Using water filters to get clean drinking water from the tap	Health & Sanitation Food & Beverage Industry Property Management	7, 20	M-L	M-L	M-L	M-H	
	<b>Portugal</b>	Healthy aquatic ecosystems	Agriculture & Forestry Furniture & Design Health & Sanitation	7, 20	M-H	M-L	M-L	M-L	
	<b>High investments</b>	<b>Germany</b>	Self-sufficient stationary eco-toilets	Health & Sanitation Events & Entertainment Property Management	7, 20	M-H	M-L	M-L	M-H
		<b>Portugal</b>	Reduce waste of water dispensed at undesired temperature	Construction & Building Property Management	7, 16	M-H	M-H	M-L	M-H
		<b>Spain</b>	Water-saving tap device to reduce water waste	Property Management Construction & Building	7	M-H	M-H	M-L	M-H
	<b>Client nudging</b>	<b>Montenegro</b>	Camping Service Points in rural areas	Health & Sanitation	7, 12, 20	M-H	M-H	M-L	M-L
	<b>Staff nudging</b>	<b>Germany</b>	Sustainability Management Platform to maximise hotels' resource savings	Property Management IT & Digital Services ML Accommodations	9, 16	M-L	M-H	M-L	M-H
		<b>Montenegro</b>	Certification scheme to promote sustainable business operations	ML Accommodations Events & Entertainment	7, 8, 19, 20	M-L	M-H	M-H	M-H

		Slovenia	Green Direction: sustainable cleaning practices	Health & Sanitation Food & Beverage Industry Retail & Consumer Goods	7, 8, 19	M-L	M-L	M-L	M-H	
			Improve resource efficiency by using a staff collaboration platform	Human Resources & Training ML Accommodations Property Management	9, 16, 19	M-H	M-L	M-L	M-L	
		Spain	Smart Water Management Platform leveraging IoT	Property Management Agriculture & Forestry ML Accommodations	7, 9, 15, 16	M-H	M-H	M-L	M-H	
			An assisted pathway towards sustainability in the food industry	Food & Beverage Industry	7, 8, 19, 20	M-L	M-H	M-H	M-L	
	ENERGY	Resource efficiency	Germany	Sustainability Management Platform to maximise hotels' resource savings	Property Management IT & Digital Services ML Accommodations	9, 16	M-L	M-H	M-L	M-H
				Circular Living: a climate-friendly hotel room concept	Furniture & Design Construction & Building ML Accommodations	7, 12	M-H	M-L	M-H	M-L
				Self-sufficient stationary eco-toilets	Health & Sanitation Events & Entertainment Property Management	7, 20	M-H	M-L	M-L	M-H
			Latvia	Machine Learning Technology for Smart energy usage	Property Management IT & Digital Services	9, 16	M-H	M-H	M-H	M-H
Autonomous Robotic Kitchen System				Food & Beverage Industry Events & Entertainment Retail & Consumer Goods	7, 9, 16	M-H	M-H	M-H	M-L	
Malta			Near Waterless Laundry system	Health & Sanitation ML Accommodations	7, 20	M-H	M-L	M-L	M-H	
			Sustainable kitchenware cleaning	Food & Beverage Industry Events & Entertainment	7, 20	M-H	M-L	M-L	M-H	
			Energy and carbon management digital platform	Property Management IT & Digital Services	9, 13, 16	M-H	M-H	M-L	M-H	
			Innovative technologies for hot water and steam generation	Construction & Building Manufacturing Health & Sanitation	9, 16	M-H	M-H	M-L	M-H	
Montenegro			Solar-powered water heating in off-grid settlements	Construction & Building Property Management	7	M-L	M-H	M-L	M-H	
			Certification scheme to promote sustainable business operations	ML Accommodations Events & Entertainment	7, 8, 19, 20	M-L	M-H	M-H	M-H	
			SunChef Solar Oven	Food & Beverage Industry Events & Entertainment	7, 12, 20	M-H	M-L	M-L	M-H	
			IT-based tools to improve resource efficiency and sustainability	Food & Beverage Industry IT & Digital Services ML Accommodations	7, 9, 16	M-H	M-H	M-H	M-H	

ENERGY		Portugal	Reduce waste of water dispensed at undesired temperature	Construction & Building Property Management	7, 16	M-H	M-H	M-L	M-H
			Smart irrigation management software	Agriculture & Forestry Property Management	7, 9, 16	M-H	M-L	M-H	M-L
			Digital platform to manage and monitor the energy consumption	Property Management Events & Entertainment ML Accommodations	9, 16	M-L	M-H	M-L	M-H
			Automate and optimize water usage for irrigation	Agriculture & Forestry	7, 9, 16	M-H	M-L	M-H	M-L
			AI-driven Virtual Energy Manager	Property Management ML Accommodations	9, 16, 19	M-H	M-H	M-L	M-H
		Slovenia	iQwood eco-friendly wood construction system	Construction & Building Furniture & Design	7, 20	M-L	M-L	M-H	M-H
			Green Direction: sustainable cleaning practices	Health & Sanitation Food & Beverage Industry Retail & Consumer Goods	7, 8, 19	M-L	M-L	M-L	M-H
			Comprehensive energy solutions for sustainable hospitality	Property Management ML Accommodations	8, 9, 16, 19	M-L	M-H	M-H	M-L
			Eco-friendly glamping cabins	Construction & Building Furniture & Design ML Accommodations	12, 20	M-L	M-L	M-L	M-H
			Improve resource efficiency by using a staff collaboration platform	Human Resources & Training ML Accommodations Property Management	9, 16, 19	M-H	M-L	M-L	M-L
		Spain	Renewable Energy Communities	Construction & Building Property Management	9, 12, 16	M-H	M-H	M-H	M-L
			Smart Energy Management System using AI and IoT	Property Management ML Accommodations	9, 15, 16	M-H	M-H	M-H	M-H
			Water-saving tap device to reduce water waste	Property Management Construction & Building	7	M-H	M-H	M-L	M-H
			Advanced Water Management Solutions using IoT	Property Management Events & Entertainment Health & Sanitation	7, 9, 15, 16	M-H	M-H	M-L	M-H
			Energy efficient indoor climate control using IoT	Property Management Retail & Consumer Goods Food & Beverage Industry	9, 16	M-H	M-L	M-L	M-H
			Smart and efficient laundry solutions	Health & Sanitation Property Management Food & Beverage Industry	7, 9, 16	M-L	M-L	M-L	M-L
			An assisted pathway towards sustainability in the food industry	Food & Beverage Industry	7, 8, 19, 20	M-L	M-H	M-H	M-L

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ENERGY	Adopting circularity	The Netherlands	Hydraloop: In-house water recycling systems	Construction & Building Property Management ML Accommodations	7, 8, 9, 16	M-H	M-H	M-L	M-H
			Heat Battery ensuring gas-free heating all year round	Construction & Building Health & Sanitation	12	M-H	M-L	M-H	M-L
			Powering low-energy devices with plant-generated electricity	Property Management Events & Entertainment Agriculture & Forestry	12	M-H	M-L	M-L	M-H
			Blue Energy: creating electricity from fresh and salt water	Construction & Building Logistics & Transportation	12	M-H	M-H	M-H	M-L
			Reduce energy consumption by recovering heat from wastewater	Construction & Building Property Management	12, 16	M-H	M-L	M-L	M-L
			Passive Construction: a building approach focused on energy efficiency	Construction & Building	12	M-H	M-H	M-H	M-L
			AI-supported software for advancing buildings decarbonization	Property Management IT & Digital Services ML Accommodations	9, 15, 16, 19	M-H	M-H	M-H	M-H
	Adopting circularity	Germany	Circular Living: a climate-friendly hotel room concept	Furniture & Design Construction & Building ML Accommodations	7, 12	M-H	M-L	M-H	M-L
			Self-sufficient stationary eco-toilets	Health & Sanitation Events & Entertainment Property Management	7, 20	M-H	M-L	M-L	M-H
			Using seaweed as insulation material	Construction & Building	7, 12	M-H	M-L	M-L	M-L
		Latvia	Ecowool as thermal insulation material	Construction & Building	7, 12	M-H	M-L	M-L	M-L
		The Netherlands	Hydraloop: In-house water recycling systems	Construction & Building Property Management ML Accommodations	7, 8, 9, 16	M-H	M-H	M-L	M-H
			The Waste Transformers: give a value to food waste	Construction & Building Food & Beverage Industry Agriculture & Forestry	7, 12	M-L	M-H	M-H	M-L
			Powering low-energy devices with plant-generated electricity	Property Management Events & Entertainment Agriculture & Forestry	12	M-H	M-L	M-L	M-H
	Reduce energy consumption by recovering heat from wastewater		Construction & Building Property Management	12, 16	M-H	M-L	M-L	M-L	
	Waste management	Germany	Circular Living: a climate-friendly hotel room concept	Furniture & Design Construction & Building ML Accommodations	7, 12	M-H	M-L	M-H	M-L
			Self-sufficient stationary eco-toilets	Health & Sanitation Events & Entertainment Property Management	7, 20	M-H	M-L	M-L	M-H
			Using seaweed as insulation material	Construction & Building	7, 12	M-H	M-L	M-L	M-L

<b>ENERGY</b>		<b>Latvia</b>	<b>Ecowool as thermal insulation material</b>	Construction & Building	7, 12	M-H	M-L	M-L	M-L
			<b>Autonomous Robotic Kitchen System</b>	Food & Beverage Industry Events & Entertainment Retail & Consumer Goods	7, 9, 16	M-H	M-H	M-H	M-L
		<b>Malta</b>	<b>Near Waterless Laundry system</b>	Health & Sanitation ML Accommodations	7, 20	M-H	M-L	M-L	M-H
			<b>Sustainable kitchenware cleaning</b>	Food & Beverage Industry Events & Entertainment	7, 20	M-H	M-L	M-L	M-H
		<b>Montenegro</b>	<b>Certification scheme to promote sustainable business operations</b>	ML Accommodations Events & Entertainment	7, 8, 19, 20	M-L	M-H	M-H	M-H
		<b>Portugal</b>	<b>Reduce waste of water dispensed at undesired temperature</b>	Construction & Building Property Management	7, 16	M-H	M-H	M-L	M-H
		<b>Slovenia</b>	<b>iQwood eco-friendly wood construction system</b>	Construction & Building Furniture & Design	7, 20	M-L	M-L	M-H	M-H
		<b>Spain</b>	<b>Water-saving tap device to reduce water waste</b>	Property Management Construction & Building	7	M-H	M-H	M-L	M-H
			<b>An assisted pathway towards sustainability in the food industry</b>	Food & Beverage Industry	7, 8, 19, 20	M-L	M-H	M-H	M-L
		<b>The Netherlands</b>	<b>Hydraloop: In-house water recycling systems</b>	Construction & Building Property Management ML Accommodations	7, 8, 9, 16	M-H	M-H	M-L	M-H
			<b>The Waste Transformers: give a value to food waste</b>	Construction & Building Food & Beverage Industry Agriculture & Forestry	7, 12	M-L	M-H	M-H	M-L
		<b>Innovation knowledge-gap</b>	<b>Malta</b>	<b>Innovative technologies for hot water and steam generation</b>	Construction & Building Manufacturing Health & Sanitation	9, 16	M-H	M-H	M-L
	<b>Montenegro</b>		<b>Certification scheme to promote sustainable business operations</b>	ML Accommodations Events & Entertainment	7, 8, 19, 20	M-L	M-H	M-H	M-H
	<b>Slovenia</b>		<b>Planet Positive Event: Assess the sustainability of events</b>	Events & Entertainment IT & Digital Services	7, 8, 13, 20	M-H	M-L	M-L	M-H
			<b>Comprehensive energy solutions for sustainable hospitality</b>	Property Management ML Accommodations	8, 9, 16, 19	M-L	M-H	M-H	M-L
	<b>Spain</b>		<b>Renewable Energy Communities</b>	Construction & Building Property Management	9, 12, 16	M-H	M-H	M-H	M-L
			<b>An assisted pathway towards sustainability in the food industry</b>	Food & Beverage Industry	7, 8, 19, 20	M-L	M-H	M-H	M-L
	<b>The Netherlands</b>	<b>Passive Construction: a building approach focused on energy efficiency</b>	Construction & Building	12	M-H	M-H	M-H	M-L	

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ENERGY	Technical capacity	Germany	Circular Living: a climate-friendly hotel room concept	Furniture & Design Construction & Building ML Accommodations	7, 12	M-H	M-L	M-H	M-L
			Using seaweed as insulation material	Construction & Building	7, 12	M-H	M-L	M-L	M-L
		Latvia	Machine Learning Technology for Smart energy usage	Property Management IT & Digital Services	9, 16	M-H	M-H	M-H	M-H
		Malta	Energy and carbon management digital platform	Property Management IT & Digital Services	9, 13, 16	M-H	M-H	M-L	M-H
			Innovative technologies for hot water and steam generation	Construction & Building Manufacturing Health & Sanitation	9, 16	M-H	M-H	M-L	M-H
		Montenegro	Solar-powered water heating in off-grid settlements	Construction & Building Property Management	7	M-L	M-H	M-L	M-H
			IT-based tools to improve resource efficiency and sustainability	Food & Beverage Industry IT & Digital Services ML Accommodations	7, 9, 16	M-H	M-H	M-H	M-H
		Portugal	Digital platform to manage and monitor the energy consumption	Property Management Events & Entertainment ML Accommodations	9, 16	M-L	M-H	M-L	M-H
		Slovenia	Planet Positive Event: Assess the sustainability of events	Events & Entertainment IT & Digital Services	7, 8, 13, 20	M-H	M-L	M-L	M-H
			Green Direction: sustainable cleaning practices	Health & Sanitation Food & Beverage Industry Retail & Consumer Goods	7, 8, 19	M-L	M-L	M-L	M-H
			Comprehensive energy solutions for sustainable hospitality	Property Management ML Accommodations	8, 9, 16, 19	M-L	M-H	M-H	M-L
			Eco-friendly glamping cabins	Construction & Building Furniture & Design ML Accommodations	12, 20	M-L	M-L	M-L	M-H
			Improve resource efficiency by using a staff collaboration platform	Human Resources & Training ML Accommodations Property Management	9, 16, 19	M-H	M-L	M-L	M-L
		Spain	Renewable Energy Communities	Construction & Building Property Management	9, 12, 16	M-H	M-H	M-H	M-L
			Smart Energy Management System using AI and IoT	Property Management ML Accommodations	9, 15, 16	M-H	M-H	M-H	M-H
			Water-saving tap device to reduce water waste	Property Management Construction & Building	7	M-H	M-H	M-L	M-H
			Advanced Water Management Solutions using IoT	Property Management Events & Entertainment Health & Sanitation	7, 9, 15, 16	M-H	M-H	M-L	M-H

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<b>ENERGY</b>	<b>Real-Time monitoring</b>		<b>Energy efficient indoor climate control using IoT</b>	Property Management Retail & Consumer Goods Food & Beverage Industry	9, 16	M-H	M-L	M-L	M-H
		<b>The Netherlands</b>	<b>Heat Battery ensuring gas-free heating all year round</b>	Construction & Building Health & Sanitation	12	M-H	M-L	M-H	M-L
			<b>The Waste Transformers: give a value to food waste</b>	Construction & Building Food & Beverage Industry Agriculture & Forestry	7, 12	M-L	M-H	M-H	M-L
			<b>Powering low-energy devices with plant-generated electricity</b>	Property Management Events & Entertainment Agriculture & Forestry	12	M-H	M-L	M-L	M-H
			<b>Blue Energy: creating electricity from fresh and salt water</b>	Construction & Building Logistics & Transportation	12	M-H	M-H	M-H	M-L
			<b>Reduce energy consumption by recovering heat from wastewater</b>	Construction & Building Property Management	12, 16	M-H	M-L	M-L	M-L
			<b>Passive Construction: a building approach focused on energy efficiency</b>	Construction & Building	12	M-H	M-H	M-H	M-L
	<b>Germany</b>	<b>Sustainability Management Platform to maximise hotels' resource savings</b>	Property Management IT & Digital Services ML Accommodations	9, 16	M-L	M-H	M-L	M-H	
	<b>Latvia</b>	<b>Machine Learning Technology for Smart energy usage</b>	Property Management IT & Digital Services	9, 16	M-H	M-H	M-H	M-H	
	<b>Malta</b>	<b>Energy and carbon management digital platform</b>	Property Management IT & Digital Services	9, 13, 16	M-H	M-H	M-L	M-H	
		<b>Innovative technologies for hot water and steam generation</b>	Construction & Building Manufacturing Health & Sanitation	9, 16	M-H	M-H	M-L	M-H	
	<b>Montenegro</b>	<b>IT-based tools to improve resource efficiency and sustainability</b>	Food & Beverage Industry IT & Digital Services ML Accommodations	7, 9, 16	M-H	M-H	M-H	M-H	
	<b>Portugal</b>	<b>Reduce waste of water dispensed at undesired temperature</b>	Construction & Building Property Management	7, 16	M-H	M-H	M-L	M-H	
		<b>Smart irrigation management software</b>	Agriculture & Forestry Property Management	7, 9, 16	M-H	M-L	M-H	M-L	
		<b>Digital platform to manage and monitor the energy consumption</b>	Property Management Events & Entertainment ML Accommodations	9, 16	M-L	M-H	M-L	M-H	
		<b>Automate and optimize water usage for irrigation</b>	Agriculture & Forestry	7, 9, 16	M-H	M-L	M-H	M-L	
		<b>AI-driven Virtual Energy Manager</b>	Property Management ML Accommodations	9, 16, 19	M-H	M-H	M-L	M-H	

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ENERGY		Slovenia	Improve resource efficiency by using a staff collaboration platform	Human Resources & Training ML Accommodations Property Management	9, 16, 19	M-H	M-L	M-L	M-L
		Spain	Smart Energy Management System using AI and IoT	Property Management ML Accommodations	9, 15, 16	M-H	M-H	M-H	M-H
			Advanced Water Management Solutions using IoT	Property Management Events & Entertainment Health & Sanitation	7, 9, 15, 16	M-H	M-H	M-L	M-H
			Energy efficient indoor climate control using IoT	Property Management Retail & Consumer Goods Food & Beverage Industry	9, 16	M-H	M-L	M-L	M-H
			Smart and efficient laundry solutions	Health & Sanitation Property Management Food & Beverage Industry	7, 9, 16	M-L	M-L	M-L	M-L
		The Netherlands	Hydraloop: In-house water recycling systems	Construction & Building Property Management ML Accommodations	7, 8, 9, 16	M-H	M-H	M-L	M-H
			Reduce energy consumption by recovering heat from wastewater	Construction & Building Property Management	12, 16	M-H	M-L	M-L	M-L
			AI-supported software for advancing buildings decarbonization	Property Management IT & Digital Services ML Accommodations	9, 15, 16, 19	M-H	M-H	M-H	M-H
		Price/Quality balance	Montenegro	SunChef Solar Oven	Food & Beverage Industry Events & Entertainment	7, 12, 20	M-H	M-L	M-L
	Slovenia		Eco-friendly glamping cabins	Construction & Building Furniture & Design ML Accommodations	12, 20	M-L	M-L	M-L	M-H
	The Netherlands		Passive Construction: a building approach focused on energy efficiency	Construction & Building	12	M-H	M-H	M-H	M-L
	High investments	Germany	Self-sufficient stationary eco-toilets	Health & Sanitation Events & Entertainment Property Management	7, 20	M-H	M-L	M-L	M-H
		Portugal	Reduce waste of water dispensed at undesired temperature	Construction & Building Property Management	7, 16	M-H	M-H	M-L	M-H
		Slovenia	Comprehensive energy solutions for sustainable hospitality	Property Management ML Accommodations	8, 9, 16, 19	M-L	M-H	M-H	M-L
			Eco-friendly glamping cabins	Construction & Building Furniture & Design ML Accommodations	12, 20	M-L	M-L	M-L	M-H
		Spain	Water-saving tap device to reduce water waste	Property Management Construction & Building	7	M-H	M-H	M-L	M-H



ENERGY	Client nudging	Portugal	AI-driven Virtual Energy Manager	Property Management ML Accommodations	9, 16, 19	M-H	M-H	M-L	M-H
		Spain	Smart Energy Management System using AI and IoT	Property Management ML Accommodations	9, 15, 16	M-H	M-H	M-H	M-H
		The Netherlands	AI-supported software for advancing buildings decarbonization	Property Management IT & Digital Services ML Accommodations	9, 15, 16, 19	M-H	M-H	M-H	M-H
	Staff nudging	Germany	Sustainability Management Platform to maximise hotels' resource savings	Property Management IT & Digital Services ML Accommodations	9, 16	M-L	M-H	M-L	M-H
			Montenegro	Certification scheme to promote sustainable business operations	ML Accommodations Events & Entertainment	7, 8, 19, 20	M-L	M-H	M-H
		Portugal	Digital platform to manage and monitor the energy consumption	Property Management Events & Entertainment ML Accommodations	9, 16	M-L	M-H	M-L	M-H
			AI-driven Virtual Energy Manager	Property Management ML Accommodations	9, 16, 19	M-H	M-H	M-L	M-H
		Slovenia	Green Direction: sustainable cleaning practices	Health & Sanitation Food & Beverage Industry Retail & Consumer Goods	7, 8, 19	M-L	M-L	M-L	M-H
			Improve resource efficiency by using a staff collaboration platform	Human Resources & Training ML Accommodations Property Management	9, 16, 19	M-H	M-L	M-L	M-L
		Spain	An assisted pathway towards sustainability in the food industry	Food & Beverage Industry	7, 8, 19, 20	M-L	M-H	M-H	M-L
		The Netherlands	AI-supported software for advancing buildings decarbonization	Property Management IT & Digital Services ML Accommodations	9, 15, 16, 19	M-H	M-H	M-H	M-H
		TRANSPORT	Resource efficiency	Latvia	Mosphera Electric Scooters to enhance exploring opportunities	Logistics & Transportation Agriculture & Forestry	6, 12, 20	M-H	M-H
Electric Mobility Solutions for logistics & outdoor activities	Logistics & Transportation Events & Entertainment				6, 16, 20	M-H	M-H	M-L	M-L
Electric amphibious vehicle for land & water explorations	Events & Entertainment Logistics & Transportation				7, 12, 20	M-H	M-H	M-L	M-L

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TRANSPORT		The Netherlands	Using nudging and gamification to influence commuting behaviour	Human Resources & Training IT & Digital Services Logistics & Transportation	6, 9, 16	M-L	M-L	M-L	M-H
	Adopting circularity	Portugal	Bamboo Bicycles for sustainable mobility	Logistics & Transportation Events & Entertainment	6, 7, 12, 20	M-H	M-L	M-L	M-H
	Waste management	Portugal	Bamboo Bicycles for sustainable mobility	Logistics & Transportation Events & Entertainment	6, 7, 12, 20	M-H	M-L	M-L	M-H
	Innovation knowledge-gap	Portugal	Fostering sustainability through Corporate Social Responsibility projects	Human Resources & Training ML Accommodations	7, 8, 19, 20	M-L	M-H	M-L	M-H
	Technical capacity	Portugal	Fostering sustainability through Corporate Social Responsibility projects	Human Resources & Training ML Accommodations	7, 8, 19, 20	M-L	M-H	M-L	M-H
		Slovenia	AI-driven personalized digital guides	Events & Entertainment IT & Digital Services	9, 15, 16, 20	M-H	M-L	M-H	M-L
		Spain	App to create connected mobility ecosystem	IT & Digital Services Logistics & Transportation	6, 9, 10, 16	M-L	M-L	M-H	M-L
	Real-Time monitoring	Slovenia	AI-driven personalized digital guides	Events & Entertainment IT & Digital Services	9, 15, 16, 20	M-H	M-L	M-H	M-L
		The Netherlands	Using nudging and gamification to influence commuting behaviour	Human Resources & Training IT & Digital Services Logistics & Transportation	6, 9, 16	M-L	M-L	M-L	M-H
	Price/Quality balance	Latvia	Mosphera Electric Scooters to enhance exploring opportunities	Logistics & Transportation Agriculture & Forestry	6, 12, 20	M-H	M-H	M-L	M-H
			Electric Mobility Solutions for logistics & outdoor activities	Logistics & Transportation Events & Entertainment	6, 16, 20	M-H	M-H	M-L	M-L
			Electric amphibious vehicle for land & water explorations	Events & Entertainment Logistics & Transportation	7, 12, 20	M-H	M-H	M-L	M-L

TRANSPORT	High investments	Portugal	Bamboo Bicycles for sustainable mobility	Logistics & Transportation Events & Entertainment	6, 7, 12, 20	M-H	M-L	M-L	M-H	
		Spain	App to create connected mobility ecosystem	IT & Digital Services Logistics & Transportation	6, 9, 10, 16	M-L	M-L	M-H	M-L	
		Client nudging	Latvia	Mosphera Electric Scooters to enhance exploring opportunities	Logistics & Transportation Agriculture & Forestry	6, 12, 20	M-H	M-H	M-L	M-H
			Portugal	Fostering sustainability through Corporate Social Responsibility projects	Human Resources & Training ML Accommodations	7, 8, 19, 20	M-L	M-H	M-L	M-H
			Slovenia	AI-driven personalized digital guides	Events & Entertainment IT & Digital Services	9, 15, 16, 20	M-H	M-L	M-H	M-L
	Staff nudging	Spain	App to create connected mobility ecosystem	IT & Digital Services Logistics & Transportation	6, 9, 10, 16	M-L	M-L	M-H	M-L	
		Portugal	Fostering sustainability through Corporate Social Responsibility projects	Human Resources & Training ML Accommodations	7, 8, 19, 20	M-L	M-H	M-L	M-H	
	FOOD	Resource efficiency	The Netherlands	Using nudging and gamification to influence commuting behaviour	Human Resources & Training IT & Digital Services Logistics & Transportation	6, 9, 16	M-L	M-L	M-L	M-H
			Germany	Kitchen Cooking Robotics: A fully autonomous kitchen ecosystem	Food & Beverage Industry	7, 9, 16	M-H	M-H	M-H	M-L
			Latvia	Autonomous Robotic Kitchen System	Food & Beverage Industry Events & Entertainment Retail & Consumer Goods	7, 9, 16	M-H	M-H	M-H	M-L
Malta			Applying oil filters to extend the life of cooking oil	Food & Beverage Industry	7, 20	M-H	M-L	M-L	M-H	
			Paperless Smart Kitchen automated HACCP plan	Food & Beverage Industry Health & Sanitation Events & Entertainment	7, 9, 16	M-H	M-H	M-H	M-L	
Spain		An assisted pathway towards sustainability in the food industry	Food & Beverage Industry	7, 8, 19, 20	M-L	M-H	M-H	M-L		
Adopting circularity		Latvia	Recycling coffee waste into sustainable products	Retail & Consumer Goods Food & Beverage Industry Manufacturing	7, 12, 20	M-H	M-L	M-L	M-H	
		Portugal	Community Corporate Garden	Agriculture & Forestry Human Resources & Training	7, 8, 12, 20	M-H	M-L	M-L	M-L	
		Slovenia	Bokashi composting solutions for organic waste management	Food & Beverage Industry Agriculture & Forestry	7, 12, 20	M-H	M-H	M-L	M-H	
		Spain	AI-based system for food waste reduction and composting	Food & Beverage Industry Health & Sanitation	7, 9, 15, 16	M-H	M-H	M-L	M-H	

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<b>FOOD</b>	<b>Waste management</b>	<b>The Netherlands</b>	<b>The Waste Transformers: give a value to food waste</b>	Construction & Building Food & Beverage Industry Agriculture & Forestry	7, 12	M-L	M-H	M-H	M-L
		<b>Germany</b>	<b>Kitchen Cooking Robotics: A fully autonomous kitchen ecosystem</b>	Food & Beverage Industry	7, 9, 16	M-H	M-H	M-H	M-L
			<b>Best practices to reduce food waste</b>	Human Resources & Training Food & Beverage Industry	8, 12, 20	M-L	M-H	M-L	M-H
		<b>Latvia</b>	<b>Recycling coffee waste into sustainable products</b>	Retail & Consumer Goods Food & Beverage Industry Manufacturing	7, 12, 20	M-H	M-L	M-L	M-H
			<b>Autonomous Robotic Kitchen System</b>	Food & Beverage Industry Events & Entertainment Retail & Consumer Goods	7, 9, 16	M-H	M-H	M-H	M-L
		<b>Malta</b>	<b>Applying oil filters to extend the life of cooking oil</b>	Food & Beverage Industry	7, 20	M-H	M-L	M-L	M-H
			<b>Paperless Smart Kitchen automated HACCP plan</b>	Food & Beverage Industry Health & Sanitation Events & Entertainment	7, 9, 16	M-H	M-H	M-H	M-L
		<b>Slovenia</b>	<b>Bokashi composting solutions for organic waste management</b>	Food & Beverage Industry Agriculture & Forestry	7, 12, 20	M-H	M-H	M-L	M-H
			<b>App to reduce food waste by connecting food providers &amp; consumers</b>	Food & Beverage Industry	7, 9, 10, 16	M-H	M-L	M-L	M-H
		<b>Spain</b>	<b>AI-based system for food waste reduction and composting</b>	Food & Beverage Industry Health & Sanitation	7, 9, 15, 16	M-H	M-H	M-L	M-H
			<b>An assisted pathway towards sustainability in the food industry</b>	Food & Beverage Industry	7, 8, 19, 20	M-L	M-H	M-H	M-L
		<b>The Netherlands</b>	<b>The Waste Transformers: give a value to food waste</b>	Construction & Building Food & Beverage Industry Agriculture & Forestry	7, 12	M-L	M-H	M-H	M-L
			<b>Automated food waste monitoring system</b>	Food & Beverage Industry Events & Entertainment ML Accommodations	7, 9, 16, 20	M-H	M-L	M-L	M-H
		<b>Innovation knowledge-gap</b>	<b>Portugal</b>	<b>Community Corporate Garden</b>	Agriculture & Forestry Human Resources & Training	7, 8, 12, 20	M-H	M-L	M-L
	<b>Slovenia</b>		<b>Planet Positive Event: Assess the sustainability of events</b>	Events & Entertainment IT & Digital Services	7, 8, 13, 20	M-H	M-L	M-L	M-H
	<b>Spain</b>		<b>An assisted pathway towards sustainability in the food industry</b>	Food & Beverage Industry	7, 8, 19, 20	M-L	M-H	M-H	M-L
	<b>Technical capacity</b>	<b>Germany</b>	<b>Best practices to reduce food waste</b>	Human Resources & Training Food & Beverage Industry	8, 12, 20	M-L	M-H	M-L	M-H
		<b>Latvia</b>	<b>Recycling coffee waste into sustainable products</b>	Retail & Consumer Goods Food & Beverage Industry Manufacturing	7, 12, 20	M-H	M-L	M-L	M-H

<b>FOOD</b>		<b>Malta</b>	<b>Paperless Smart Kitchen automated HACCP plan</b>	Food & Beverage Industry Health & Sanitation Events & Entertainment	7, 9, 16	M-H	M-H	M-H	M-L
		<b>Slovenia</b>	<b>Planet Positive Event: Assess the sustainability of events</b>	Events & Entertainment IT & Digital Services	7, 8, 13, 20	M-H	M-L	M-L	M-H
			<b>Bokashi composting solutions for organic waste management</b>	Food & Beverage Industry Agriculture & Forestry	7, 12, 20	M-H	M-H	M-L	M-H
			<b>App to reduce food waste by connecting food providers &amp; consumers</b>	Food & Beverage Industry	7, 9, 10, 16	M-H	M-L	M-L	M-H
		<b>Spain</b>	<b>AI-based system for food waste reduction and composting</b>	Food & Beverage Industry Health & Sanitation	7, 9, 15, 16	M-H	M-H	M-L	M-H
		<b>The Netherlands</b>	<b>The Waste Transformers: give a value to food waste</b>	Construction & Building Food & Beverage Industry Agriculture & Forestry	7, 12	M-L	M-H	M-H	M-L
			<b>Automated food waste monitoring system</b>	Food & Beverage Industry Events & Entertainment ML Accommodations	7, 9, 16, 20	M-H	M-L	M-L	M-H
	<b>Real-Time monitoring</b>	<b>Malta</b>	<b>Paperless Smart Kitchen automated HACCP plan</b>	Food & Beverage Industry Health & Sanitation Events & Entertainment	7, 9, 16	M-H	M-H	M-H	M-L
		<b>Spain</b>	<b>AI-based system for food waste reduction and composting</b>	Food & Beverage Industry Health & Sanitation	7, 9, 15, 16	M-H	M-H	M-L	M-H
		<b>The Netherlands</b>	<b>Automated food waste monitoring system</b>	Food & Beverage Industry Events & Entertainment ML Accommodations	7, 9, 16, 20	M-H	M-L	M-L	M-H
	<b>Price/ Quality balance</b>	<b>Slovenia</b>	<b>App to reduce food waste by connecting food providers &amp; consumers</b>	Food & Beverage Industry	7, 9, 10, 16	M-H	M-L	M-L	M-H
	<b>High investments</b>	<b>Germany</b>	<b>Best practices to reduce food waste</b>	Human Resources & Training Food & Beverage Industry	8, 12, 20	M-L	M-H	M-L	M-H
		<b>Portugal</b>	<b>Community Corporate Garden</b>	Agriculture & Forestry Human Resources & Training	7, 8, 12, 20	M-H	M-L	M-L	M-L

FOOD	Client nudging	Slovenia	Bokashi composting solutions for organic waste management	Food & Beverage Industry Agriculture & Forestry	7, 12, 20	M-H	M-H	M-L	M-H
			App to reduce food waste by connecting food providers & consumers	Food & Beverage Industry	7, 9, 10, 16	M-H	M-L	M-L	M-H
	Staff nudging	Germany	Best practices to reduce food waste	Human Resources & Training Food & Beverage Industry	8, 12, 20	M-L	M-H	M-L	M-H
		Portugal	Community Corporate Garden	Agriculture & Forestry Human Resources & Training	7, 8, 12, 20	M-H	M-L	M-L	M-L
		Spain	An assisted pathway towards sustainability in the food industry	Food & Beverage Industry	7, 8, 19, 20	M-L	M-H	M-H	M-L
The Netherlands	Automated food waste monitoring system	Food & Beverage Industry Events & Entertainment ML Accommodations	7, 9, 16, 20	M-H	M-L	M-L	M-H		
PLASTIC	Resource efficiency	Germany	Circular Living: a climate-friendly hotel room concept	Furniture & Design Construction & Building ML Accommodations	7, 12	M-H	M-L	M-H	M-L
		Latvia	Autonomous Robotic Kitchen System	Food & Beverage Industry Events & Entertainment Retail & Consumer Goods	7, 9, 16	M-H	M-H	M-H	M-L
		Malta	Using water filters to get clean drinking water from the tap	Health & Sanitation Food & Beverage Industry Property Management	7, 20	M-L	M-L	M-L	M-H
		Montenegro	Certification scheme to promote sustainable business operations	ML Accommodations Events & Entertainment	7, 8, 19, 20	M-L	M-H	M-H	M-H
	Adopting circularity	Germany	Implementing a 'Cradle to Cradle' design concept	Construction & Building Furniture & Design Manufacturing	7, 8, 19	M-H	M-H	M-H	M-L
			ReCup: an integrated network for reusable cups and bowls	Food & Beverage Industry	7, 9, 10, 16	M-L	M-H	M-L	M-H
			Circular Living: a climate-friendly hotel room concept	Furniture & Design Construction & Building ML Accommodations	7, 12	M-H	M-L	M-H	M-L
		Latvia	Eco-friendly biodegradable clothing hangers	Furniture & Design Retail & Consumer Goods	7, 12	M-L	M-L	M-L	M-H
			Restoring and upcycling old furniture	Furniture & Design Property Management Retail & Consumer Goods	7, 8, 12	M-L	M-L	M-L	M-L
			CHUM - compostable & eatable tableware	Food & Beverage Industry Events & Entertainment Retail & Consumer Goods	7, 12, 20	M-H	M-L	M-L	M-H

PLASTIC	Waste management	Malta	Eco-friendly packaging solutions	Retail & Consumer Goods Events & Entertainment Manufacturing	7, 20	M-L	M-L	M-L	M-H
			Using water filters to get clean drinking water from the tap	Health & Sanitation Food & Beverage Industry Property Management	7, 20	M-L	M-L	M-L	M-H
		Montenegro	Eco-Board outdoor furniture made of recycled plastic	Furniture & Design Construction & Building Property Management	7, 12	M-H	M-L	M-L	M-H
			AI-powered smart waste management system	Property Management Food & Beverage Industry	7, 9, 20	M-H	M-L	M-L	M-L
			Implementing measures to reduce plastic waste	Food & Beverage Industry Health & Sanitation Retail & Consumer Goods	7, 8, 19, 20	M-L	M-H	M-L	M-L
		Portugal	Sustainable plastic packaging	Manufacturing Food & Beverage Industry Retail & Consumer Goods	7	M-L	M-L	M-L	M-H
			App-based reusable food packaging system	Food & Beverage Industry Retail & Consumer Goods	7, 9, 12, 16	M-H	M-H	M-L	M-L
			Heritage-inspired sustainable furniture	Furniture & Design Manufacturing Retail & Consumer Goods	7, 12, 20	M-L	M-L	M-L	M-L
			Transforming waste into valuable products	Manufacturing Furniture & Design Retail & Consumer Goods	7, 12, 20	M-H	M-H	M-H	M-H
		Slovenia	Sustainable footwear for guests	Furniture & Design ML Accommodations	7, 20	M-L	M-L	M-L	M-H
			Circular LAB: Develop and implement circular economy solutions	Furniture & Design Property Management	7, 12, 20	M-L	M-H	M-H	M-L
		Spain	Eco-friendly packaging solutions for food & beverage	Food & Beverage Industry Events & Entertainment Retail & Consumer Goods	7, 20	M-L	M-L	M-L	M-H
		The Netherlands	Replacing plastic items in outdoor areas with biobased products	Agriculture & Forestry Property Management	7, 20	M-L	M-L	M-L	M-H
		Germany	Implementing a 'Cradle to Cradle' design concept	Construction & Building Furniture & Design Manufacturing	7, 8, 19	M-H	M-H	M-H	M-L
			ReCup: an integrated network for reusable cups and bowls	Food & Beverage Industry	7, 9, 10, 16	M-L	M-H	M-L	M-H
			Circular Living: a climate-friendly hotel room concept	Furniture & Design Construction & Building ML Accommodations	7, 12	M-H	M-L	M-H	M-L

PLASTIC		Latvia	Eco-friendly biodegradable clothing hangers	Furniture & Design Retail & Consumer Goods	7, 12	M-L	M-L	M-L	M-H
			Restoring and upcycling old furniture	Furniture & Design Property Management Retail & Consumer Goods	7, 8, 12	M-L	M-L	M-L	M-L
			CHUM - compostable & eatable tableware	Food & Beverage Industry Events & Entertainment Retail & Consumer Goods	7, 12, 20	M-H	M-L	M-L	M-H
			Autonomous Robotic Kitchen System	Food & Beverage Industry Events & Entertainment Retail & Consumer Goods	7, 9, 16	M-H	M-H	M-H	M-L
		Malta	Eco-friendly packaging solutions	Retail & Consumer Goods Events & Entertainment Manufacturing	7, 20	M-L	M-L	M-L	M-H
			Using water filters to get clean drinking water from the tap	Health & Sanitation Food & Beverage Industry Property Management	7, 20	M-L	M-L	M-L	M-H
		Montenegro	Eco-Board outdoor furniture made of recycled plastic	Furniture & Design Construction & Building Property Management	7, 12	M-H	M-L	M-L	M-H
			Certification scheme to promote sustainable business operations	ML Accommodations Events & Entertainment	7, 8, 19, 20	M-L	M-H	M-H	M-H
			AI-powered smart waste management system	Property Management Food & Beverage Industry	7, 9, 20	M-H	M-L	M-L	M-L
			Implementing measures to reduce plastic waste	Food & Beverage Industry Health & Sanitation Retail & Consumer Goods	7, 8, 19, 20	M-L	M-H	M-L	M-L
		Portugal	Sustainable plastic packaging	Manufacturing Food & Beverage Industry Retail & Consumer Goods	7	M-L	M-L	M-L	M-H
			App-based reusable food packaging system	Food & Beverage Industry Retail & Consumer Goods	7, 9, 12, 16	M-H	M-H	M-L	M-L
			Heritage-inspired sustainable furniture	Furniture & Design Manufacturing Retail & Consumer Goods	7, 12, 20	M-L	M-L	M-L	M-L
			Transforming waste into valuable products	Manufacturing Furniture & Design Retail & Consumer Goods	7, 12, 20	M-H	M-H	M-H	M-H
		Slovenia	Sustainable footwear for guests	Furniture & Design ML Accommodations	7, 20	M-L	M-L	M-L	M-H
			Circular LAB: Develop and implement circular economy solutions	Furniture & Design Property Management	7, 12, 20	M-L	M-H	M-H	M-L

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PLASTIC		Spain	Eco-friendly packaging solutions for food & beverage	Food & Beverage Industry Events & Entertainment Retail & Consumer Goods	7, 20	M-L	M-L	M-L	M-H
		The Netherlands	Replacing plastic items in outdoor areas with biobased products	Agriculture & Forestry Property Management	7, 20	M-L	M-L	M-L	M-H
	Innovation knowledge-gap	Germany	Implementing a 'Cradle to Cradle' design concept	Construction & Building Furniture & Design Manufacturing	7, 8, 19	M-H	M-H	M-H	M-L
		Montenegro	Certification scheme to promote sustainable business operations	ML Accommodations Events & Entertainment	7, 8, 19, 20	M-L	M-H	M-H	M-H
			Implementing measures to reduce plastic waste	Food & Beverage Industry Health & Sanitation Retail & Consumer Goods	7, 8, 19, 20	M-L	M-H	M-L	M-L
		Slovenia	Planet Positive Event: Assess the sustainability of events	Events & Entertainment IT & Digital Services	7, 8, 13, 20	M-H	M-L	M-L	M-H
	Technical capacity	Germany	Implementing a 'Cradle to Cradle' design concept	Construction & Building Furniture & Design Manufacturing	7, 8, 19	M-H	M-H	M-H	M-L
			Circular Living: a climate-friendly hotel room concept	Furniture & Design Construction & Building ML Accommodations	7, 12	M-H	M-L	M-H	M-L
		Latvia	Restoring and upcycling old furniture	Furniture & Design Property Management Retail & Consumer Goods	7, 8, 12	M-L	M-L	M-L	M-L
		Portugal	Sustainable plastic packaging	Manufacturing Food & Beverage Industry Retail & Consumer Goods	7	M-L	M-L	M-L	M-H
			Transforming waste into valuable products	Manufacturing Furniture & Design Retail & Consumer Goods	7, 12, 20	M-H	M-H	M-H	M-H
	Slovenia	Planet Positive Event: Assess the sustainability of events	Events & Entertainment IT & Digital Services	7, 8, 13, 20	M-H	M-L	M-L	M-H	
	Real-Time monitoring	Montenegro	AI-powered smart waste management system	Property Management Food & Beverage Industry	7, 9, 20	M-H	M-L	M-L	M-L
	Price/Quality balance	Latvia	CHUM - compostable & eatable tableware	Food & Beverage Industry Events & Entertainment Retail & Consumer Goods	7, 12, 20	M-H	M-L	M-L	M-H
		Malta	Eco-friendly packaging solutions	Retail & Consumer Goods Events & Entertainment Manufacturing	7, 20	M-L	M-L	M-L	M-H

PLASTIC			Using water filters to get clean drinking water from the tap	Health & Sanitation Food & Beverage Industry Property Management	7, 20	M-L	M-L	M-L	M-H
		Montenegro	Eco-Board outdoor furniture made of recycled plastic	Furniture & Design Construction & Building Property Management	7, 12	M-H	M-L	M-L	M-H
		Slovenia	Sustainable footwear for guests	Furniture & Design ML Accommodations	7, 20	M-L	M-L	M-L	M-H
		The Netherlands	Replacing plastic items in outdoor areas with biobased products	Agriculture & Forestry Property Management	7, 20	M-L	M-L	M-L	M-H
	High investments	Germany	ReCup: an integrated network for reusable cups and bowls	Food & Beverage Industry	7, 9, 10, 16	M-L	M-H	M-L	M-H
		Portugal	Transforming waste into valuable products	Manufacturing Furniture & Design Retail & Consumer Goods	7, 12, 20	M-H	M-H	M-H	M-H
		The Netherlands	Replacing plastic items in outdoor areas with biobased products	Agriculture & Forestry Property Management	7, 20	M-L	M-L	M-L	M-H
	Client nudging	Germany	ReCup: an integrated network for reusable cups and bowls	Food & Beverage Industry	7, 9, 10, 16	M-L	M-H	M-L	M-H
		Portugal	App-based reusable food packaging system	Food & Beverage Industry Retail & Consumer Goods	7, 9, 12, 16	M-H	M-H	M-L	M-L
		Slovenia	Sustainable footwear for guests	Furniture & Design ML Accommodations	7, 20	M-L	M-L	M-L	M-H
	Staff nudging	Montenegro	Certification scheme to promote sustainable business operations	ML Accommodations Events & Entertainment	7, 8, 19, 20	M-L	M-H	M-H	M-H
			Implementing measures to reduce plastic waste	Food & Beverage Industry Health & Sanitation Retail & Consumer Goods	7, 8, 19, 20	M-L	M-H	M-L	M-L
	FURNITURE & EQUIPMENT	Resource efficiency	Germany	Kitchen Cooking Robotics: A fully autonomous kitchen ecosystem	Food & Beverage Industry	7, 9, 16	M-H	M-H	M-H
Circular Living: a climate-friendly hotel room concept				Furniture & Design Construction & Building ML Accommodations	7, 12	M-H	M-L	M-H	M-L
Latvia			Autonomous Robotic Kitchen System	Food & Beverage Industry Events & Entertainment Retail & Consumer Goods	7, 9, 16	M-H	M-H	M-H	M-L
Montenegro			SunChef Solar Oven	Food & Beverage Industry Events & Entertainment	7, 12, 20	M-H	M-L	M-L	M-H
			Waterless toilets for off-grid settlements	Health & Sanitation Construction & Building	7	M-H	M-L	M-H	M-H
Slovenia			iQwood eco-friendly wood construction system	Construction & Building Furniture & Design	7, 20	M-L	M-L	M-H	M-H

<b>FORNITURE &amp; EQUIPMENT</b>			<b>Eco-friendly glamping cabins</b>	Construction & Building Furniture & Design ML Accommodations	12, 20	M-L	M-L	M-L	M-H	
		<b>The Netherlands</b>	<b>Passive Construction: a building approach focused on energy efficiency</b>	Construction & Building	12	M-H	M-H	M-H	M-L	
	<b>Adopting circularity</b>	<b>Germany</b>		<b>Implementing a 'Cradle to Cradle' design concept</b>	Construction & Building Furniture & Design Manufacturing	7, 8, 19	M-H	M-H	M-H	M-L
				<b>Circular Living: a climate-friendly hotel room concept</b>	Furniture & Design Construction & Building ML Accommodations	7, 12	M-H	M-L	M-H	M-L
				<b>Using seaweed as insulation material</b>	Construction & Building	7, 12	M-H	M-L	M-L	M-L
				<b>Eco-friendly seaweed pillows</b>	Furniture & Design Retail & Consumer Goods	7, 12, 20	M-H	M-L	M-L	M-L
		<b>Latvia</b>		<b>Restoring and upcycling old furniture</b>	Furniture & Design Property Management Retail & Consumer Goods	7, 8, 12	M-L	M-L	M-L	M-L
				<b>Ecowool as thermal insulation material</b>	Construction & Building	7, 12	M-H	M-L	M-L	M-L
		<b>Malta</b>		<b>Innovative materials for sustainable mattresses</b>	Furniture & Design Health & Sanitation	7, 12	M-H	M-L	M-L	M-H
		<b>Montenegro</b>		<b>Eco-Board outdoor furniture made of recycled plastic</b>	Furniture & Design Construction & Building Property Management	7, 12	M-H	M-L	M-L	M-H
				<b>AI-powered smart waste management system</b>	Property Management Food & Beverage Industry	7, 9, 20	M-H	M-L	M-L	M-L
				<b>Waterless toilets for off-grid settlements</b>	Health & Sanitation Construction & Building	7	M-H	M-L	M-H	M-H
		<b>Portugal</b>		<b>Heritage-inspired sustainable furniture</b>	Furniture & Design Manufacturing Retail & Consumer Goods	7, 12, 20	M-L	M-L	M-L	M-L
				<b>Transforming waste into valuable products</b>	Manufacturing Furniture & Design Retail & Consumer Goods	7, 12, 20	M-H	M-H	M-H	M-H
		<b>Slovenia</b>		<b>Circular LAB: Develop and implement circular economy solutions</b>	Furniture & Design Property Management	7, 12, 20	M-L	M-H	M-H	M-L

FURNITURE & EQUIPMENT	Waste management	The Netherlands	Replacing plastic items in outdoor areas with biobased products	Agriculture & Forestry Property Management	7, 20	M-L	M-L	M-L	M-H
		Germany	Kitchen Cooking Robotics: A fully autonomous kitchen ecosystem	Food & Beverage Industry	7, 9, 16	M-H	M-H	M-H	M-L
			Implementing a 'Cradle to Cradle' design concept	Construction & Building Furniture & Design Manufacturing	7, 8, 19	M-H	M-H	M-H	M-L
			Circular Living: a climate-friendly hotel room concept	Furniture & Design Construction & Building ML Accommodations	7, 12	M-H	M-L	M-H	M-L
			Using seaweed as insulation material	Construction & Building	7, 12	M-H	M-L	M-L	M-L
			Eco-friendly seaweed pillows	Furniture & Design Retail & Consumer Goods	7, 12, 20	M-H	M-L	M-L	M-L
		Latvia	Restoring and upcycling old furniture	Furniture & Design Property Management Retail & Consumer Goods	7, 8, 12	M-L	M-L	M-L	M-L
			Ecowool as thermal insulation material	Construction & Building	7, 12	M-H	M-L	M-L	M-L
			Autonomous Robotic Kitchen System	Food & Beverage Industry Events & Entertainment Retail & Consumer Goods	7, 9, 16	M-H	M-H	M-H	M-L
		Malta	Innovative materials for sustainable mattresses	Furniture & Design Health & Sanitation	7, 12	M-H	M-L	M-L	M-H
		Montenegro	Eco-Board outdoor furniture made of recycled plastic	Furniture & Design Construction & Building Property Management	7, 12	M-H	M-L	M-L	M-H
			AI-powered smart waste management system	Property Management Food & Beverage Industry	7, 9, 20	M-H	M-L	M-L	M-L
			Waterless toilets for off-grid settlements	Health & Sanitation Construction & Building	7	M-H	M-L	M-H	M-H
		Portugal	Heritage-inspired sustainable furniture	Furniture & Design Manufacturing Retail & Consumer Goods	7, 12, 20	M-L	M-L	M-L	M-L
			Transforming waste into valuable products	Manufacturing Furniture & Design Retail & Consumer Goods	7, 12, 20	M-H	M-H	M-H	M-H
		Slovenia	iQwood eco-friendly wood construction system	Construction & Building Furniture & Design	7, 20	M-L	M-L	M-H	M-H
			Circular LAB: Develop and implement circular economy solutions	Furniture & Design Property Management	7, 12, 20	M-L	M-H	M-H	M-L

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<b>FORNITURE &amp; EQUIPMENT</b>	<b>Innovation knowledge-gap</b>	<b>The Netherlands</b>	Replacing plastic items in outdoor areas with biobased products	Agriculture & Forestry Property Management	7, 20	M-L	M-L	M-L	M-H
		<b>Germany</b>	Implementing a 'Cradle to Cradle' design concept	Construction & Building Furniture & Design Manufacturing	7, 8, 19	M-H	M-H	M-H	M-L
		<b>The Netherlands</b>	Passive Construction: a building approach focused on energy efficiency	Construction & Building	12	M-H	M-H	M-H	M-L
	<b>Technical capacity</b>	<b>Germany</b>	Implementing a 'Cradle to Cradle' design concept	Construction & Building Furniture & Design Manufacturing	7, 8, 19	M-H	M-H	M-H	M-L
			Circular Living: a climate-friendly hotel room concept	Furniture & Design Construction & Building ML Accommodations	7, 12	M-H	M-L	M-H	M-L
			Using seaweed as insulation material	Construction & Building	7, 12	M-H	M-L	M-L	M-L
		<b>Latvia</b>	Restoring and upcycling old furniture	Furniture & Design Property Management Retail & Consumer Goods	7, 8, 12	M-L	M-L	M-L	M-L
		<b>Portugal</b>	Transforming waste into valuable products	Manufacturing Furniture & Design Retail & Consumer Goods	7, 12, 20	M-H	M-H	M-H	M-H
		<b>Slovenia</b>	Eco-friendly glamping cabins	Construction & Building Furniture & Design ML Accommodations	12, 20	M-L	M-L	M-L	M-H
		<b>The Netherlands</b>	Passive Construction: a building approach focused on energy efficiency	Construction & Building	12	M-H	M-H	M-H	M-L
	<b>Real-Time monitoring</b>	<b>Montenegro</b>	AI-powered smart waste management system	Property Management Food & Beverage Industry	7, 9, 20	M-H	M-L	M-L	M-L
	<b>Price/ Quality balance</b>	<b>Montenegro</b>	Eco-Board outdoor furniture made of recycled plastic	Furniture & Design Construction & Building Property Management	7, 12	M-H	M-L	M-L	M-H
		<b>Montenegro</b>	SunChef Solar Oven	Food & Beverage Industry Events & Entertainment	7, 12, 20	M-H	M-L	M-L	M-H
		<b>Slovenia</b>	Eco-friendly glamping cabins	Construction & Building Furniture & Design ML Accommodations	12, 20	M-L	M-L	M-L	M-H

STAFF NUDGING	High investments	The Netherlands	Passive Construction: a building approach focused on energy efficiency	Construction & Building	12	M-H	M-H	M-H	M-L
			Replacing plastic items in outdoor areas with biobased products	Agriculture & Forestry Property Management	7, 20	M-L	M-L	M-L	M-H
		Portugal	Transforming waste into valuable products	Manufacturing Furniture & Design Retail & Consumer Goods	7, 12, 20	M-H	M-H	M-H	M-H
		Slovenia	Eco-friendly glamping cabins	Construction & Building Furniture & Design ML Accommodations	12, 20	M-L	M-L	M-L	M-H
	The Netherlands	Replacing plastic items in outdoor areas with biobased products	Agriculture & Forestry Property Management	7, 20	M-L	M-L	M-L	M-H	
	Resource efficiency	Germany	Property Management System for Holiday Homes	Property Management IT & Digital Services	9, 16	M-L	M-L	M-L	M-H
			Sustainability Management Platform to maximise hotels' resource savings	Property Management IT & Digital Services ML Accommodations	9, 16	M-L	M-H	M-L	M-H
		Montenegro	Certification scheme to promote sustainable business operations	ML Accommodations Events & Entertainment	7, 8, 19, 20	M-L	M-H	M-H	M-H
			IT-based tools to improve resource efficiency and sustainability	Food & Beverage Industry IT & Digital Services ML Accommodations	7, 9, 16	M-H	M-H	M-H	M-H
		Portugal	Digital platform to manage and monitor the energy consumption	Property Management Events & Entertainment ML Accommodations	9, 16	M-L	M-H	M-L	M-H
			AI-driven Virtual Energy Manager	Property Management ML Accommodations	9, 16, 19	M-H	M-H	M-L	M-H
		Slovenia	Green Direction: sustainable cleaning practices	Health & Sanitation Food & Beverage Industry Retail & Consumer Goods	7, 8, 19	M-L	M-L	M-L	M-H
			Improve resource efficiency by using a staff collaboration platform	Human Resources & Training ML Accommodations Property Management	9, 16, 19	M-H	M-L	M-L	M-L
		Spain	Smart Water Management Platform leveraging IoT	Property Management Agriculture & Forestry ML Accommodations	7, 9, 15, 16	M-H	M-H	M-L	M-H
An assisted pathway towards sustainability in the food industry			Food & Beverage Industry	7, 8, 19, 20	M-L	M-H	M-H	M-L	

<b>STAFF NUDGING</b>		<b>The Netherlands</b>	AI-supported software for advancing buildings decarbonization	Property Management IT & Digital Services ML Accommodations	9, 15, 16, 19	M-H	M-H	M-H	M-H		
			Using nudging and gamification to influence commuting behaviour	Human Resources & Training IT & Digital Services Logistics & Transportation	6, 9, 16	M-L	M-L	M-L	M-H		
	<b>Adopting circularity</b>		<b>Montenegro</b>	Implementing measures to reduce plastic waste	Food & Beverage Industry Health & Sanitation Retail & Consumer Goods	7, 8, 19, 20	M-L	M-H	M-L	M-L	
				<b>Portugal</b>	<b>Community Corporate Garden</b>	Agriculture & Forestry Human Resources & Training	7, 8, 12, 20	M-H	M-L	M-L	M-L
	<b>Waste management</b>			<b>Germany</b>	Best practices to reduce food waste	Human Resources & Training Food & Beverage Industry	8, 12, 20	M-L	M-H	M-L	M-H
				<b>Montenegro</b>	Certification scheme to promote sustainable business operations	ML Accommodations Events & Entertainment	7, 8, 19, 20	M-L	M-H	M-H	M-H
					Implementing measures to reduce plastic waste	Food & Beverage Industry Health & Sanitation Retail & Consumer Goods	7, 8, 19, 20	M-L	M-H	M-L	M-L
				<b>Spain</b>	An assisted pathway towards sustainability in the food industry	Food & Beverage Industry	7, 8, 19, 20	M-L	M-H	M-H	M-L
				<b>The Netherlands</b>	Automated food waste monitoring system	Food & Beverage Industry Events & Entertainment ML Accommodations	7, 9, 16, 20	M-H	M-L	M-L	M-H
	<b>Innovation knowledge-gap</b>		<b>Germany</b>	Using 'gaming' to enhance HR practices	Human Resources & Training IT & Digital Services	16, 19, 20	M-H	M-H	M-L	M-L	
				SDG-Scouts Training employees on sustainability	Human Resources & Training	8, 19, 20	M-H	M-H	M-L	M-H	
			<b>Latvia</b>	Engaging and educational activities to nudge staff & customers towards sustainability	Human Resources & Training IT & Digital Services Retail & Consumer Goods	7, 8, 19, 20	M-H	M-L	M-L	M-H	
				<b>Montenegro</b>	Certification scheme to promote sustainable business operations	ML Accommodations Events & Entertainment	7, 8, 19, 20	M-L	M-H	M-H	M-H
			<b>Portugal</b>		Community Corporate Garden	Agriculture & Forestry Human Resources & Training	7, 8, 12, 20	M-H	M-L	M-L	M-L
				Fostering sustainability through Corporate Social Responsibility projects	Human Resources & Training ML Accommodations	7, 8, 19, 20	M-L	M-H	M-L	M-H	
		<b>Spain</b>	An assisted pathway towards sustainability in the food industry	Food & Beverage Industry	7, 8, 19, 20	M-L	M-H	M-H	M-L		

STAFF NUDGING	Technical capacity	The Netherlands	Nudging sustainability in staff and customers through serious games	Human Resources & Training IT & Digital Services	8, 15, 16, 19	M-H	M-H	M-L	M-L
		Germany	Using 'gaming' to enhance HR practices	Human Resources & Training IT & Digital Services	16, 19, 20	M-H	M-H	M-L	M-L
			Best practices to reduce food waste	Human Resources & Training Food & Beverage Industry	8, 12, 20	M-L	M-H	M-L	M-H
			SDG-Scouts Training employees on sustainability	Human Resources & Training	8, 19, 20	M-H	M-H	M-L	M-H
		Latvia	Engaging and educational activities to nudge staff & customers towards sustainability	Human Resources & Training IT & Digital Services Retail & Consumer Goods	7, 8, 19, 20	M-H	M-L	M-L	M-H
		Montenegro	IT-based tools to improve resource efficiency and sustainability	Food & Beverage Industry IT & Digital Services ML Accommodations	7, 9, 16	M-H	M-H	M-H	M-H
		Portugal	Digital platform to manage and monitor the energy consumption	Property Management Events & Entertainment ML Accommodations	9, 16	M-L	M-H	M-L	M-H
			Fostering sustainability through Corporate Social Responsibility projects	Human Resources & Training ML Accommodations	7, 8, 19, 20	M-L	M-H	M-L	M-H
		Slovenia	Green Direction: sustainable cleaning practices	Health & Sanitation Food & Beverage Industry Retail & Consumer Goods	7, 8, 19	M-L	M-L	M-L	M-H
			Improve resource efficiency by using a staff collaboration platform	Human Resources & Training ML Accommodations Property Management	9, 16, 19	M-H	M-L	M-L	M-L
		Spain	Smart Water Management Platform leveraging IoT	Property Management Agriculture & Forestry ML Accommodations	7, 9, 15, 16	M-H	M-H	M-L	M-H
		The Netherlands	Automated food waste monitoring system	Food & Beverage Industry Events & Entertainment ML Accommodations	7, 9, 16, 20	M-H	M-L	M-L	M-H
		Real-Time monitoring	Germany	Property Management System for Holiday Homes	Property Management IT & Digital Services	9, 16	M-L	M-L	M-L
	Sustainability Management Platform to maximise hotels' resource savings			Property Management IT & Digital Services ML Accommodations	9, 16	M-L	M-H	M-L	M-H
	Montenegro		IT-based tools to improve resource efficiency and sustainability	Food & Beverage Industry IT & Digital Services ML Accommodations	7, 9, 16	M-H	M-H	M-H	M-H
	Portugal		Digital platform to manage and monitor the energy consumption	Property Management Events & Entertainment ML Accommodations	9, 16	M-L	M-H	M-L	M-H



<b>STAFF NUDGING</b>			<b>AI-driven Virtual Energy Manager</b>	Property Management ML Accommodations	9, 16, 19	M-H	M-H	M-L	M-H
		<b>Slovenia</b>	<b>Improve resource efficiency by using a staff collaboration platform</b>	Human Resources & Training ML Accommodations Property Management	9, 16, 19	M-H	M-L	M-L	M-L
		<b>Spain</b>	<b>Smart Water Management Platform leveraging IoT</b>	Property Management Agriculture & Forestry ML Accommodations	7, 9, 15, 16	M-H	M-H	M-L	M-H
		<b>The Netherlands</b>	<b>AI-supported software for advancing buildings decarbonization</b>	Property Management IT & Digital Services ML Accommodations	9, 15, 16, 19	M-H	M-H	M-H	M-H
			<b>Automated food waste monitoring system</b>	Food & Beverage Industry Events & Entertainment ML Accommodations	7, 9, 16, 20	M-H	M-L	M-L	M-H
			<b>Using nudging and gamification to influence commuting behaviour</b>	Human Resources & Training IT & Digital Services Logistics & Transportation	6, 9, 16	M-L	M-L	M-L	M-H
		<b>Germany</b>	<b>Best practices to reduce food waste</b>	Human Resources & Training Food & Beverage Industry	8, 12, 20	M-L	M-H	M-L	M-H
		<b>Portugal</b>	<b>Community Corporate Garden</b>	Agriculture & Forestry Human Resources & Training	7, 8, 12, 20	M-H	M-L	M-L	M-L
	<b>The Netherlands</b>	<b>Nudging sustainability in staff and customers through serious games</b>	Human Resources & Training IT & Digital Services	8, 15, 16, 19	M-H	M-H	M-L	M-L	
	<b>Client nudging</b>	<b>Latvia</b>	<b>Engaging and educational activities to nudge staff &amp; customers towards sustainability</b>	Human Resources & Training IT & Digital Services Retail & Consumer Goods	7, 8, 19, 20	M-H	M-L	M-L	M-H
		<b>Portugal</b>	<b>AI-driven Virtual Energy Manager</b>	Property Management ML Accommodations	9, 16, 19	M-H	M-H	M-L	M-H
			<b>Fostering sustainability through Corporate Social Responsibility projects</b>	Human Resources & Training ML Accommodations	7, 8, 19, 20	M-L	M-H	M-L	M-H
		<b>The Netherlands</b>	<b>Nudging sustainability in staff and customers through serious games</b>	Human Resources & Training IT & Digital Services	8, 15, 16, 19	M-H	M-H	M-L	M-L
	<b>AI-supported software for advancing buildings decarbonization</b>		Property Management IT & Digital Services ML Accommodations	9, 15, 16, 19	M-H	M-H	M-H	M-H	
	<b>Staff nudging</b>	<b>Germany</b>	<b>Using 'gaming' to enhance HR practices</b>	Human Resources & Training IT & Digital Services	16, 19, 20	M-H	M-H	M-L	M-L
			<b>Property Management System for Holiday Homes</b>	Property Management IT & Digital Services	9, 16	M-L	M-L	M-L	M-H
			<b>Sustainability Management Platform to maximise hotels' resource savings</b>	Property Management IT & Digital Services ML Accommodations	9, 16	M-L	M-H	M-L	M-H

STAFF NUDGING			Best practices to reduce food waste	Human Resources & Training Food & Beverage Industry	8, 12, 20	M-L	M-H	M-L	M-H
			SDG-Scouts Training employees on sustainability	Human Resources & Training	8, 19, 20	M-H	M-H	M-L	M-H
		Latvia	Engaging and educational activities to nudge staff & customers towards sustainability	Human Resources & Training IT & Digital Services Retail & Consumer Goods	7, 8, 19, 20	M-H	M-L	M-L	M-H
		Montenegro	Certification scheme to promote sustainable business operations	ML Accommodations Events & Entertainment	7, 8, 19, 20	M-L	M-H	M-H	M-H
			IT-based tools to improve resource efficiency and sustainability	Food & Beverage Industry IT & Digital Services ML Accommodations	7, 9, 16	M-H	M-H	M-H	M-H
			Implementing measures to reduce plastic waste	Food & Beverage Industry Health & Sanitation Retail & Consumer Goods	7, 8, 19, 20	M-L	M-H	M-L	M-L
		Portugal	Digital platform to manage and monitor the energy consumption	Property Management Events & Entertainment ML Accommodations	9, 16	M-L	M-H	M-L	M-H
			AI-driven Virtual Energy Manager	Property Management ML Accommodations	9, 16, 19	M-H	M-H	M-L	M-H
			Community Corporate Garden	Agriculture & Forestry Human Resources & Training	7, 8, 12, 20	M-H	M-L	M-L	M-L
			Fostering sustainability through Corporate Social Responsibility projects	Human Resources & Training ML Accommodations	7, 8, 19, 20	M-L	M-H	M-L	M-H
		Slovenia	Green Direction: sustainable cleaning practices	Health & Sanitation Food & Beverage Industry Retail & Consumer Goods	7, 8, 19	M-L	M-L	M-L	M-H
			Improve resource efficiency by using a staff collaboration platform	Human Resources & Training ML Accommodations Property Management	9, 16, 19	M-H	M-L	M-L	M-L
		Spain	Smart Water Management Platform leveraging IoT	Property Management Agriculture & Forestry ML Accommodations	7, 9, 15, 16	M-H	M-H	M-L	M-H
			An assisted pathway towards sustainability in the food industry	Food & Beverage Industry	7, 8, 19, 20	M-L	M-H	M-H	M-L
		The Netherlands	Nudging sustainability in staff and customers through serious games	Human Resources & Training IT & Digital Services	8, 15, 16, 19	M-H	M-H	M-L	M-L

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CLIENT NUDGING			AI-supported software for advancing buildings decarbonization	Property Management IT & Digital Services ML Accommodations	9, 15, 16, 19	M-H	M-H	M-H	M-H	
			Automated food waste monitoring system	Food & Beverage Industry Events & Entertainment ML Accommodations	7, 9, 16, 20	M-H	M-L	M-L	M-H	
			Using nudging and gamification to influence commuting behaviour	Human Resources & Training IT & Digital Services Logistics & Transportation	6, 9, 16	M-L	M-L	M-L	M-H	
		Resource efficiency	Germany	Property Management System for Holiday Homes	Property Management IT & Digital Services	9, 16	M-L	M-L	M-L	M-H
			Latvia	Mosphera Electric Scooters to enhance exploring opportunities	Logistics & Transportation Agriculture & Forestry	6, 12, 20	M-H	M-H	M-L	M-H
			Montenegro	Camping Service Points in rural areas	Health & Sanitation	7, 12, 20	M-H	M-H	M-L	M-L
			Portugal	AI-driven Virtual Energy Manager	Property Management ML Accommodations	9, 16, 19	M-H	M-H	M-L	M-H
			Slovenia	Using gamified experiences to stimulate sustainable choices	IT & Digital Services Events & Entertainment	7, 10, 15, 16	M-H	M-H	M-H	M-L
			Spain	Smart Energy Management System using AI and IoT	Property Management ML Accommodations	9, 15, 16	M-H	M-H	M-H	M-H
		The Netherlands	AI-supported software for advancing buildings decarbonization	Property Management IT & Digital Services ML Accommodations	9, 15, 16, 19	M-H	M-H	M-H	M-H	
		Adopting circularity	Germany	ReCup: an integrated network for reusable cups and bowls	Food & Beverage Industry	7, 9, 10, 16	M-L	M-H	M-L	M-H
			Portugal	App-based reusable food packaging system	Food & Beverage Industry Retail & Consumer Goods	7, 9, 12, 16	M-H	M-H	M-L	M-L
Slovenia			Sustainable footwear for guests	Furniture & Design ML Accommodations	7, 20	M-L	M-L	M-L	M-H	
		Bokashi composting solutions for organic waste management	Food & Beverage Industry Agriculture & Forestry	7, 12, 20	M-H	M-H	M-L	M-H		
Waste management		Germany	ReCup: an integrated network for reusable cups and bowls	Food & Beverage Industry	7, 9, 10, 16	M-L	M-H	M-L	M-H	
	Montenegro	Camping Service Points in rural areas	Health & Sanitation	7, 12, 20	M-H	M-H	M-L	M-L		
		Incorporating sustainability nudges into AR experiences	IT & Digital Services Events & Entertainment	9, 10, 15, 16	M-H	M-L	M-H	M-H		
	Portugal	App-based reusable food packaging system	Food & Beverage Industry Retail & Consumer Goods	7, 9, 12, 16	M-H	M-H	M-L	M-L		

<b>CLIENT NUDGING</b>		<b>Slovenia</b>	<b>Sustainable footwear for guests</b>	Furniture & Design ML Accommodations	7, 20	M-L	M-L	M-L	M-H	
			<b>Bokashi composting solutions for organic waste management</b>	Food & Beverage Industry Agriculture & Forestry	7, 12, 20	M-H	M-H	M-L	M-H	
			<b>App to reduce food waste by connecting food providers &amp; consumers</b>	Food & Beverage Industry	7, 9, 10, 16	M-H	M-L	M-L	M-H	
	<b>Innovation knowledge-gap</b>	<b>Latvia</b>	<b>Engaging and educational activities to nudge staff &amp; customers towards sustainability</b>	Human Resources & Training IT & Digital Services Retail & Consumer Goods	7, 8, 19, 20	M-H	M-L	M-L	M-H	
				<b>Using real-time customer insights to foster sustainability</b>	IT & Digital Services Events & Entertainment Retail & Consumer Goods	9, 10, 16, 20	M-L	M-H	M-H	M-L
		<b>Portugal</b>	<b>Fostering sustainability through Corporate Social Responsibility projects</b>	Human Resources & Training ML Accommodations	7, 8, 19, 20	M-L	M-H	M-L	M-H	
		<b>The Netherlands</b>	<b>Nudging sustainability in staff and customers through serious games</b>	Human Resources & Training IT & Digital Services	8, 15, 16, 19	M-H	M-H	M-L	M-L	
	<b>Technical capacity</b>	<b>Latvia</b>	<b>Engaging and educational activities to nudge staff &amp; customers towards sustainability</b>	Human Resources & Training IT & Digital Services Retail & Consumer Goods	7, 8, 19, 20	M-H	M-L	M-L	M-H	
				<b>Montenegro</b>	<b>Incorporating sustainability nudges into AR experiences</b>	IT & Digital Services Events & Entertainment	9, 10, 15, 16	M-H	M-L	M-H
		<b>Portugal</b>	<b>Fostering sustainability through Corporate Social Responsibility projects</b>	Human Resources & Training ML Accommodations	7, 8, 19, 20	M-L	M-H	M-L	M-H	
		<b>Slovenia</b>	<b>AI-driven personalized digital guides</b>	Events & Entertainment IT & Digital Services	9, 15, 16, 20	M-H	M-L	M-H	M-L	
				<b>Bokashi composting solutions for organic waste management</b>	Food & Beverage Industry Agriculture & Forestry	7, 12, 20	M-H	M-H	M-L	M-H
				<b>App to reduce food waste by connecting food providers &amp; consumers</b>	Food & Beverage Industry	7, 9, 10, 16	M-H	M-L	M-L	M-H
				<b>Using gamified experiences to stimulate sustainable choices</b>	IT & Digital Services Events & Entertainment	7, 10, 15, 16	M-H	M-H	M-H	M-L
		<b>Spain</b>	<b>Smart Energy Management System using AI and IoT</b>	Property Management ML Accommodations	9, 15, 16	M-H	M-H	M-H	M-H	
	<b>App to create connected mobility ecosystem</b>		IT & Digital Services Logistics & Transportation	6, 9, 10, 16	M-L	M-L	M-H	M-L		
	<b>Real-Time monitoring</b>	<b>Germany</b>	<b>Property Management System for Holiday Homes</b>	Property Management IT & Digital Services	9, 16	M-L	M-L	M-L	M-H	
		<b>Malta</b>	<b>Using real-time customer insights to foster sustainability</b>	IT & Digital Services Events & Entertainment Retail & Consumer Goods	9, 10, 16, 20	M-L	M-H	M-H	M-L	

<b>CLIENT NUDGING</b>			Using a loyalty platform to encourage sustainable choices	IT & Digital Services Retail & Consumer Goods ML Accommodations	7, 10, 16, 20	M-H	M-H	M-H	M-L
		<b>Portugal</b>	AI-driven Virtual Energy Manager	Property Management ML Accommodations	9, 16, 19	M-H	M-H	M-L	M-H
		<b>Slovenia</b>	AI-driven personalized digital guides	Events & Entertainment IT & Digital Services	9, 15, 16, 20	M-H	M-L	M-H	M-L
		<b>Spain</b>	Smart Energy Management System using AI and IoT	Property Management ML Accommodations	9, 15, 16	M-H	M-H	M-H	M-H
		<b>The Netherlands</b>	AI-supported software for advancing buildings decarbonization	Property Management IT & Digital Services ML Accommodations	9, 15, 16, 19	M-H	M-H	M-H	M-H
	<b>Price/Quality balance</b>	<b>Latvia</b>	Mosphera Electric Scooters to enhance exploring opportunities	Logistics & Transportation Agriculture & Forestry	6, 12, 20	M-H	M-H	M-L	M-H
		<b>Malta</b>	Using real-time customer insights to foster sustainability	IT & Digital Services Events & Entertainment Retail & Consumer Goods	9, 10, 16, 20	M-L	M-H	M-H	M-L
			Using a loyalty platform to encourage sustainable choices	IT & Digital Services Retail & Consumer Goods ML Accommodations	7, 10, 16, 20	M-H	M-H	M-H	M-L
		<b>Slovenia</b>	Sustainable footwear for guests	Furniture & Design ML Accommodations	7, 20	M-L	M-L	M-L	M-H
			App to reduce food waste by connecting food providers & consumers	Food & Beverage Industry	7, 9, 10, 16	M-H	M-L	M-L	M-H
			Using gamified experiences to stimulate sustainable choices	IT & Digital Services Events & Entertainment	7, 10, 15, 16	M-H	M-H	M-H	M-L
	<b>High investments</b>	<b>Germany</b>	ReCup: an integrated network for reusable cups and bowls	Food & Beverage Industry	7, 9, 10, 16	M-L	M-H	M-L	M-H
		<b>Spain</b>	App to create connected mobility ecosystem	IT & Digital Services Logistics & Transportation	6, 9, 10, 16	M-L	M-L	M-H	M-L
		<b>The Netherlands</b>	Nudging sustainability in staff and customers through serious games	Human Resources & Training IT & Digital Services	8, 15, 16, 19	M-H	M-H	M-L	M-L
	<b>Client nudging</b>	<b>Germany</b>	ReCup: an integrated network for reusable cups and bowls	Food & Beverage Industry	7, 9, 10, 16	M-L	M-H	M-L	M-H
		<b>Latvia</b>	Mosphera Electric Scooters to enhance exploring opportunities	Logistics & Transportation Agriculture & Forestry	6, 12, 20	M-H	M-H	M-L	M-H
			Engaging and educational activities to nudge staff & customers towards sustainability	Human Resources & Training IT & Digital Services Retail & Consumer Goods	7, 8, 19, 20	M-H	M-L	M-L	M-H
		<b>Malta</b>	Using real-time customer insights to foster sustainability	IT & Digital Services Events & Entertainment Retail & Consumer Goods	9, 10, 16, 20	M-L	M-H	M-H	M-L

<b>CLIENT NUDGING</b>			Using a loyalty platform to encourage sustainable choices	IT & Digital Services Retail & Consumer Goods ML Accommodations	7, 10, 16, 20	M-H	M-H	M-H	M-L
		<b>Montenegro</b>	Camping Service Points in rural areas	Health & Sanitation	7, 12, 20	M-H	M-H	M-L	M-L
			Incorporating sustainability nudges into AR experiences	IT & Digital Services Events & Entertainment	9, 10, 15, 16	M-H	M-L	M-H	M-H
		<b>Portugal</b>	AI-driven Virtual Energy Manager	Property Management ML Accommodations	9, 16, 19	M-H	M-H	M-L	M-H
			App-based reusable food packaging system	Food & Beverage Industry Retail & Consumer Goods	7, 9, 12, 16	M-H	M-H	M-L	M-L
			Fostering sustainability through Corporate Social Responsibility projects	Human Resources & Training ML Accommodations	7, 8, 19, 20	M-L	M-H	M-L	M-H
		<b>Slovenia</b>	AI-driven personalized digital guides	Events & Entertainment IT & Digital Services	9, 15, 16, 20	M-H	M-L	M-H	M-L
			Sustainable footwear for guests	Furniture & Design ML Accommodations	7, 20	M-L	M-L	M-L	M-H
			Bokashi composting solutions for organic waste management	Food & Beverage Industry Agriculture & Forestry	7, 12, 20	M-H	M-H	M-L	M-H
			App to reduce food waste by connecting food providers & consumers	Food & Beverage Industry	7, 9, 10, 16	M-H	M-L	M-L	M-H
			Using gamified experiences to stimulate sustainable choices	IT & Digital Services Events & Entertainment	7, 10, 15, 16	M-H	M-H	M-H	M-L
		<b>Spain</b>	Smart Energy Management System using AI and IoT	Property Management ML Accommodations	9, 15, 16	M-H	M-H	M-H	M-H
			App to create connected mobility ecosystem	IT & Digital Services Logistics & Transportation	6, 9, 10, 16	M-L	M-L	M-H	M-L
		<b>The Netherlands</b>	Nudging sustainability in staff and customers through serious games	Human Resources & Training IT & Digital Services	8, 15, 16, 19	M-H	M-H	M-L	M-L
			AI-supported software for advancing buildings decarbonization	Property Management IT & Digital Services ML Accommodations	9, 15, 16, 19	M-H	M-H	M-H	M-H
	<b>Staff nudging</b>	<b>Germany</b>	Property Management System for Holiday Homes	Property Management IT & Digital Services	9, 16	M-L	M-L	M-L	M-H
			Latvia	Engaging and educational activities to nudge staff & customers towards sustainability	Human Resources & Training IT & Digital Services Retail & Consumer Goods	7, 8, 19, 20	M-H	M-L	M-L
		<b>Portugal</b>	AI-driven Virtual Energy Manager	Property Management ML Accommodations	9, 16, 19	M-H	M-H	M-L	M-H
			Fostering sustainability through Corporate Social Responsibility projects	Human Resources & Training ML Accommodations	7, 8, 19, 20	M-L	M-H	M-L	M-H

SUSTAINABLE & INCLUSIVE MARKETS		The Netherlands	Nudging sustainability in staff and customers through serious games	Human Resources & Training IT & Digital Services	8, 15, 16, 19	M-H	M-H	M-L	M-L		
			AI-supported software for advancing buildings decarbonization	Property Management IT & Digital Services ML Accommodations	9, 15, 16, 19	M-H	M-H	M-H	M-H		
	Resource efficiency	Latvia	Latvia	Electric amphibious vehicle for land & water explorations	Events & Entertainment Logistics & Transportation	7, 12, 20	M-H	M-H	M-L	M-L	
				Camping Service Points in rural areas	Health & Sanitation	7, 12, 20	M-H	M-H	M-L	M-L	
		Montenegro	Montenegro	Certification scheme to promote sustainable business operations	ML Accommodations Events & Entertainment	7, 8, 19, 20	M-L	M-H	M-H	M-H	
				Waterless toilets for off-grid settlements	Health & Sanitation Construction & Building	7	M-H	M-L	M-H	M-H	
		Slovenia	Slovenia	Eco-friendly glamping cabins	Construction & Building Furniture & Design ML Accommodations	12, 20	M-L	M-L	M-L	M-H	
				Using gamified experiences to stimulate sustainable choices	IT & Digital Services Events & Entertainment	7, 10, 15, 16	M-H	M-H	M-H	M-L	
		Adopting circularity	Germany	Germany	ReCup: an integrated network for reusable cups and bowls	Food & Beverage Industry	7, 9, 10, 16	M-L	M-H	M-L	M-H
					Latvia	Latvia	CHUM - compostable & eatable tableware	Food & Beverage Industry Events & Entertainment Retail & Consumer Goods	7, 12, 20	M-H	M-L
Malta			Malta	Malta	Eco-friendly packaging solutions	Retail & Consumer Goods Events & Entertainment Manufacturing	7, 20	M-L	M-L	M-L	M-H
					Waterless toilets for off-grid settlements	Health & Sanitation Construction & Building	7	M-H	M-L	M-H	M-H
Montenegro	Montenegro		Montenegro	Implementing measures to reduce plastic waste	Food & Beverage Industry Health & Sanitation Retail & Consumer Goods	7, 8, 19, 20	M-L	M-H	M-L	M-L	
				Portugal	Portugal	Bamboo Bicycles for sustainable mobility	Logistics & Transportation Events & Entertainment	6, 7, 12, 20	M-H	M-L	M-L
Portugal	Portugal		Portugal	App-based reusable food packaging system	Food & Beverage Industry Retail & Consumer Goods	7, 9, 12, 16	M-H	M-H	M-L	M-L	
				Heritage-inspired sustainable furniture	Furniture & Design Manufacturing Retail & Consumer Goods	7, 12, 20	M-L	M-L	M-L	M-L	

<b>SUSTAINABLE AND INCLUSIVE MARKETS</b>	<b>Waste management</b>	<b>Germany</b>	<b>ReCup: an integrated network for reusable cups and bowls</b>	Food & Beverage Industry	7, 9, 10, 16	M-L	M-H	M-L	M-H
		<b>Latvia</b>	<b>CHUM - compostable &amp; eatable tableware</b>	Food & Beverage Industry Events & Entertainment Retail & Consumer Goods	7, 12, 20	M-H	M-L	M-L	M-H
		<b>Malta</b>	<b>Eco-friendly packaging solutions</b>	Retail & Consumer Goods Events & Entertainment Manufacturing	7, 20	M-L	M-L	M-L	M-H
		<b>Montenegro</b>	<b>Camping Service Points in rural areas</b>	Health & Sanitation	7, 12, 20	M-H	M-H	M-L	M-L
			<b>Certification scheme to promote sustainable business operations</b>	ML Accommodations Events & Entertainment	7, 8, 19, 20	M-L	M-H	M-H	M-H
			<b>Waterless toilets for off-grid settlements</b>	Health & Sanitation Construction & Building	7	M-H	M-L	M-H	M-H
			<b>Incorporating sustainability nudges into AR experiences</b>	IT & Digital Services Events & Entertainment	9, 10, 15, 16	M-H	M-L	M-H	M-H
		<b>Portugal</b>	<b>Implementing measures to reduce plastic waste</b>	Food & Beverage Industry Health & Sanitation Retail & Consumer Goods	7, 8, 19, 20	M-L	M-H	M-L	M-L
			<b>Bamboo Bicycles for sustainable mobility</b>	Logistics & Transportation Events & Entertainment	6, 7, 12, 20	M-H	M-L	M-L	M-H
	<b>App-based reusable food packaging system</b>		Food & Beverage Industry Retail & Consumer Goods	7, 9, 12, 16	M-H	M-H	M-L	M-L	
		<b>Heritage-inspired sustainable furniture</b>	Furniture & Design Manufacturing Retail & Consumer Goods	7, 12, 20	M-L	M-L	M-L	M-L	
	<b>Innovation knowledge-gap</b>	<b>Malta</b>	<b>Using real-time customer insights to foster sustainability</b>	IT & Digital Services Events & Entertainment Retail & Consumer Goods	9, 10, 16, 20	M-L	M-H	M-H	M-L
		<b>Montenegro</b>	<b>Certification scheme to promote sustainable business operations</b>	ML Accommodations Events & Entertainment	7, 8, 19, 20	M-L	M-H	M-H	M-H
			<b>Implementing measures to reduce plastic waste</b>	Food & Beverage Industry Health & Sanitation Retail & Consumer Goods	7, 8, 19, 20	M-L	M-H	M-L	M-L
		<b>Portugal</b>	<b>Fostering sustainability through Corporate Social Responsibility projects</b>	Human Resources & Training ML Accommodations	7, 8, 19, 20	M-L	M-H	M-L	M-H
		<b>The Netherlands</b>	<b>Nudging sustainability in staff and customers through serious games</b>	Human Resources & Training IT & Digital Services	8, 15, 16, 19	M-H	M-H	M-L	M-L

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<b>SUSTAINABLE AND INCLUSIVE MARKETS</b>	<b>Technical capacity</b>	<b>Malta</b>	Digital tools to enhance your online sustainability reputation	IT & Digital Services Retail & Consumer Goods ML Accommodations	9, 16, 20	M-H	M-L	M-H	M-L
		<b>Montenegro</b>	Incorporating sustainability nudges into AR experiences	IT & Digital Services Events & Entertainment	9, 10, 15, 16	M-H	M-L	M-H	M-H
		<b>Portugal</b>	Fostering sustainability through Corporate Social Responsibility projects	Human Resources & Training ML Accommodations	7, 8, 19, 20	M-L	M-H	M-L	M-H
		<b>Slovenia</b>	Eco-friendly glamping cabins	Construction & Building Furniture & Design ML Accommodations	12, 20	M-L	M-L	M-L	M-H
			Using gamified experiences to stimulate sustainable choices	IT & Digital Services Events & Entertainment	7, 10, 15, 16	M-H	M-H	M-H	M-L
	<b>Real-Time monitoring</b>	<b>Malta</b>	Digital tools to enhance your online sustainability reputation	IT & Digital Services Retail & Consumer Goods ML Accommodations	9, 16, 20	M-H	M-L	M-H	M-L
			Using real-time customer insights to foster sustainability	IT & Digital Services Events & Entertainment Retail & Consumer Goods	9, 10, 16, 20	M-L	M-H	M-H	M-L
			Using a loyalty platform to encourage sustainable choices	IT & Digital Services Retail & Consumer Goods ML Accommodations	7, 10, 16, 20	M-H	M-H	M-H	M-L
	<b>Price/Quality balance</b>	<b>Latvia</b>	CHUM - compostable & eatable tableware	Food & Beverage Industry Events & Entertainment Retail & Consumer Goods	7, 12, 20	M-H	M-L	M-L	M-H
			Electric amphibious vehicle for land & water explorations	Events & Entertainment Logistics & Transportation	7, 12, 20	M-H	M-H	M-L	M-L
		<b>Malta</b>	Eco-friendly packaging solutions	Retail & Consumer Goods Events & Entertainment Manufacturing	7, 20	M-L	M-L	M-L	M-H
			Using real-time customer insights to foster sustainability	IT & Digital Services Events & Entertainment Retail & Consumer Goods	9, 10, 16, 20	M-L	M-H	M-H	M-L
			Using a loyalty platform to encourage sustainable choices	IT & Digital Services Retail & Consumer Goods ML Accommodations	7, 10, 16, 20	M-H	M-H	M-H	M-L
		<b>Portugal</b>	Bamboo Bicycles for sustainable mobility	Logistics & Transportation Events & Entertainment	6, 7, 12, 20	M-H	M-L	M-L	M-H
		<b>Slovenia</b>	Eco-friendly glamping cabins	Construction & Building Furniture & Design ML Accommodations	12, 20	M-L	M-L	M-L	M-H
			Using gamified experiences to stimulate sustainable choices	IT & Digital Services Events & Entertainment	7, 10, 15, 16	M-H	M-H	M-H	M-L

<b>SUSTAINABLE AND INCLUSIVE MARKETS</b>	<b>High investments</b>	<b>Germany</b>	ReCup: an integrated network for reusable cups and bowls	Food & Beverage Industry	7, 9, 10, 16	M-L	M-H	M-L	M-H
		<b>Malta</b>	Digital tools to enhance your online sustainability reputation	IT & Digital Services Retail & Consumer Goods ML Accommodations	9, 16, 20	M-H	M-L	M-H	M-L
		<b>Slovenia</b>	Eco-friendly glamping cabins	Construction & Building Furniture & Design ML Accommodations	12, 20	M-L	M-L	M-L	M-H
		<b>The Netherlands</b>	Nudging sustainability in staff and customers through serious games	Human Resources & Training IT & Digital Services	8, 15, 16, 19	M-H	M-H	M-L	M-L
	<b>Client nudging</b>	<b>Germany</b>	ReCup: an integrated network for reusable cups and bowls	Food & Beverage Industry	7, 9, 10, 16	M-L	M-H	M-L	M-H
		<b>Malta</b>	Using real-time customer insights to foster sustainability	IT & Digital Services Events & Entertainment Retail & Consumer Goods	9, 10, 16, 20	M-L	M-H	M-H	M-L
			Using a loyalty platform to encourage sustainable choices	IT & Digital Services Retail & Consumer Goods ML Accommodations	7, 10, 16, 20	M-H	M-H	M-H	M-L
		<b>Montenegro</b>	Camping Service Points in rural areas	Health & Sanitation	7, 12, 20	M-H	M-H	M-L	M-L
			Incorporating sustainability nudges into AR experiences	IT & Digital Services Events & Entertainment	9, 10, 15, 16	M-H	M-L	M-H	M-H
		<b>Portugal</b>	App-based reusable food packaging system	Food & Beverage Industry Retail & Consumer Goods	7, 9, 12, 16	M-H	M-H	M-L	M-L
			Fostering sustainability through Corporate Social Responsibility projects	Human Resources & Training ML Accommodations	7, 8, 19, 20	M-L	M-H	M-L	M-H
		<b>Slovenia</b>	Using gamified experiences to stimulate sustainable choices	IT & Digital Services Events & Entertainment	7, 10, 15, 16	M-H	M-H	M-H	M-L
	<b>The Netherlands</b>	Nudging sustainability in staff and customers through serious games	Human Resources & Training IT & Digital Services	8, 15, 16, 19	M-H	M-H	M-L	M-L	
	<b>Staff nudging</b>	<b>Montenegro</b>	Certification scheme to promote sustainable business operations	ML Accommodations Events & Entertainment	7, 8, 19, 20	M-L	M-H	M-H	M-H
			Implementing measures to reduce plastic waste	Food & Beverage Industry Health & Sanitation Retail & Consumer Goods	7, 8, 19, 20	M-L	M-H	M-L	M-L
		<b>Portugal</b>	Fostering sustainability through Corporate Social Responsibility projects	Human Resources & Training ML Accommodations	7, 8, 19, 20	M-L	M-H	M-L	M-H
<b>The Netherlands</b>		Nudging sustainability in staff and customers through serious games	Human Resources & Training IT & Digital Services	8, 15, 16, 19	M-H	M-H	M-L	M-L	

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## 9. Conclusion

This report provides tourism SMEs in the 8 CRT countries with market intelligence insights and knowledge about scalable cross-domain innovation opportunities, by developing an extensive overview of solutions and measures for digital and green innovations that have already been adopted in other fields and industries, with regard to the 6 Key Business Areas and the 3 Transversal Business Areas of CRT. This report, which will be disseminated through various channels and made available on the CRT Knowledge Hub, also fulfils the WP3 objective of providing a dynamic overview of the WP results, communicating the outcomes of the market scan in an online publication on the state of the art of cross-domain innovation for tourism business operations. This will also hopefully contribute to boosting international exchange of best practices in open innovation for tourism SMEs.

### **Innovation landscape and local context in the CRT countries**

Interviews with experts across the 8 countries highlight a diverse innovation landscape, involving different fields and sectors in each country, but also many similarities in terms of tourism SMEs challenges with regard to the digital and green transition. **Common difficulties include financial constraints, regulatory complexities, limited digital literacy, and fragmented organizational structures.** However, the findings recognize the transformative potential of cross-sector innovations and their ability to inspire the tourism sector.

In Slovenia and Germany, the integration of sustainability and digital practices faces structural and cultural barriers. In Latvia and Montenegro, tourism SMEs are often located in rural and remote areas, where small and simple steps towards innovation emerge from necessity. These cases emphasize the need for scalable, standardized solutions to foster broader adoption. The innovation landscape in the Catalan region and in the Netherlands provides opportunities, particularly in energy management and resource efficiency. However, smaller enterprises often lack the capacity to align with ambitious national or regional strategies. Malta and Portugal, meanwhile, reflect a cautious approach to innovation, with SMEs hesitant to invest in sustainability and digitalization due to perceived risks and uncertainties. Yet, these countries highlight the critical role of leadership, collaboration, and targeted government support in driving progress.

While different barriers remain, **the tourism sector can significantly benefit from adopting innovations applied in other industries**, such as energy, mobility, and IT. By addressing gaps in knowledge, funding, and regulatory support, SMEs can leverage these innovations to enhance their competitiveness and sustainability. A shift toward more integrative and forward-thinking approaches, coupled with cross-sector collaboration, is essential for creating a resilient and future-ready tourism ecosystem.

## Mapped innovations

When analysing the inventory of mapped solutions, **energy** emerges as the leading Key Business Area (KBA) in most countries, accounting for 41 innovations across all countries categorized and associated with this key area. While most countries prioritize **Energy and Water** as their top two KBAs, Germany stands out by identifying most of its solutions in the Furniture and Equipment category, while Latvia focuses more on Plastic, which highlights unique sectoral needs and priorities in these countries. Interestingly, the Transport KBA was identified in only 7 solutions across all countries, with no solutions reported in this area by Germany, Malta, or Portugal. This analysis highlights that while countries share common priorities, such as energy and water efficiency, regional nuances and specific sectoral requirements can present opportunities for targeted collaboration and innovation.

By considering **SMEs' challenges** that mapped innovations may be able to address, the importance of certain topics clearly emerges. Particularly, more than half of the mapped innovations have been considered potentially useful to improve **resource efficiency** (53 innovations) and to **manage and reduce waste** (50 innovations). 48 innovations offer practical and concrete solutions and tools to strengthen the **technical capacity** of SMEs for implementing green and digital innovations, while 16 mapped innovation provide more strategic support to reduce the **innovation knowledge-gap** that is sometimes not allowing SMEs to embrace more innovative approaches. 35 of the mapped innovations can facilitate the adoption of **circularity principles** by SMEs and 31 offer **real-time monitoring** tools that can support SMEs in taking timely and effective actions to reduce the environmental impact of their operations.

Furthermore, the partner countries exhibit diverse approaches to innovation characteristics, shaped by their distinct economic conditions and SME landscapes. Across all partner countries, the mapped solutions demonstrate **medium-to-high levels of novelty**, except for Slovenia, where a balance between medium-low and medium-high levels is observed. This overall trend highlights a promising outlook for enhancing innovation through cross-sectoral collaboration. The solutions' **impact on the sustainability** of SMEs' business operations is overall **medium-low**, apart from Germany and Spain, which also underlines the need for sector-specific solutions that help tourism SMEs overcome their unique challenges starting from their initial steps towards sustainability. This is consistent with the fact that across all partner countries, **medium-low complexity solutions** are a common trend, as they can ensure easier adoption and higher accessibility for replication in tourism SMEs with limited technical or financial capacity.

Table 9.1 below shows the distribution of the 98 mapped innovations across 4 categories, identified based on the assessed level of innovations' novelty in the tourism industry (Medium-Low vs Medium High) and their expected level of impact

on the sustainability of SMEs' business operations (Medium-Low vs Medium High). As also described in the guideline documents ([Annex 1](#)) the matrix in table 9.1 defines 4 categories of innovations:

**Radical innovations:** innovations that are relatively new in the tourism industry and are expected to substantially impact the environmental sustainability of SMEs' business operations. Out of the 98 innovations mapped through the market scan, 33 can be identified as belonging to this category.

**Impactful innovations:** solutions with a limited level of novelty in the industry but potentially significantly impacting the environmental sustainability of SMEs' operations. These innovations are essential, as they consolidate the impact of solutions that had a higher level of novelty before. Out of the 98 innovations mapped through the market scan, 13 can be identified as impactful innovations.

**Novel innovations:** solutions that might have a limited impact on the business operations of SMEs, but they represent innovative approaches. Successfully implementing them might lead to future versions of the solution with higher levels of impact. Out of the 98 innovations mapped through the market scan, 34 can be identified as novel innovations.

**Incremental innovations:** innovations with a limited level of novelty and a medium-low expected impact. For many tourism SMEs these innovations might represent a first step in the digital and green transition, contributing to making the SME ready for more innovative solutions in the future. Out of the 98 innovations mapped through the market scan, 18 can be identified as incremental innovations.

This overview shows how the CRT market scan provides an interesting mix of incremental, novel, impactful and radical innovations, offering a wide range of solutions useful for taking the first steps or further consolidating SMEs' journey towards the green and digital transition.

Finally, regarding scalability and replicability, most of the mapped solutions are categorized as medium-high, underscoring their adaptability and transferability across various sectors. This highlights their potential for effective implementation in the tourism sector.

## Recommendations to tourism SMEs

Despite diverse contexts, innovation landscapes and priorities, several commonalities emerge among the CRT countries when considering recommendations made to tourism SMEs regarding their green and digital

Expected Impact	M-H	Impactful innovations 13	Radical innovations 33
	M-L	Incremental innovations 18	Novel innovations 34
		M-L	M-H
		Level of Novelty	

Table 9.1: Categorization of mapped solution according to their level of novelty and expected impact on the sustainability of business operations

transition. A strong need for collaboration among SMEs, workforce development, and incremental adoption of innovations emerge as common and important suggestions. Recommendations emphasize starting with small, impactful steps like resource efficiency or adopting basic digital tools, while progressively scaling towards more complex and transformative initiatives. Collaboration with local producers, universities, and innovation hubs can strengthen capabilities and foster a culture of innovation.

Digitalization, including tools for communication, operations, and customer engagement, offers clear benefits in terms of efficiency and market reach, while sustainability practices, such as energy-saving technologies and waste reduction, enhance competitiveness and appeal to eco-conscious travelers.

Insights from all countries underline the importance of embedding innovation into organizational culture, encouraging experimentation, and fostering stakeholder engagement. By adopting these strategies, tourism SMEs can not only enhance their resilience and competitiveness but also contribute to the broader goal of sustainable and inclusive growth in the sector.

### **Possible solutions at the political level**

Similarities are also recognizable among the possible solutions at the political level identified in the 8 CRT countries. Key recommendations emphasize the need for governmental support mechanisms for SMEs, including simplified access to funding, fiscal incentives, and grants to lower the financial barriers to innovation. The organization of capacity-building initiatives directed at SMEs, such as affordable training programs and awareness campaigns, is crucial in equipping SMEs with the skills needed for sustainability and digital transformation.

Moreover, fostering cross-domain collaboration through innovation hubs, networking events, and public-private partnerships is seen as an effective way to inspire SMEs to adopt proven solutions from other industries. Governments are also invited to address structural challenges, such as bureaucratic complexities and limited digital infrastructure.

### **Conclusive Reflection**

Through the activities of WP3 a key takeaway emerged: while the path to a green and digital transition is filled with opportunities, it is equally fraught with challenges that require nuanced, context-specific solutions. This highlights the difficulty of applying a 'one size fit all' approach, where national and even regional specificities must be carefully considered to inspire and enable SMEs to embark on their sustainability journey starting from simple and standard solutions to progressively support the adoption of more complex and transformative innovations.

# ANNEXES

## Annex 1 – Guidelines WP3 Market Scan

### **“Cross-domain solution mapping” in the Grant Agreement**

This document provides clarifications and guidelines to prepare, conduct and report results concerning the “Cross-domain solution mapping”, also defined as “Market Scan, overview of existing state-of-the-art solutions to digital and green constraints in other economic sectors” in the GA (Grant Agreement). We will conduct this market scan in each of the 8 countries as one of the main activities of WP3, linked explicitly to T3.1 and T3.2:

**T3.1: Definition of scope and design of templates (M01-M06):** Clarify areas of business operations, design of categories of solutions scanning.

**T3.2: Cross-domain solutions mapping in 8 countries (M04-M15).** Examination of existing cross-domain solutions, measures in the 8 countries destinations, with a focus on new market segments. It will result in a country matrix completed and an assessment of replicability and adaptability for each country.

**Completing those tasks will allow us to achieve most of the WP3 objectives stated in the GA:**

- Develop an extensive overview to SMEs on solutions and measures to digital and green challenges in other industries for 6 areas of business operations as well as 2 transversal themes, in 8 countries.
- Provide SMEs with market intelligence and knowledge about cross-domain scalable innovation opportunities for different market segments.
- Communicate outcomes of the market scan in an online publication: “cross-domain innovation for tourism business operations: state-of-the-art”.
- Promote cross-domain innovation practices in the project territories.
- Boost international best practices exchange in open innovation for tourism.

### **Role of Solution Mapping/Market Scan in CrossReTour**

CrossReTour intends to provide technical and financial support to tourism SMEs willing to improve their business operations and practices by adopting digital and green innovations that have been successfully implemented in other domains than tourism.

As CrossReTour has limited budget and resources, we will open a Call for Proposal (WP5), to which SMEs can respond by submitting their project idea describing, for example, what innovation they would like to bring in, how this can be implemented in their business, what results they intend to achieve etc. (details deferred to WP5). They could/should also apply by forming partnerships with the provider of

the solution/innovation they would like to implement in their business (the 'solution provider').

We can expect different types of SMEs interested in the Call for Proposals:

- SMEs already having a relatively clear idea about what digital/green innovation they would like to implement in their business, and they may even already know who can provide that solution/innovation (the solution provider). Having some of these SMEs in each country will make our life easier.
- Other SMEs might be generally interested in the topics of CrossReTour (green/digital innovations) but not have a clear idea about what they could actually do. They might be keen to see examples of what they can implement as green/digital innovations in their business, becoming more sustainable, reducing costs or reaching out to new markets. Those SMEs might need inspiration, examples, and successful stories about what possibilities and innovations are out there in the market, (preferably) outside the tourism industry. That's where the cross-domain solution mapping can provide its value, by collecting inspiring examples of green/digital innovation adaptable to the scale and the needs of a tourism SME.

## **Solution Mapping: how does it work, and what will the results be used for?**

Through different channels (e.g. personal knowledge, online desk research, personal networks, connection with research & innovation hubs, expert interviews, etc.), we aim at identifying real green/digital innovations successfully implemented mainly or exclusively in other sectors and that could also be implemented in the business operations of tourism SMEs. Relevant information for each identified solution will be collected by partners using a specific template provided by BUAs (see document "WP3 - Solutions Template"). Each partner has to identify solutions provided in their own country. The identified solutions will be showcased online to SMEs and can be used as "source of inspiration/ideas" for them. Each SME can take inspiration from the showcased solution and use them as a source of potential ideas. However, in terms of application to the "Call for Proposals" (WP5), the "solution providers" identified in one country will only be available to the SMEs of the same country (this will be made clear when solutions are showcased online).

In terms of a number of solutions we aim to identify, we aim for (minimum target):

- By 15<sup>th</sup> March 2024: each partner provides (using the provided template) at least 4 solutions (ideally a mix of digital/green solutions and covering different business key operation areas)
- By end of May 2024: each partner provides (using the provided template) at least 4 other solutions (ideally a mix of digital/green solutions and covering different business key operation areas)



- By end of September 2024: each partner provides (using the provided template) at least 4 other solutions (ideally a mix of digital/green solutions and covering different business key operation areas)

This will lead to a total of at least 12 solutions per partner (ideally a mix of digital/green solutions and covering each of the 6 business key operation areas with at least one innovation/solution)

These examples will hopefully inspire tourism SMEs already involved in the online dialogue (and others, that's also possible). Identified solution can also be used to create the last session of the online dialogue (to be further discussed with WP2). SMEs can then get in touch with the solution provider and discuss how a specific solution/innovation can be adjusted/adapted/implemented to their business operations, starting to shape their project ideas.

Suppose this match works, and it is promising. In that case, SMEs (forming a partnership) can then respond to the Call for Proposal (WP5), illustrating the project/idea/innovation they would like to implement and how.

At that point, through the procedure established within WP5, received proposals will be evaluated, selecting the most promising and innovative (criteria deferred to WP5), which will receive further technical and financial support through the "Cross-domain Open Innovation Programme".

The following sections of this document provide an answer to 3 main questions concerning the scope of the solution mapping (Task 3.1):

- a) Which sectors (preferably outside the tourism domain) should we look at when searching for successful digital and green innovations that could fit tourism SMEs?
- b) What do we precisely intend with the 6 business operation key areas and 2 transversal topics mentioned in the GA?
- c) How should we categorize the identified solutions in a meaningful and useful way?

## **Which cross-sectors should we focus on?**

- ❖ *Which sectors (preferably outside of the tourism domain) should we focus on to find good examples of business green/digital innovations that might be relevant for tourism SMEs?*

In principle, we agreed on leaving the answer to this question as open as possible and adapting to different situations and contexts in each country. This means you are open to which sector, field or domain to consider when scanning the market, searching for best practices and good examples of green/digital innovations.

Nevertheless, we must recognize that not all of us are experts in green/digital business innovations. Therefore, it is a good idea to seek advice from who actually is an expert in those fields. This will allow us to create some basic knowledge at the country/partner level on where to focus while searching for inspiring and practical examples to be showcased to tourism SMEs. Moreover, this will generate insights (on a country level) that will certainly be helpful for the rest of the project.

Therefore, we suggest identifying, at the local level, 2 experts (one for green innovations and one for digital innovations) and setting up an informal interview/conversation to shed light on the sectors and fields that are frontrunners in your country/area when it comes to green and digital innovations. They might already mention good examples and practices you could further explore.

Examples of potential interviewees can be academics and professionals working in research and innovation hubs, innovation incubators, trade bodies and professional associations, or consultants helping small and medium businesses implement green/digital innovations. Other criteria to keep in consideration could be:

- Experts with a broad focus on the innovation landscape, so not only focused on one specific industry/sector.
- Experts with proven experience in studying/implementing innovative digital/green solutions;
- Ideally, experts with a basic understanding of the tourism industry, but they do not need to be tourism experts.
- Most importantly, they can help you understand your country's green/digital innovation landscape.

We suggest having conversations of minimum 45 minutes per expert.

## **Clarifications: “business operation key areas” and other terminology**

❖ *What do we precisely intend with the 6 business operation areas mentioned in the GA (+ the 2 transversal ‘nudging’ topics)?*

As certain terminology will go with us for the entire project, we should make sure we have a common understanding when we refer to one of the 6 “business operation areas” or the 2 “transversal topics” Cross-Re-Tour GA focuses on. The following clarification should work as a sort of glossary:

- **Water.** This key area includes all the business processes and practices concerning water procurement, distribution, purification, business and customers’ consumption, appropriate treatment and disposal of wastewater.
- **Energy.** This key area includes all the business processes and practices concerning energy procurement, energy efficiency, transition to renewable energy sources, retrofitting interventions, and business and customers’ energy consumption.
- **Transport:** This key area includes all the business processes and practices concerning business and customers’ fuel consumption for transports, including the transition to less carbon-intensive transportation modes for employees and customers.
- **Food:** This key area includes all the business processes and practices concerning food sourcing/procurement, food supply chain management, food production, management and reduction of food waste produced by employees and customers.

- **Plastic:** This key area includes all the business processes and practices concerning the procurement and the use of goods and equipment partially or entirely made of plastic, plastic waste separation processes, and disposal of plastic waste.
- **Furniture and equipment:** This key area includes all the business processes and practices concerning the procurement, use, disposal and recycling of furniture and equipment used for the functioning of the business and to supply services to customers.

It is also necessary to clarify the two transversal topics concerning *staff and client nudging*<sup>1</sup>. A nudge is an intervention that maintains freedom of choice but aims at predictably influencing decisions and steering people's behaviour in a particular direction. Nudging contrasts with other ways to achieve compliance, such as regulations, laws and enforcement. Therefore, we can clarify the meaning of the following:

- **Staff nudging:** Strategies or interventions employed by SMEs to gently influence the decisions and behaviours of their employees, generating a change that creates an environmentally positive impact on one or more of the 6 key business areas defined above, basically altering non-sustainable behaviour in a predictable way without forbidding any current options.
- **Client nudging:** Strategies or interventions employed by SMEs to gently influence the decisions and behaviours of their customers, generating a change that creates an environmentally positive impact on one or more of the 6 key business areas defined above, basically altering non-sustainable behaviour in a predictable way without forbidding any current options.

#### ❖ **Terminology clarification: What do we mean by digital and green innovations and solutions?**

First, let's clarify what we mean by green/digital innovation, so we can determine what do we intend as green/digital solutions within Cross-Re-Tour.

**Green innovations:** changes in the business operations and practices able to determine a reduction of the environmental impact of the business, creating a positive value for both the SME and the environment.

**Digital innovations:** changes in the business operations and processes, deriving from the adoption of digital technologies and determining improved processes and services/products, including gains in terms of resource-usage efficiency, cost-reduction, reduced environmental impacts, and access to new markets.

Ideally, within Cross-Re-Tour, a **digital or green solution** would be a digital/green innovation that responds to the challenges manifested by tourism SMEs and that we will uncover during the online dialogue (WP2). Although we are not fully aware yet of the challenges that will emerge from the online dialogue,

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<sup>1</sup> Typical examples of client nudging strategies in hospitality are the messages positioned in the hotel rooms to influence guests behaviours on topics such as the re-use of towels or the use of the air conditioning. E.g. <https://www.bva-bdrc.com/nudging-sustainability-in-the-hospitality-sector/>

and we agreed on interpreting the solution mapping as a way of collecting inspirational examples, we can safely state that:

*In the context of the solution mapping, we refer to "green" or "digital" solution as any digital or green innovation (existing preferably outside of the tourism domain) that could reasonably be adjusted and/or adopted by tourism SMEs, potentially allowing them to achieve one or more of the following results (see also figure below):*

- *improve the environmental sustainability of their business operations in one or more of the 6 key business areas.*
- *improve their capability to effectively reach out, engage and offer services to new markets that represent meaningful segments and niches in terms of inclusivity, accessibility and sustainability (e.g., LGBTQ+ market, ecotourism, solutions for accessibility, etc.)*
- *nudging clients or staff as a strategy to get to one (or both) of the two results above.*

Green/Digital solutions might refer to one or more of the following approaches (non-exhaustive list):

- Fill in knowledge gaps or training gaps necessary to achieve one or more of the above-mentioned results.
- Adapting, adjusting and/or prototyping an existing solution already on the market, including know-how, licenses, software and/or physical goods, tools, machinery and devices functional to achieve one or more of the above-mentioned results.
- Acquiring existing know-how, licenses, software and/or physical goods, tools, machineries and devices functional to improve the digital or green performance of the SME and achieve one or more of the above-mentioned results.

## **Categories of solutions**

Defining how to classify and categorise the mapped solutions might help us in the next steps of Cross-Re-Tour, besides providing an additional perspective on how to organise the solutions when they are presented and showcased to SMEs.

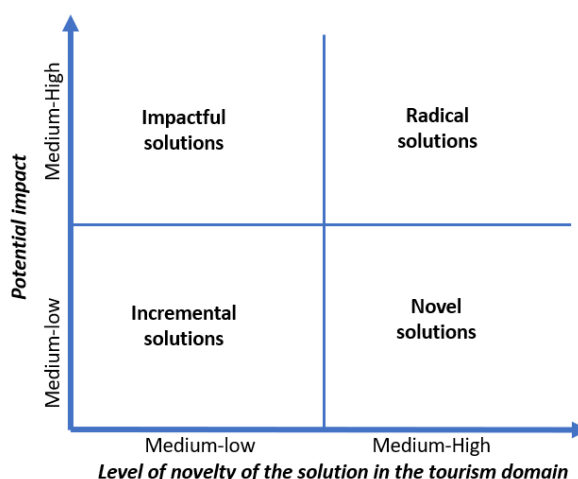
We propose to classify the mapped solutions according to 2 dimensions:

- *Level of novelty of the solution in the tourism domain:* how innovative the solution is in the tourism domain? Is it something completely new and completely out-of-the-box for the tourism industry? Or is it similar to something that, in some form, has already been experimented, tested or implemented in the industry in your country?
- *Potential impact of the solution on the business operation of the SME:* How significant is the potential impact the solution might be able to determine, if adjusted/implemented by tourism SMEs? The impact is assessed in terms of the potential to improve the environmental sustainability of SME business operations in one or more of the 6 key business areas or the potential to enhance their capability to effectively reach out, engage and offer services

to new markets that represent meaningful segments and niches in terms of inclusivity, accessibility and sustainability.

**While mapping cross-domain solutions using the provided template, partners will also be asked to conduct an indicative assessment of these 2 dimensions.** Obviously, this entails a subjective level of approximation, as not all of us are experts in the field. Nevertheless, our assessment doesn't need to be a precise and objective evaluation, but it will hopefully allow us to generate a meaningful overview of the solutions we have identified.

The graph below shows 4 possible categories of solutions based on the assessment of the 2 mentioned criteria:



- **Radical solutions:** solutions that are new in the tourism industry and are expected to substantially impact the environmental sustainability of SMEs' business operations and their capabilities to reach out to new 'sustainable markets'. They do represent an ideal contribution of cross-domain solutions within Cross-Re-Tour.
- **Impactful solutions:** solutions with a limited level of novelty in the industry but potentially significantly impacting the environmental sustainability of SMEs' business operations and their capability to reach out to new 'sustainable markets'. They are essential, as they allow, for example, to consolidate the impact of solutions that before had a higher level of novelty.
- **Novel solutions:** solutions that might have a limited impact on the business operations of SMEs, but they represent innovative approaches. Successfully implementing them (for example, within Cross-Re-Tour) might lead to future versions of the solution with higher levels of impact.
- **Incremental solutions:** solutions with a limited level of novelty and a lower level of expected impact. Nevertheless, for some SMEs they might represent a first step in innovation, contributing to making the SME ready for more innovative solutions in the future.

Through the cross-domain solution mapping and probably in the "Cross-domain Open Innovation Programme", we strive for a good balance between the 4 types of solutions. We can expect a number of incremental solutions which can help and

support certain types of SMEs making their first steps into the uncertain field of green and digital innovations. Nevertheless, we should aim at a good number of impactful solutions, as they help to maximise the results of the project, and novel solutions to test more innovative approaches, as this is the spirit of Cross-Re-Tour. Obviously, radical solutions represent an ideal opportunity Cross-Re-Tour should aim for.

To be considered/developed: maybe the outcome of the AAT self-assessment can also indicate what type of innovation an SME is ready for. If they are not well prepared yet, focusing on incremental solutions might be better. If they are already well equipped, they might dare for a more disruptive type of solution, for example.

## Annex 2 – Template to collect data about solutions/innovations

<b>Country</b>									
<b>Reported by</b>									
<b>CrossReTour name</b>									
<b>Solution Provider</b>									
<b>Solution Description</b>									
<b>Contextual area if known/relevant</b>									
<b>CrossReTour Relevant topic (multiple topics are possible)</b>	Water	Energy	Transport	Food	Plastic	Furniture/ Equipment	Staff Nudging	Client Nudging	Sustainable & Inclusive Markets
<b>Green Impact on the business operations</b>									
<b>Digital Impact on the business operations</b>									
<b>Why should this solution be interesting for tourism SMEs?</b>									
<b>Does the solution help SMEs to reduce their costs? How?</b>									
<b>Does the solution help SMEs to develop new markets and/or increase revenues? How?</b>									
<b>Assessed level of novelty of the solution in the tourism industry</b>	Medium-Low		Medium-High						
<b>Assessed level of potential impact on the business</b>	Medium-Low		Medium-High						
<b>Assessed level of complexity of adoption of the solution</b>	Medium-Low		Medium-High						
<b>Potential impact on the customer experience (if applicable)</b>									

Investments needed	
HR and organization requirements	
Assessment of replicability and scalability in the tourism domain	
Additional comments (if necessary)	

**Terminology clarifications:**

**CrossReTour name for the solution:** Choose a name that can be used to identify the solution within CrossReTour. It can be, for example, the name of the solution provider itself or a few words that clearly identify what the solution is about. E.g. "Reduce water consumption with WaterSupply" or just "WaterSupply".

**Solution Provider:** Indicate the name of the company or organization that provides the identified solution. If possible, provide a link to the website of the company/organization and a link to the webpage with the description of the solution (if available/applicable).

**Solution Description:** Provide a short description of the solution and how it is currently used/implemented (preferably) outside of the tourism domain. Indicatively use at least 100 words, but more is possible if necessary.

**Contextual area (if known):** Provide an indication of the contextual area (e.g. (e.g. urban, rural, coastal, mountain, inland, island) in which the solution is normally provided, if known.

**CrossReTour Relevant topics:** Indicate with an "X" the CrossReTour topics that are relevant for the reported solution. These are the 6+2 key business areas + the indication that the solution allows to reach out and strengthen the business position in markets that are particularly sustainable or inclusive (e.g. ecotourism, LGBT+ tourism, accessibility of tourism services, etc..)

**Green Impact on the business operations:** Briefly describe the expected impact of the solution on the environmental impact of SMEs' business operations, in case the solution would be adjusted/implemented by the SMEs. Imagine you are talking to an SME and want to explain how the solution could reduce the environmental impact of their business operations and how. You can refer back to one (or more) of the 6 key business areas (water, energy, etc...). If the solution focuses only on digital innovation to improve SME capability to reach out, engage and offer services to new markets, there might not be green impacts. If this is the case, leave this section empty.

**Digital Impact on the business operations:** Briefly describe in which way the digital innovation is expected to change the business processes and operations of the SMEs (e.g. procurement, internal processes and functions, marketing, provision of services, etc.) and how this either reduce the environmental impact of SMEs business operations or improve their capability to effectively reach out, engage and offer services to new markets. Imagine you are directly talking to an SME and want to explain how the solution could impact their business operations.



**Why should this solution be attractive for tourism SMEs?** Imagine you are “selling” the solution to an SME. Why should this solution be exciting and beneficial for them? Why should they even consider it? What are the benefits for them?

**Does the solution help SMEs to reduce their costs? How?** Briefly explain if and how the solution might determine a reduction of the costs for the SME (e.g. more efficient processes, reduced consumptions, etc.). Imagine you are directly talking to an SME, and you want to explain to them the possible benefits in terms of cost reduction.

**Does the solution help SMEs to develop new markets? How?** Briefly explain if and how the solution might determine an improved capability to effectively reach out, engage and offer services to new markets. Imagine you are directly talking to an SME and want to explain to them the possible benefits of new market opportunities.

**Assessed level of novelty of the solution in the tourism industry:** Based on the collected information and your (subjective) knowledge, please determine the level of novelty of the solution in the tourism industry. Is it a solution that is new and (as far as reasonably known) not used in the tourism industry? Or is it a solution that, in some form, has already been tested, although not really spread and well-known in the tourism industry? Mark with an “x” your assessment “medium-low” vs “medium-high”. Please check chapter 6 of the *Innovation Market Scan Guidelines* document. We know that this can only be a rough assessment based on your subjective knowledge and understanding.

**Assessed level of potential impact on the business:** Based on the collected information and your (subjective) knowledge, please assess the level of the potential impact of the solution if adjusted/ implemented by tourism SMEs. The impact is assessed in terms of the potential to improve the environmental sustainability of SME business operations in one or more of the 6 key business areas or the potential to enhance their capability to effectively reach out, engage and offer services to new markets that represent meaningful segments and niches in terms of inclusivity, accessibility and sustainability. Please check chapter 6 of the *Innovation Market Scan Guidelines* document. We know that this can only be a rough assessment based on your subjective knowledge and understanding.

**Assessed level of complexity of adoption of the solution :** Based on the collected information and your (subjective) knowledge, please determine how complex it might be to adopt a solution by a tourism SME. Is it a solution that could potentially be implemented by a tourism SME without special and costly adjustments and/or without the need of permanent special expertise normally not available in-house? Or is it a solution that can easily be adopted and implemented without special and costly adjustments and/or without the need of permanent special expertise? Mark with an “x” your assessment “medium-low” vs “medium-high”. We know that this can only be a rough assessment based on your subjective knowledge and understanding.

**Potential impact on the customer experience:** Briefly explain if and how the solution will have an impact on the customer experience of the SME (e.g. the way customers get to know about a particular service, the way they experience the service or use a product, etc.).

**Investments needed:** Briefly indicate (if known) what is the necessary investment to acquire and implement the solution, as it is available in a domain other than tourism. If possible and known, indicate the necessary cost and/or other resources needed to adjust and implement the solution for a tourism SME.

**HR and organization implications and requirements:** Briefly indicate if the implementation of the solution by the SME has specific implications or requirements at the HR and organization level (e.g. the solution would require hiring/laying off people, to train (part of the) staff, to change the organisational structure of the SME, reorganize staff, etc.).

**Assessment of replicability and scalability in the tourism domain:** Briefly elaborate on the opportunities and challenges in terms of replicability (how easy is it to replicate/adjust the exact solution to tourism SMEs? What might facilitate or hinder this? Challenges?) and scalability (how easy such a solution could spread across the entire tourism industry? What might facilitate or hinder this? Challenges?). We know that this can only be a rough assessment based on your subjective knowledge and understanding.

## Annex 3 – Interview Guide for interview with experts

**Intro:** You have been invited to participate in this interview as an expert in the field of 'digital' or 'green' innovation in our country. Cross-Re-Tour aims at supporting tourism SMEs willing to improve their business operations by adopting 'digital' and 'green' innovations that have been successfully implemented (preferably) in domains other than tourism. Therefore, we think your expertise can be a great added value to understand better the current situation of 'green'/'digital'\* innovation in our country. This will help us in identifying innovation opportunities for tourism SMEs.

### A. Understanding the local tourism ecosystem

As a starting point, I would like to ask you a few questions regarding tourism and the tourism industry in XXX\*\*. We know you might not be a tourism expert, and that is totally fine; therefore, answer to the best of your knowledge.

- How familiar are you with the tourism industry/sector (from a personal and professional point of view)?
- To what extent are you aware of the sustainability challenges of SMEs operating in the tourism sector?
- What do you think about tourism in XXX\*\*(city/country)?
  - What are the main challenges, difficulties and problems concerning sustainable tourism in XXX\*\*?
  - To what extent do you perceive tourism in XXX\*\* as an innovative industry? Why? Specific challenges?

### B. Digital & green innovations in other sectors

I will now ask you a few questions regarding the 'innovation environment' in our country, not specifically related to the tourism industry:

- Which sectors/domains are the country's leaders/frontrunners in terms of digital/green\* innovations?
  - Which of these sectors would be more interesting to look at for a tourism SME willing to innovate their business?
- What are the success conditions for green/digital\* innovations? Under what conditions those innovations are usually successful?
- What should we consider when reflecting on the ability of a tourism SME to adjust/adopt these innovations?

### C. Best practices

Can you mention one or more best practices representing specific green/digital\* innovations successfully implemented by SMEs in other sectors in our country that made SMEs operations more sustainable?

- a. What was the primary focus of this practice?
- b. Which key challenge(s) has been dissolved through this best practice?
- c. How significant was the benefit to other stakeholders (e.g. local communities)?

digital/green\* -> Please mention 'digital' or 'green' depending on the expert you are interviewing.

XXX\*\* -> to be replaced with the name of the city/Country

## Annex 4 – Format Solutions/Innovations to be published online

### ***Cross-Re-Tour shares insights into green and digital innovation:***

**Innovation code (internal use – do not publish):** XXNN

**Country in which the innovation is available:** ...Country...

**Name of the innovation:** ...Innovation...

**Innovator:** ...Innovator...

**CRT Category:** ...categories...

### **What is this innovation about?**

AAA... (indicatively 40-60 words)

### **What's in it for a tourism SME?**

BBB... (indicatively 40-60 words)

### **Consider that:**

CCC... (indicatively 40-60 words)

**Keywords:** dddd, ffff, gggg, hhhh

**Innovator's website:** XXXXX

**Other sources and copyrights:** YYYYYY

### **Disclaimers:**

*\*This post includes information publicly available online between March and October 2024. Some text is directly quoted from sources (see 'Innovator's website' & 'Sources and Copyrights'), while other parts are summarized or paraphrased and may not fully reflect the original intent. Online information and data may have changed or been removed since collection. Please always verify the most updated and accurate version of the innovator's website and/or get in touch with the innovator for more and accurate information.*

*\*\* This post shares insights on behalf of the Cross-Re-Tour EU-funded project. It is intended as a source of inspiration for tourism businesses interested in green and digital innovation. However, it does not guarantee that the mentioned innovation will be fully or partially eligible under the terms and conditions of the upcoming Call for Proposals within Cross-Re-Tour.*

## Annex 5 – Set of considered tourism SMEs challenges

- **Resource efficiency:** Efficient use of resources is a critical challenge for tourism SMEs striving to achieve sustainable operations. Tourism SMEs often struggle to optimize the use of scarce and increasingly costly resources (e.g. water, energy, etc.) which are fundamental to their daily operations. Inefficiencies in resource management can lead to excessive consumption, waste, unnecessary costs and undesired environmental impact. Tourism SMEs are struggling to find ways to streamline business processes and minimize resource usage and waste of resources that are determining the environmental impact of business operations.
- **Adopting circularity:** Tourism SMEs find particularly challenging to implement the circularity paradigm as part of their business operations and as part of the supply chain they are part of. This entails, for instance, implementing the re-use and re-cycle approach as part of the internal business operations and as part of the service provided to customers.
- **Waste management:** Running a tourism business can determine a waste production that is sometimes unavoidable and finding out how to reduce it is perceived as challenging. This regard, for example, how to prevent/mitigate/reduce costly disposal costs, how to deal with the lack of recycling facilities, how to reduce the impact on the environment and comply with existing regulations.
- **Innovation knowledge-gap:** SMEs owners and managers are often aware about the need to implement green and digital innovation to reduce the environmental impact of their business, reduce costs and access to new market opportunities. Nevertheless, they lack knowledge on a strategic level on how innovation can help them to make their business more sustainable, what steps to follow, what options are available and economically feasible for their business, etc.
- **Technical capacity:** Digital and green innovations can make a business more sustainable but they sometimes require particular skills, technical expertise, digital literacy, specific knowledge, in order to implement and use them effectively. SMEs owners and staff often perceive this as a barrier, as they don't have these capacities and without specific training and capacity building, they would just waste time and money. Sometimes those barriers are particularly significant and owners are just not comfortable in thinking how to overcome them.
- **Real-Time monitoring:** In a fast and digitalized world, having the possibility to rely on real-time data and information is often essential for SMEs in their attempt to reduce the environmental impact of business operations and timely implement corrective actions.
- **Price/Quality balance:** SMEs are sometimes struggling in embedding more sustainable component in their offer to visitors, due to concerns regarding price and quality. On one side, sustainability is (perceived) as an expensive option and SMEs are afraid to scare market opportunities away. On the other hand SMEs have sometimes concern regarding the quality and durability of more eco-friendly options and are afraid this will impact on the customer satisfaction. As a consequence, SMEs are sometimes reluctant or not comfortable in embedding more sustainable options in their offer.
- **High investments:** Even when SMEs are determined to invest in green and digital innovation, they feel the necessary investments are very high and there is a lack of affordable options to make their business more sustainable without putting their financial sustainability at risk.

- **Client nudging:** Many tourism SMEs are already trying to influence decisions and behaviours of their customers (client nudging) towards more sustainable choices, as this not only translates into a mitigation of business' environmental impact but also into a reduction of their operating costs. Nevertheless, SMEs experience several challenges in doing so, due to many reasons: customers limited awareness and knowledge about their environmental footprint, resistance to change their habits, perceived inconvenience, cultural differences, price sensitiveness. Greenwashing scepticism and a lack of measurable impact further complicate the process. For many SMEs it is clear that client nudging should be done in an engaging, playful and still informative way, but they often lack of tools, resources or strategies on how to do that.
- **Staff nudging:** The role of staff is of paramount importance in effectively reducing the environmental impact of a business, also when this is achieved through green and digital innovation. Those innovation often require specific actions to be taken when carrying out day to day operations and without having the staff convincingly on board, they cannot produce the desired results. Moreover, certain innovation require specific training and skills staff need to be open and comfortable in developing. SMEs owners often struggle in influencing decisions and behaviours of staff (staff nudging) towards sustainability and this is due to multiple reasons: staff limited awareness about their potential contribution in reducing environmental footprint, resistance to change established routines and working habits, excessive workload and perceived irrelevance of sustainability for the business performances, lack of training or clear guidelines. For many SMEs owner and managers, it is clear that staff nudging could be effective if implemented in an engaging, playful and still informative way, but they often lack of tools, resources or strategies on how to do that.

## Annex 6 – Transition Pathway topics

- Topic 6 (Sustainable mobility):
  - Passenger transport companies to develop greenhouse gas (GHG) reduction plans in line with the Climate Law goals.
- Topic 7 (Circularity of tourism services):
  - Developing the use of locally supplied ingredients with low environmental footprint to reduce the environmental impact of food services
  - Reducing food waste in the hospitality industry
  - Reducing and separating overall waste of tourism services
  - Increasing water efficiency, reducing water stress and pollution, and improving sanitation.
- Topic 8 (Green transition of tourism companies and SMEs):
  - Tourism accommodations, including SMEs to apply for the EU Ecolabel or other EN ISO 14024 type I ecolabels or equivalent voluntary labels, which are independent, multi-criteria based and third party verified
  - Capacity-building programmes, technical and financial assistance for SMEs to engage in environmentally friendly practices and schemes.
- Topic 9: (Data-driven tourism services):
  - Use of artificial intelligence and data-based innovation, such as local digital twins for predictive planning to accurately meet demand and reduce resource efficiency of service.
- Topic 10 (Improving the availability of online information on tourism offer):
  - Improving the online availability of validated information on sustainable, accessible, or specifically targeted tourism offers.
- Topic 12 (Research and innovation projects and pilots on circular and climate friendly tourism):
  - Developing models and transferable practices for circular and climate friendly tourism
  - Establishing large-scale pilots on circular and climate friendly tourism.
- Topic 13 (Promoting the use of the PEF and OEF methodology and the development sectorial category rules for the tourism ecosystem):
  - Developing tools to support tourism companies to make Product and Organization Environmental Footprint assessments of their products, services and organizations.
- Topic 15 (R&I for digital tools and services in tourism):
  - Innovative tourism services using advanced technologies (virtual reality, augmented reality, AI) and digitised cultural heritage.
- Topic 16 (Support for digitalisation of tourism SMEs and destinations):
  - Raising awareness of tourism SMEs on the benefits of digitalisation.
- Topic 19 (Awareness raising on skills needs for twin transition in tourism):
  - Preparing information materials on skills needs for different types of actors.
- Topic 20 (Awareness raising on changes in tourism demand and the opportunities of twin transition for tourism):
  - Awareness-raising activities to increase the uptake and visibility of sustainability tools, as well as consumers' demand of sustainable options.



## Annex 7 – Innovation Assessment criteria

**NOVELTY:** *Level of novelty of the innovation in the tourism domain:* how innovative this solution or new approach is in the tourism domain? Is it something completely new and completely out-of-the-box for the tourism industry? Or is it similar to something that, in some form, has already been experimented, tested or implemented in the industry in this Country?

**IMPACT:** Potential impact of the solution on the business operation of the SME: How significant is the potential impact the solution might be able to determine, if adjusted/implemented by tourism SMEs? The impact is assessed in terms of the potential to improve the environmental sustainability of SME business operations and the potential to enhance their capability to effectively reach out, engage and offer services to sustainable and inclusive markets.

**COMPLEXITY:** How complex it is to adoption of such an innovation by a tourism SME? Is it a solution that could potentially be implemented by a tourism SME without special and costly adjustments and/or without the need of permanent special expertise normally not available in-house, or not? Is it a solution that can easily be adopted and implemented without special and costly adjustments and/or without the need of permanent special expertise, or not?

**Scalability of green and digital innovations:** Scalability refers to the ability of a digital or green innovation to grow in size, scope, or impact while maintaining its efficiency and effectiveness. For tourism SMEs, a scalable solution can adapt to increased demand, a larger customer base, or expanded operations without requiring disproportionate additional resources, while maintaining its effectiveness, quality, and performance. It is about increasing the capacity or size—such as reaching more people, serving a larger audience, or handling more demand without costs increasing disproportionately. The scalability of an innovation depends on factors like its design, resource requirements, and the surrounding ecosystem. Innovations that are modular, efficient, standardized, and resource-light are generally easier to scale, as they can grow without significant additional cost or complexity. Strong market demand and adaptable business models, such as subscription services or licensing, also enhance scalability. Conversely, reliance on scarce resources, complex implementation, cultural or regulatory barriers, and a lack of supporting infrastructure can hinder growth. Innovations requiring high customization or fragile quality control also face challenges, as scaling risks diluting their effectiveness.

**Replicability of green and digital innovations:** Replicability refers to the ability to reproduce or transfer a digital or green innovation across different contexts, businesses, or geographic locations while maintaining its effectiveness. It is also about the adaptability of innovations that are usually implemented by larger organizations to the size and the needs of an SME (is it feasible to adapt that innovation or solution to the reality of a tourism SME?). The replicability of

an innovation depends on how easily it can be reproduced in different contexts while maintaining its effectiveness. Key factors include its adaptability, complexity, and dependence on external conditions. Innovations are more replicable when they are simple, well-documented, and adaptable to local contexts. Solutions that require minimal resources, training, or specialized knowledge are easier to transfer and implement elsewhere. Clear guidelines, standardized processes, and tools that can be adjusted to local needs also enhance replicability. Conversely, innovations are less replicable when they rely on unique or hard-to-access resources, highly specific expertise, or infrastructure that may not exist in other locations. Dependence on supportive ecosystems, such as supply chains or regulatory frameworks that differ widely, can also hinder replication. Furthermore, cultural, legal, or environmental differences between regions can complicate implementation, requiring significant adaptations that may undermine the original innovation's success.