

SMART

DIGITAL
SUSTAINABLE
TOURISM

Smart Practice Manual

November 2022



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1. Introduction



The SMART project aims at supporting organisational capacity building, resilience, and safe experiences for the sustainable tourism industry through the use of digital tools and the promotion of digital skills, interconnectivity, and interoperability. SMART is the response to a real need for more materials that professionals require to adapt to a new labour market through transversal skills and competencies.

SMART also aims to raise awareness of the advantages of sustainable tourism for businesses, the community, and the environment. SMART encourages tourism stakeholders to invest in the upskilling/reskilling of staff as well as support businesses and public authorities in the development and promotion of more environmentally sustainable destinations. SMART aims to support destinations wanting to develop a smarter and more sustainable tourism offer and who want to become more resilient. As a result, SMART aims to contribute to sustainable post-COVID-19 recovery for tourism professionals and their destinations.

The Manual is meant for professionals working in the tourism sector or in digitalisation such as SMEs/tourism organisations, tourist offices, tourism ecosystem stakeholders interested in destination management and sustainable tourism destinations; VET and adult education providers in the sector of tourism & hospitality, education centres, community organisations, NGOs Training professionals involved in the travel and tourism sector.

The Manual provides an overview about the links between digitalisation and sustainability in tourism as digital tools and the digitalisation of tourism can, if applied intelligently, make a considerable

contribution to advancing the sustainability of the tourism sector. As part of the Transition Pathway for Tourism document published in early 2022, the European Commission establishes several priorities for the future of tourism and they all take environmental sustainability and climate neutrality (referred to as the green transition) into account. As such the European Commission is also working towards speeding up the digital transition of the tourism sector.

The three country profiles of France, Spain and Greece provide an overview of tourism policies and insight as to how each country tackles current challenges around the needs linked to the twin transition in tourism. Governance, funding and investments by both public and private parties are key variables shaping a successful transition.

The Manual then looks into the methodology used for the best practice collection and the types of practices that have been identified by the project partners. There are a vast number of different tools available, however, research by the project partners have led to the conclusion that ultimately most of them can fall into the category of either mobile applications, online platforms or a few other categories, such as for example specific software. As part of its work of looking into good examples of online platforms, the partners have also identified online training programmes and courses for tourism professionals or those (including students) wishing to start a career in sustainable tourism or improve their skills.

Understanding one's needs and selecting the right tools that support a tourism business and its activity can be a challenging task considering the vast

number of tools available on the market. Each case needs to be assessed individually to find the most adequate solution. As a result, our best practices are meant as inspiring examples covering different areas that support sustainable tourism. They are broadly linked to the GSTC criteria, such as Sustainable business management, Promotion of local products, Promotion of sustainable rural development, Fostering social inclusion, Promotion and conservation of cultural heritage, Circular Economy, Environmental protection and conservation.

The main need identified regarding the uptake of digital tools from tourism businesses is the lack of awareness of their contribution to the mid- and long-

term sustainability of the sector that professionals and employees showcase. Tourism professionals have access to limited and often scattered information about the variety of digital tools available and about their impact towards sustainability due to the fact that almost all tourism businesses are SMEs with limited capacity in terms of specialised human resources. The digital skills necessary for the uptake and use of specific tools is also another main identified need among tourism professionals. Finally the Manual also includes some recommendations to support educators in vocational and adult learning with using the SMART best practice collection in the classroom or the integration into their teaching materials.



2. Digitalisation and Sustainability in Tourism



2.1 Introduction to the priorities of digitalisation and sustainability for tourism

Tourism is one of the world's major economic sectors. It is the third-largest export category (after fuels and chemicals) and in 2019 accounted for 7% of global trade. As we know very well, tourism is also one of the sectors most affected by the Covid-19 pandemic, impacting economies, livelihoods, public services and opportunities on all continents. All parts of its vast value-chain have been affected (1).

The UN offers an action plan to transform tourism with five priority areas. First, there is a need to manage the crisis and mitigate its socio-economic consequences on populations' livelihoods, in particular on women's employment and economic security. The UN recommends boosting competitiveness and enhancing resilience, promoting innovation and digitalisation of the tourism ecosystem and also promoting sustainability and inclusive green growth. Finally, the UN suggests the creation of partnerships and to coordinate the industry to transform tourism and achieve the SDGs (1).

As part of the Transition Pathway for Tourism document published in early 2022 (2), the European Commission establishes several priorities for the future of tourism and they all take environmental sustainability and climate neutrality (referred to as the green transition) into account. Another aspect of tourism, which the European Commission is working towards is firmly linked to speeding up the digital transition of the tourism sector.

To achieve its ambitions linked to the above mentioned priorities the European Union needs to follow the objectives

announced as part of the Green Deal, aspiring to make Europe the first climate-neutral continent by 2050 (3). The European Green Deal calls for a standard method to substantiate green claims through economic adaptation to the digital age and by promoting equality and social inclusion. To carry out this green and digital transition, tourism in Europe should act as the model activity of the sustainable environmental transition.

After the Covid-19 crisis and its consequences on tourism, it is the right moment to implement changes in the industry. Indeed, tourism was one of sectors that were most affected by the Covid-19 crisis and with 82% of Europeans willing to change their travel habits for more sustainable options means a considerable opportunity to achieve some of the sustainability goals of the sector. A third of Europeans would even be ready to pay more to support local nature and local communities (4) although different data collected by different organisations in different countries vary somewhat.

One of the focus areas for the digitalisation and sustainability of tourism is to make better and innovative use of data to boost competitiveness and innovation of tourism services. It is a challenge for tourists to find trustworthy information about the level of sustainability of tourism offers on the market. Thus, this makes accessibility of sustainable tourism a priority to develop and attract more consumers (4).

One more priority and need at European level, which is also closely linked to the objectives of the SMART project, is to address the lack of knowledge about the exchange of existing good practices between micro enterprises and SMEs and their difficulty to access the tools to implement such practices (2). Micro-

enterprises and SMEs lack knowledge of existing good practices and access to tools to implement them, which is a challenge that needs to be addressed in order to help their sustainable and digital transition. Tools and technologies are also needed to make the application of the environmental footprint method more user friendly for SMEs.

In addition to a lack of knowledge, tourism SMEs also need more opportunities to exchange practical knowledge with peers and as a result face an important obstacle in adopting new practices. The digital transition pathway should prioritise the need to provide more effective support mechanisms and peer learning between SMEs within and among destinations, as well as among destination management organisations (DMOs) (2).

Another priority for tourism needs to be to make local communities key players for tourism development. Within local communities, tourism can be used for local renewable inputs in the energy mix. Tourist areas experiencing high seasonal demand can increase circularity, energy security and generate secondary income year-round with projects based on local renewable energy. Through social economy approaches, local communities would be at the centre of the transition towards sustainable tourism (2).

Data in tourism is equally important for the European Commission. Indeed, tourism operators generate data continuously, creating a great amount of data that could be used to better match tourism supply and demand and creating new types of services. Interoperable technical specifications for tourism data sharing could also facilitate sharing data with other ecosystems and help develop a common language and governance framework for using data which is a

priority area for the digital transition for tourism. The European data economy should integrate tourism but in order to do so all operators, users and providers need to work together and the data space for tourism should provide interoperability between every stakeholder (2).

The priorities of digitalisation and sustainability for tourism will be to develop digital and green skills, something which the SMART project is promoting as part of its dissemination efforts and project results. Current and future tourism professionals need both basic and advanced digital skills. Tourism-specific digital skills approaches could be developed based on the European Digital Competence framework which provides guidance of different elements to be included for different types of skills objectives but tourism actors also need skills to understand the elements of environmental sustainability. These skills can help them recognise how addressing sustainability challenges could also provide new business opportunities with the increasingly environmentally conscious customers. The recently published GreenComp framework also offers a structure that can provide a playing field for using digitalisation to advance sustainability.

2.2 Introduction to the role of digital tools and skills for sustainable tourism and general trends in Europe and globally

Digital tools and the digitalisation of tourism can, if applied intelligently, make a considerable contribution to advancing the sustainability of the tourism sector. The room and the opportunities for application of digital tools and

technologies within the sector are vast and it can be noted that digital tools develop and evolve very fast with a large number of start-ups working on filling the growing market. Not all ideas or tools survive, some disappear as quickly as they appeared. However, many tools, platforms and apps also turn out to be very successful and can bring considerable benefits to the business or private user, local communities and the environment and can therefore play an important role in making tourism more sustainable.

Digitalisation is the term used to describe the transformation of society and the economy towards a more digital world. It is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities. The role of digital tools in tourism has evolved and today it tends to help businesses to be more sustainable. Enabling digitalisation in tourism is a key policy challenge for making the tourism industry around the world more sustainable. Digitalisation is expected to continue driving the travel experience on its trajectory towards becoming more easily, seamless, and high quality and in a way that contributes to the Sustainable Development Goals (SDGs) (5).

The role of digital tools has changed over the years. Development of technologies in tourism started with the digitalisation of sales and marketing in the last of the 20th century (1990-2000). Tourism organisations and businesses were able to harness technology as a marketing tool with the invention and spread of the internet. The Internet consolidated its place as the key source of information for travellers between 2000 and 2010. The visitor experience became the focus of tourism providers with customised products and personalised experiences. The third phase to the digitalisation of

tourism started from 2010 with advances such as cloud computing, mobile and wearable technologies, augmented and virtual reality, GPS. Interconnectivities between digital and physical worlds became the norm and increased integration and interoperability of digital systems. The reach of tourism providers evolved globally with the appearance of social media platforms and ways in which the internet has developed to facilitate user-generated content. These advances have opened up new and innovative product development opportunities for the tourism industry and paved the way to the digitalisation and sustainability of tourism today. According to an OECD survey of the top 10 challenges to digitalisation across 31 countries, the 3 most prominent challenges for governments were first a lack of awareness, implementation and enforcement, second insufficient skills, training and education, and finally multi-actor, multi-stakeholder and multi-level governance coordination (6).

Nowadays, consumers are using digital technologies throughout their entire vacation from searching to booking their travel. The use of digital technologies including the Internet, location-based services, artificial intelligence, augmented and virtual reality, and blockchain technology has resulted in a tourism offer that is more attractive, efficient, inclusive, and economically, socially and environmentally sustainable than its predecessor. Thus, tourism businesses need to make their presence known in the digital sphere. Big tourism companies are more tech-driven than traditional micro and SME tourism businesses. The gap between them creates a lack of opportunities for sustainable tech business practices to spread all over the world (7).

In Europe, the European Commission found that EU countries experience differences in the uptake of digital technologies in tourism, especially between nordic countries and eastern and southern countries (8). One of the trends in recent years has been sharing accommodation and digital tools helped spread the trend around the world with popular apps (7).

Some major impacts on the sector as a whole constitute the development of smart travel facilitation, which includes the use of a smartphone for every aspect of travel from smart visas to boarding passes. Another evolution in sustainable

tourism are smart destinations, which encompass a strategy for technology, innovation, sustainability, accessibility and inclusivity along the entire tourism cycle: before, during and after the trip. A smart destination is also one with residents as well as tourists in mind, factoring multilingualism, cultural idiosyncrasies and seasonality into tourism planning. For all these developments, tourism jobs will require both technical and advanced soft skills used to effectively implement and manage smart initiatives. The greatest societal impact of digital transformation in tourism may be the effect on the sector's workforce with the need to develop the skills needed for the jobs of the future (5).

3. National Profiles, the state of digital tourism to advance sustainability in France, Greece and Spain





3.1 FRANCE

3.1.1 *Statistics and General Information*

For more than 30 years, France has been the world's leading tourist destination. In 2019, 90 million foreign tourists came to discover the richness of the country's natural and architectural heritage, and enjoy a world-renowned art of living and hospitality. In France, the tourism sector represents 8% of national wealth.

In 2018, French tourism broke a new record with 89.4 million foreign visitors, confirming its leading position on the podium of world destinations with a 3% increase compared to 2017. The total figure for spending by foreign visitors also increased by 5%, with revenue of 56.2 billion euros. In 2021, 37 million French people went on vacation (59%), for a total

of 98 million overnight stays. That is as much as before COVID-19 (9). The Ile-de-France region is the region with the highest departure rate: 70%. Last summer, France was able to count on its neighbours with European tourists spending more in France this year, +30% for the Dutch, +23% for the Germans and +12% for Belgians, while Chinese, Japanese or American tourists have become rare in 2021. During the October holidays, 87% of destinations experienced higher attendance than 2020. This increase also concerns 92% of urban destinations, in particular with the recovery of business tourism (10).

The COVID-19 pandemic has direct consequences on the tourism sector all over the world and in particular in France, the number one world tourist destination.

In France, the tourism sector employs 2 million people and represents 7.4% of GDP. The main driving force of the national economy, tourism alone generates nearly 2 million jobs in France and 160 billion euros in revenue in 2019 and it is not spared by the current health crisis. At the beginning of March 2020, the epidemic led to a 40% drop-in activity in the tourism

sector, reaching a drop of 90% in April 2020. A crisis situation, which affected sectors such as hotels, restaurants, school tourism, events and transport (11).

3.1.2 Tourism Governance in France

In France, the Ministry of Europe and Foreign Affairs and the Ministry of Economy and Finance manage tourism policy. The Prime Minister, during the Inter-ministerial Committee on Tourism, gives directives to the ministries and departments operating in tourism-related fields.

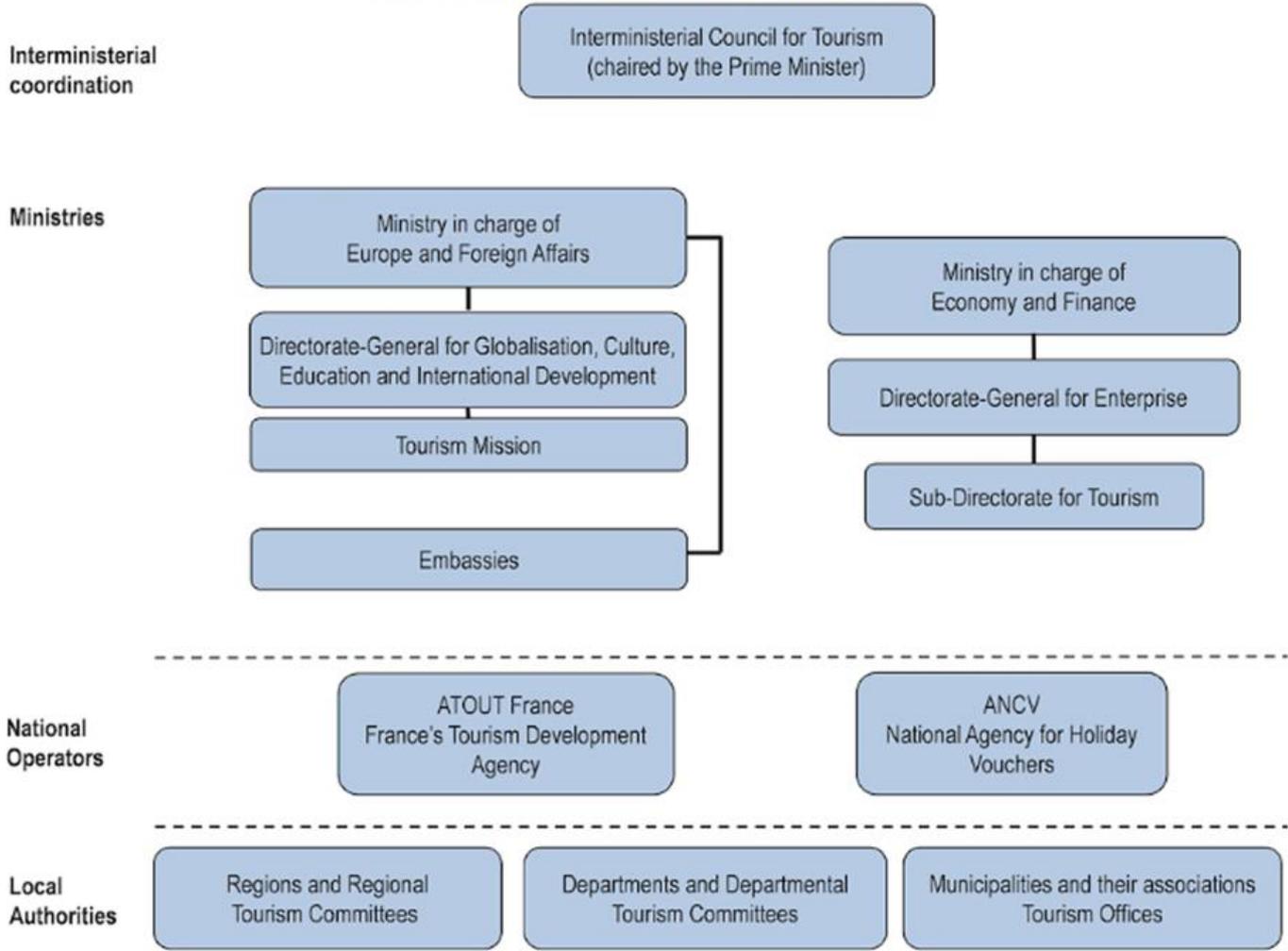
In addition, two national operators play a cardinal role in the implementation of tourism-related policies. "ATOOUT France"

is responsible for promoting the destination abroad. It has the legal form of a group of economic interests and its budget is between 70 and 75 million euros. The second agency is the " National Agency for Holiday Vouchers" which aims to make holidays accessible to all.

Every French region must create a regional tourism committee and set up a regional tourism development. They must also collect data on tourism in order to coordinate public and private initiatives on tourism development, promotion, and information. The departments have the objective of defining tourism development plans following the indications of the regions. Finally, the municipalities have the possibility to create a tourist office whose function is to inform tourists and to market tourist services.

In order to improve the organisation of tourism, a Strategic Tourism Committee has been set up to serve as a framework for the exchange of information between the professional branches and for the co-construction of tourism policy. (11)

France: Organisational chart of tourism bodies



Source: OECD, adapted from the Directorate-General for Enterprise, 2020

3.1.3 Green and Digital Transition

After the Covid-19 crisis, the French President announced a plan for the recovery and transformation of tourism. The Government wishes to make France the leading destination for sustainable tourism in 2030 and the number one cycling tourist destination and to accomplish its objectives they introduced a 3 billion euro investment plan. The plan will support the sustainable and digital transition of the sector, both by replenishing the Sustainable Tourism Fund and supporting the construction of sustainable infrastructure, but also by supporting the digitisation of VSEs and SMEs and by creating a Tourism Tech community to support the development of tourism event start-ups and unicorns. In addition, the government announced a plan dedicated to supporting mountain territories towards more diversified and more sustainable tourism (12). Since the start of the pandemic, the French government has helped the tourism sector with funding and investment. These initiatives will contribute to develop transport infrastructure and encourage innovation and digitalisation but will also help improve training for people working in tourism (13).

The other major transformation planned concerns digital technology, which is at the origin of both new innovative tourism products and better competitiveness for companies in the sector, in particular VSEs-SMEs, and for tourist destinations. If the Covid-19 crisis has accelerated the digitalisation of VSEs and SMEs in the sector, the difficulty of access to financing for them has only increased and the gap between SMEs and bigger companies of the sector widened. Thus, the government's plan makes the digital tool and innovation vectors for a greater

tourist attractiveness of France in line with the imperatives of sustainability with a fluid and quality experience for visitors and better promotion of territories and destinations. This presupposes the specific support of an ecosystem of innovative companies dedicated to tourism activities, able to shine internationally, but also support for the digital transformation of VSEs and SMEs in the sector.

French companies are also involved in changing the tourism sector for the better and to advance sustainability in the French tourism industry. The Net Zero initiative, which is a project supported by the French Agency for Ecological Transition (ADEME), the French Ministry of Ecological Transition and 21 major companies, aims for carbon neutrality. The major Luxury and Fashion groups have signed the Fashion Industry Charter for Climate Action. Through their sustainable development strategy, companies commit to improve sustainability and digitalisation reinforces their commitment (14).

In the Hauts-de-France region in France where the SMART lead partner EURAKOM is based, ADEME launched a consortium group called the POT' Hauts-de-France around the call for expression of interest "Territorial partnerships of the action programme Sustainable Tourism Fund France Relance Edition 2021". The shared ambition is to structurally and financially support regional restaurants and tourist accommodations towards a change of their offer and their practice centred on the ecological transition (15). The partners for this action are the Regional Tourism and Congress Committee of Hauts-de-France (CRTC), the Hauts-de-France Chamber of Commerce and Industry (CCI), the Regional Natural Parks, the agency

Sublimeurs, the Campus des Métiers et de Qualifications Tourisme Innovation Hauts-de-France)”, Pas-de-Calais Tourism, the agency of tourism innovation la Tangente and the Metropolitan Cluster of Greater Amiens.

3.2 GREECE

3.2.1 *Statistics and General Information*

Tourism is one of the most important sectors in the economic and social life of Greece. It has been a key element of the country’s economic growth and social development since the 1970s. Greece has always been a major tourist destination and for its rich culture and history (18 UNESCO World Heritage sites – among the most in the EU and the world), as well as for its natural beauty, nice weather, its long coastline, many islands, and beaches.

In 2019 Greece attracted as many as 31.3 million visitors making it one of the most visited countries in Europe and the world, thus contributing to approximately 24% to the nation's Gross Domestic Product (16), a higher percentage than the EU average (17). The sector directly employed 381.800 people in 2018, accounting for 10.0% of total employment in the country. (18) A substantial percentage when considering that it does not include the jobs that are indirectly linked to tourism. It is also interesting to note that more than 99% of tourism related businesses in the country are SMEs, in line with the EU average. This fact poses specific challenges towards the transition to a

more sustainable and digital tourism operation model.

Tourists from other EU countries account for almost two-thirds of total visits. The

markets of Germany and France grew significantly in 2018, recording a total of 4.4 million and 1.5 million visits respectively, as did arrivals from the United States which reached 1.1 million visits. (19) Domestic tourists made 5.7 million trips in 2018, and only 4.7% of those were for business purposes. However, the majority of domestic visitors stayed in non-rented accommodation, with only 34.2% of visits using paid accommodation. This poses a challenge for destinations that target mainly domestic visitors and are not as popular to international tourists (20).

The above numbers fell by approximately 80% in 2020 due to the covid-19 pandemic and the subsequent protective measures imposed. Since Greece has been traditionally relying heavily on revenues from tourism and tourism-related sectors, the impact of the pandemic and the travel restrictions was severe and many tourism SMEs relied solely on governmental support for their survival during 2020 and 2021.

3.2.2 *Tourism Governance in Greece*

Highlighting the importance of the tourism industry in Greece, the Ministry of Tourism is responsible for related policy making and development. It introduces legislation on tourism, agrees the strategic marketing plan, stimulates investment, and works to improve the quality and competitiveness of Greek tourism. The Ministry co-operates closely with other interested ministries and tourism bodies, such as the Association of Greek Tourism Enterprises and the Research Institute for Tourism.

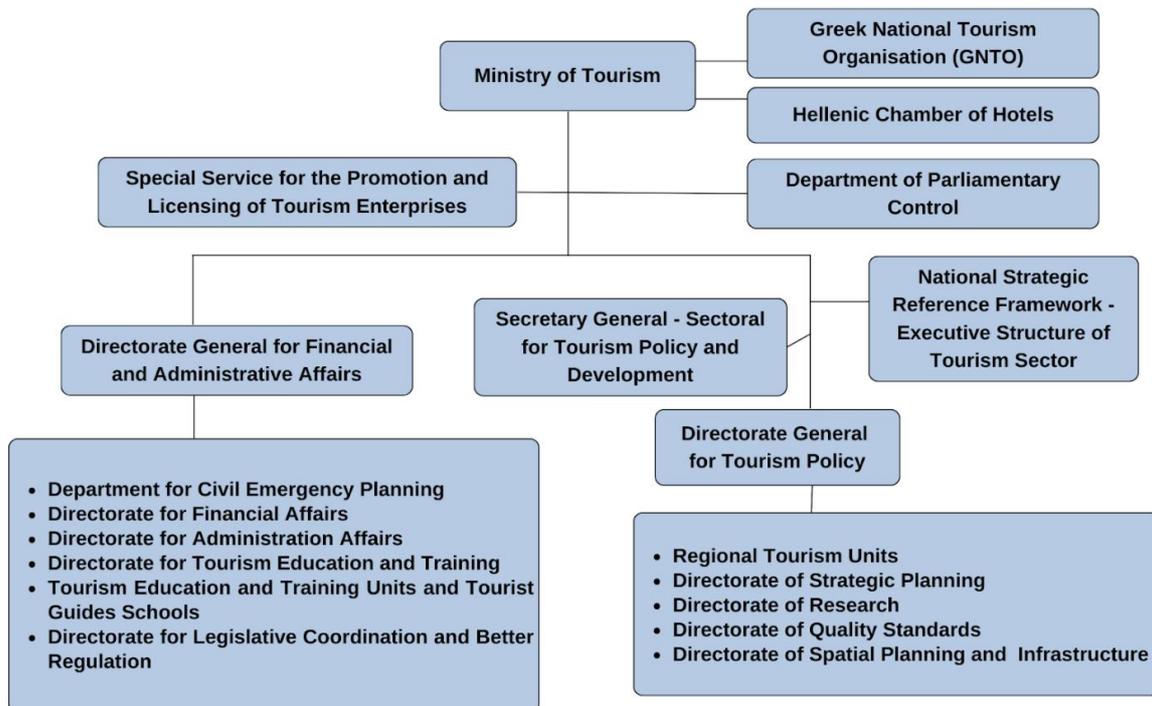
The implementation of the Marketing Strategy is carried out by the Greek National Tourism Organisation (GNTO),

which operates a network of 16 offices overseas. The Hellenic Chamber of Hotels is the Government's statutory advisor on tourism, as well as the authority responsible for the official classification of hotels, rooms and apartments.

At the regional and local level, regions and municipalities plan and implement

programmes and activities for tourism development and promotion. All promotional activities require the approval of the Greek National Tourism Organisation, to ensure that these campaigns align with the national strategy.

Organisational chart of tourism bodies in Greece



Source: OECD, adapted from the Ministry of Tourism, 2020

3.2.3 Green and Digital Transition

Following the unprecedented crisis due to the pandemic, Greece's recovery and resilience plan responds to the urgent need of fostering a strong recovery and making Greece ready for the future. It was developed throughout 2021 and was finally approved by the European Commission on 17 June 2021. The comprehensive plan named Greece 2.0, targeting various economic sectors, includes €17.77 billion in grants and €12.73 billion in loans with the aim to support Greece to become more sustainable, resilient and better prepared for the challenges and opportunities of the green and digital transitions.

The tourism sector plays an important role as part of the Plan and several key

projects have received the go-ahead. Among these are (21):

- the upgrade of tourist port infrastructure (161.05 million euros)
- the further development of mountain and winter tourism products and facilities (such as ski resorts) and the revision and simplification of legislation covering construction, licensing and operation of relevant infrastructure (56.57 million euros)
- the introduction of educational and upskilling programs for 18,000 tourism industry employees (43.97 million euros)
- the development of health and wellness tourism and the utilisation of the

country's thermal springs (28.46 million euros)

- the development of diving and underwater tourism (22.05 million euros).

- improving the management of destinations through the establishment and operation of local or regional DMOs and of observatories for sustainable tourist development (18.45 million euros)

- making beaches accessible to people with mobility problems or disabilities with the construction of some 250 semi-permanent structures (17.21 million euros)

- developing a network that will link the agri-food, gastronomy and tourism sectors (dubbed Agri-Food, Gastronomy and Tourism Interconnection System – AGTIS), which will serve as the country's management organisation / (DMO) for gastronomy and agriculture (17.18 million euros)

related to the impact of the economic crisis linked to the decrease in disposable income of domestic tourists. All the above pose severe challenges for the sustainability of tourism businesses.

However, the proximity to the metropolitan area of Athens and the potential access to capacitated human capital together with the fact that the somewhat underdeveloped in terms of tourism region has a large variety of beauties to offer to tourists such as beaches, mountains, forests, lakes, and cultural sights, as well as various local products, increases the potential for the development of novel, alternative tourism offers. Moreover, following the newly passed legislation, a dedicated DMO was set up in 2021 named Moreas, in order to promote the Peloponnese as a tourist

In December 2021 the Ministry of Tourism passed a bill setting out the new priorities for the sector which include setting out the terms of operation for destination management and promotion organisations (DMOs) and developing wellness and sustainable tourism (22).

3.2.4 Local Level: Korinthia, Peloponnese

In the region of Korinthia in the Peloponnese, and more specifically around the town of Xylokastro where the SMART partner Green Village is based, there are specific challenges and opportunities for the tourism sector. The region is not specifically marketed to international tourists; it is heavily relying on domestic tourism and mostly on people with second residence in the area. Moreover, there is an evident seasonality (during the summer months) of tourism in the region, and in the last few years the tourist season has been shrinking for various reasons mostly destination, and Xylokastro – Evrostini municipality is part of this initiative (23).

So, the engagement of relevant stakeholders and the involvement of capacitated and skilled tourism and destination management professionals who in turn will be able to drive the integration of digital tools for a more efficient, modern, and sustainable tourism offer will indeed unfold the region's potential as a sustainable and alternative tourism destination.

3.3 SPAIN

3.3.1 *Statistics and General Information*

Spain is a world leader of the tourism sector, which also is a key pillar of the national economy. During the pre-pandemic period, tourism became the sector that contributes the most wealth to the Spanish economy, representing 14.6% of GDP in addition to 2.8 million jobs, according to a report prepared by the business association World Travel & Tourism Council (WTTC) (25).

Like in other world leading tourist countries, this sector was hit drastically by the pandemic. The tourism sector in Spain closed 2020 with an unprecedented collapse. According to the employers of the sector, the tourism GDP in the country fell by almost 65% compared to that registered in 2019. In a year marked by the consequences of the COVID-19 pandemic, the national economy shrank by 10.8 %. In 2021, the painful consequences of the coronavirus were still evident and tourism GDP fell again, although this time by 42.8% (26).

The current year of 2022 is very promising for Spanish tourism. The reactivation of world tourist demand is having a significant impact on the Spanish economy. According to the National Institute of Statistics (INE) in April, Spain recovered 85,4% of international tourists compared with the same period in 2019 (27). According to data from SiteMinder (28), hotel reservations for the month of July in Spain are 5.5% higher than the figures for the same month of 2019, before the pandemic, surpassing the global average.

3.3.2 *Digitalisation of the tourism sector in Spain*

According to CaixaBank research and its Sectoral Digitalisation Index (ICDS), the ICT sector can serve as a reference sector for digitalisation (it receives 67 out of 100 points). If we compare the three sectors most closely associated with tourism: trade, accommodation, transport and storage, they receive 48, 46 and 42 points respectively, that implies a significant gap with respect to more digital sectors. Despite these indicators not being outstanding, it must be admitted that the performance between 2017 and 2020 was more positive than the average of the Spanish economy, indicating that the tourism sector is improving its relative position (29).

The ICDS also carries out an analysis of the areas of digitalisation. It shows that the accommodation sector is a reference in terms of the degree of digitalisation of its customer relations, thanks to the digitalisation of the marketing of services, which has been gaining ground over other traditional marketing methods for many years. On the contrary, there are many areas that need to be improved, such as the digitalisation of relations with suppliers and banks, as well as the digitalisation of production factors (capital and labour) (30).

The use of big data and cloud computing technologies by the Spanish accommodation and retail sectors is below the EU average. In addition, they present a very wide gap with respect to the technological frontier (difference with respect to the most digitised European country) in all cases, which shows that there is a great margin for improvement in companies related to tourism in Spain.

3.3.3 *Policies for sustainable tourism*

During the last decades the tourism sector has grown considerably, evolving from

“sun and beach” tourism to strategies more focused on quality. The pandemic has driven the government to confront the new challenges faced by the sector and adopt new formulas that would allow it to maintain and increase its results.

To receive financial support under the EU Recovery and Resilience Mechanism, Spain has elaborated its own Recovery, Transformation and Resilience Plan (PRTR) which details a complete agenda of investments and reforms specifying the goals, objectives and indicators for monitoring and control.

Spain is one of the main beneficiaries of dedicated EU funds with a total sum of 140,000 million EUR.

The Spanish tourism sector finds a special place in this plan through the policy of "Modernisation and digitisation of the industrial fabric and SMEs, recovery of tourism and promotion of a Spain Entrepreneurial Nation", where component 14 outlines a Plan for Modernization and Competitiveness of the Tourism sector.

The Plan addresses the modernisation of the Spanish tourism sector from a strategic and comprehensive perspective, with different areas of action (31):

- The transformation of the tourism model towards environmental, socioeconomic and territorial sustainability, benefiting tourist destinations, social agents and private operators in the sector, through the Spain 2030 Sustainable Tourism Strategy, Destination Tourism Sustainability Plans, Social Sustainability Plans, and other measures that include actions for the management and coordination of the housing market for tourist use.

- The digital transformation of tourist destinations and companies.
- The implementation of specific resilience plans in non-peninsular territories.
- The boost to competitiveness through the development of the tourist product, energy efficiency and the circular economy in the sector, investment in maintenance and rehabilitation of the historical heritage for tourist use and in the improvement of commercial areas with a large tourist affluence.

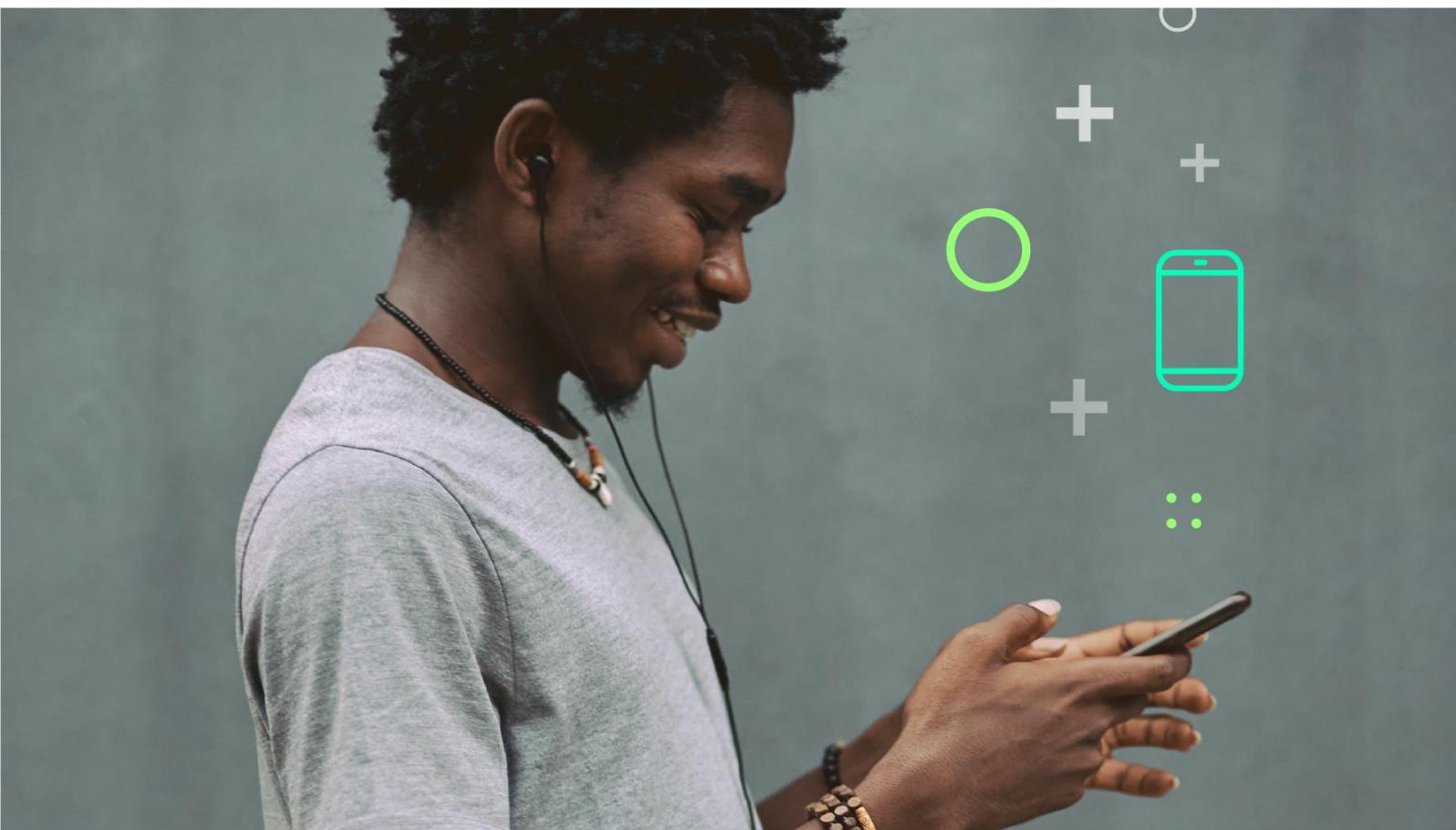
The three main lines of action for digital transformation will be:

- Investment in the development of smart destinations to promote tourism brands in Spain.
- Development of a tourism intelligence system for public administrations and companies in the sector, collecting data from the companies themselves and from organisations throughout the entire value chain.
- Investment in innovative projects and initiatives that involve digital solutions for the sector (application development, collaborative platforms, etc.).

The lines defined by the plan are very successful given the weaknesses identified in the digitalisation process of the tourism sector. Although the resources allocated in the PRTR for these initiatives might be small, it still will have a leverage effect to reactivate private investment initiatives in digitalisation that were left aside after the outbreak of COVID-19.

4. Methodology for SMART Practice Collection





Each selected practice falls under (at least) one of the identified categories outlined below. Those categories are loosely based on the Global Sustainable Tourism Council's (GSTC) industry criteria for tourism businesses and destinations and are linked to the multifaceted aspects of sustainability.

- Sustainable business management

Based on the first GSTC criterion (Demonstrate effective sustainable management), this category includes tools that foster efficiency and sustainability with regards to business operation. Relevant practices may include tools that support or accelerate the digitalisation processes of business operation and services provision.

- Promotion of local products
- Promotion of sustainable rural development
- Fostering social inclusion

Categories 2-4 are based on the second GSTC criterion (Maximise social and economic benefits to the local community and minimise negative impact). Practices may include tools and/or initiatives that address the locality of sustainable tourism and promote sustainable economic development at the local level. Practices can also address social inclusion issues such as accessibility and social integration.

- Promotion and conservation of cultural heritage

Based on the third GSTC criterion (Maximise benefits to cultural heritage and minimise negative impacts) Category 5 includes practices and tools that promote and protect local culture and heritage

- Circular economy
- Environmental protection and conservation

Based on the fourth GSTC criterion (Maximise benefits to the environment and minimise negative impacts) Categories 6 and 7 include environmentally friendly practices and tools that foster the transition to a greener operation, promote circular economy practices and contribute to sustainable energy and waste management as well as supporting environmental conservation.

Practices include for example:

- Tools supporting tourism ecosystem development (projects promoting sustainable behaviour and addressing impact of climate change, education and training activities, community events, etc.)
- Tools supporting the use of local products and services to promote

local culture and heritage and sustainable products (for example supporting organic and sustainable agriculture, the use of traditional knowledge for production, etc.)

- Tools for the promotion of local and domestic tourism versus giving up places to tourists
- Tools that contribute to the preservation and protection of communities, sites, and destinations.
- Finally, please consider the following, which have also been key factors for the selection of SMART practices:
 - When looking at tools, consider issues around interoperability of tools and how stakeholders can cooperate to build smart digital tourism ecosystems.
 - Consider the economical aspect: does the practice help to minimise costs and/or increase profit?
 - Preference has been given to digital/SMART practices that advance sustainable operations, and support more sustainable behaviour and destinations

5. Types of Digital Tools Available



This section of the SMART Manual looks at the types of tools available and how they contribute to more sustainable tourism destinations by supporting businesses, tourism organisations, educators and other stakeholders in the tourism ecosystem. The section provides a short summary based on practices collected and looks at different categories as defined as part of the methodology used for the collection of practices (see section 4).

There are a vast number of different tools available, however, research by the project partners have led to the conclusion that ultimately most of them can fall into the category of either mobile applications, online platforms or a few other categories, such as for example specific software. As part of its work of looking into good examples of online platforms, the partners have also identified online training programmes and courses for tourism professionals or those (including students) wishing to start a career in sustainable tourism or improve their skills. A list is available as part of the SMART best practice collection.

Details about the courses collected can be found here:

<https://smart-tourism-project.eu/results/smart-sustainable-tourism-training-programmes-and-offers>

5.1 Mobile Apps

Mobile apps are revolutionising tourism and travel for today's smartphone owners. Users book or plan their trips using their phones and applications are becoming more and more sophisticated as

Although many platforms can also be accessed on the mobile, they do not

technology evolves and customer expectations grow. The challenge for the user is to find the right application in what sometimes seems an almost infinite offer. Some apps, however, are very specific and serve a local need. Ideas are often transferable and the app could certainly also be successful in another geographical context. In the framework of SMART we are looking at applications that can contribute to more sustainable travel or tourism for the user but also support the travel industry in becoming more sustainable by developing a more planet-friendly offer. It can be said that there are applications available for all categories mentioned as part of the methodology but the focus is generally on supporting users and enhancing their tourism experience while they are on the go. Apps can be very local or national but some are also available worldwide. Generally it can be said that there is very little interoperability between different solutions and there are often competing apps at national or international level.

We have chosen some innovative but very different apps in order to show the diversity of apps available. Behind many of the apps one can find very interesting business models and approaches that are a win-win for users and developers and contribute to more sustainable tourism or daily life overall. Please note that there are a large number of applications which help users to calculate their carbon footprint while travelling or on the move but which have not been included in the projects' list of practices (See Annex 1 for Mobile App Practice).

5.2 Online Platforms

necessarily offer a separate application. In contrast to the majority of applications,

platforms do not necessarily have to be accessed while the user is on the move. For example, practices and tools for the category of sustainable business management are usually accessed in an office or work-related context to support sustainable operations of a tourism business. Other platforms are for tourism operators to organise their offers together with other providers on dedicated portals or platforms. There are of course also numerous platforms for the planning of sustainable travel before an actual trip. It also has to be said that online platforms are still more accessible than apps to older users or those with a disability (see Annex 2 for Online Platform Practices).

5.3 Other

While apps and online platforms are the most common digital solutions in the tourism industry, the market is developing fast. The rapid development of new innovative software solutions for businesses should not be underestimated. These solutions are often available against a more or less considerable fee but can, in addition to contributing to more

sustainable practices, also bring long-term benefit and profit, for example through more efficient energy or water management. Another option for this category are for example tourist sites or attractions using artificial intelligence solutions for innovative visitor experiences that can support local culture and heritage, products or other elements which are linked to the authenticity of a place. We have also added blockchain and the use of drones to this category. There are a lot of discussions around the possible benefits of blockchain in the tourism industry and it is a field that is expected to develop considerably in the years to come. We have found some examples of the use of drones to visit remote areas virtually without disturbing the local environment too much, something which the partners found interesting but it is not something that has been identified as a trend just yet (See Annex 3 for Other Practices).

6. Challenges with the development, use and roll out of digital tools



6.1 FRANCE

In France, tourism represents 7.5% of GDP and around 2 million jobs and it has been essential for the sector to digitalise fast in order to stay competitive. Tourism has been one of the first sectors to digitalise. However, it does not always resort to using solutions made in France. Big platforms such as booking.com have a considerable market share in the country. An acceleration of the roll-out of digitalisation in tourism is expected due to very successful developments of the French Traveltech industry, Staycation or Evaneos being two high profile examples.

A successful roll-out of domestic tools depends largely on how French start-ups compete with international ones since national companies are more likely to contribute to digital capacity building of lesser digitalised tourism businesses.

In France the digitalisation in tourism is primarily driven by bigger operators who are equipping themselves with digital tools to restore consumer confidence after the Covid-19 pandemic. SMEs and micro-businesses, which make up a large portion of tourism businesses, have limited skills and capacity to keep the pace of larger businesses such as hotel chains for example. In general, smaller businesses rely more on external platforms and intermediaries to market their offer. Developing skills and digital solutions to enable direct sales of SMEs to consumers can support the sector to become more resilient to outside influences. SMEs are also not fully aware of the value and benefits that digital tools can offer. (32)

In addition, limited access to financial support and funding for SMEs who have seen their business contract as a result of the Covid-19 crisis, makes it harder for

them to keep up with larger enterprises. The Covid-19 pandemic has given digitalisation an important push into the right direction, but a lot more needs to be done to support SMEs in developing the digitalisation of their activities.

There is also a need for hybrid interaction with clients and restructuring of the offer and communication that demands know-how or external support to be implemented successfully. Consumers need to have the possibility to easily move from a virtual to a “real” environment for interaction since entirely digital solutions can only constitute one part of the solution in the tourism sector.

Digital tools are particularly interesting in view of catering to growing customer demands for more personalised tourism experiences in France, which can also help providers to stand out of the crowd. In view of this, tourism professionals are increasingly engaging in the development of different mobile applications for specific tourism offers. Platforms are being developed to find collaborative solutions and regroup offers in a single marketplace, which can also bring financial and very practical benefits for both provider and customer. In general, professionals believe that supporting digitalisation should lead to an overall improved customer experience, rather than necessarily replacing existing experiences with new ones. (33)

Overall, in France and certainly also in other partner and European countries it will be essential for tourism professionals to stay up to date about developments regarding digitalisation in combination with understanding the latest tourism trends and customer expectations to

ensure a successful roll-out of digital tools. (34)

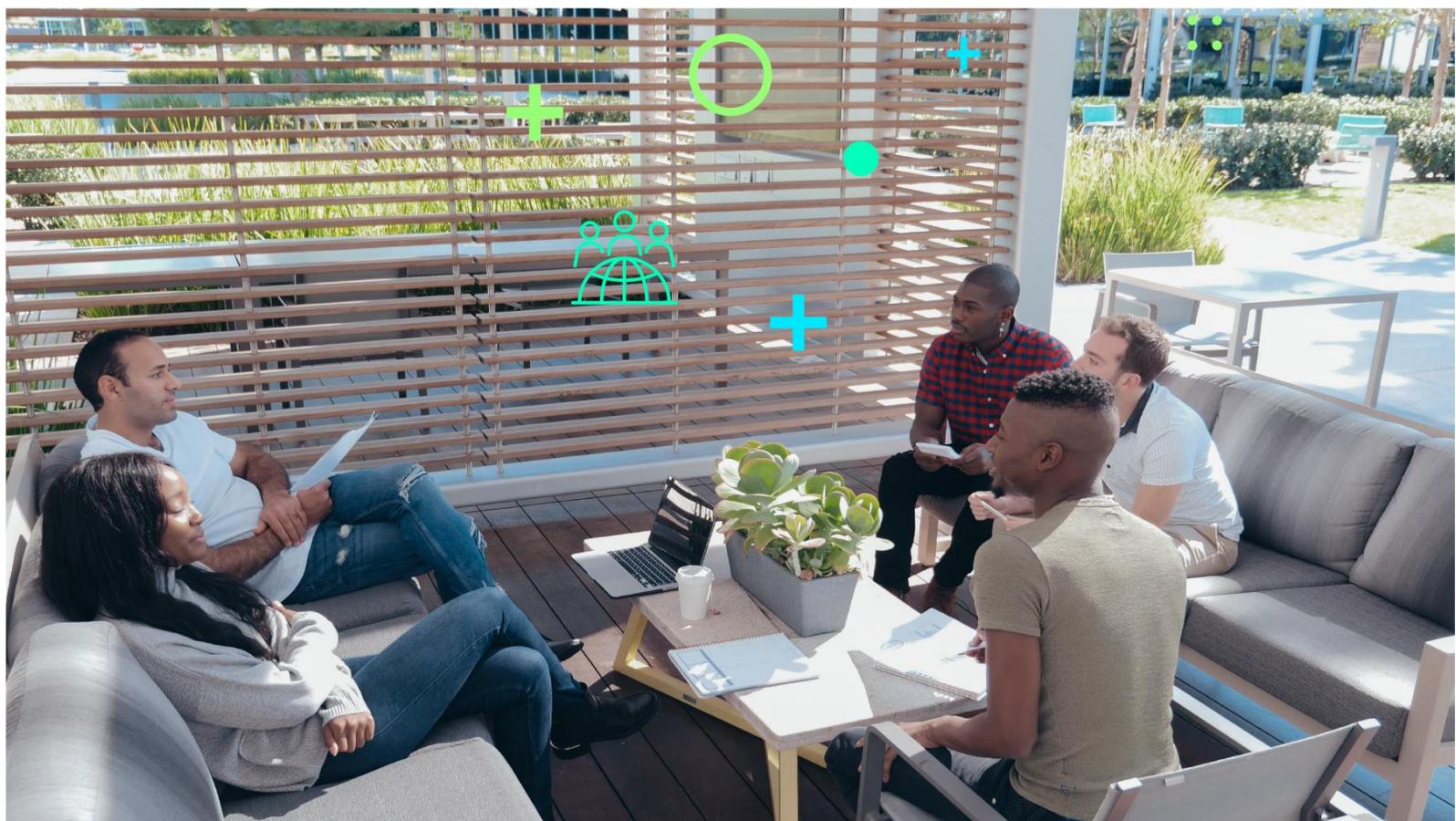
6.2 GREECE

Despite the fact that Greece overall has been a major tourism destination with a relatively refined and developed tourism offer, there are still some evident challenges regarding the uptake of digital tools towards contributing to sustainability by tourism businesses and professionals. Since the vast majority of tourism businesses in the country are SMEs (more than 99%), including a large majority of micro-enterprises and family businesses, they often lack the resources, knowledge and capacity to train employees and professionals on the necessary digital skills, especially when considering the negative impact of the recent economic crisis and the immediate consequences of the pandemic. The integration of digital tools, the modernisation of tourism businesses' operations and the transition to "greener" models can entail significant short-term investments, which businesses are not able to deliver, even if their cost-effectiveness can be foreseen in the long-term. Greece's tourism offer, even though centralised in terms of policy making, is scattered and varied due to the country's geography (thousands of islands, mountainous mainland, etc) and the particularities of each region. Consequently, some regions such as the Cyclades, Attica and Chalkidiki, have for various reasons developed into major

international tourism destinations with large investment opportunities in terms of modern infrastructure and human resources, while at the same time facing the challenges of mass and over-tourism.

In parallel, other regions such as Korinthia are still somewhat underdeveloped in terms of their tourism strategy and offer, relying heavily on domestic visitors. Thus, the motivation for innovation and competitiveness that could be the drive for the uptake of digital tools for sustainable tourism is often lacking both from the part of professionals and from local authorities. Moreover, there is also an evident lack of knowledge and awareness regarding digital tools and sustainability in these regions in general.

Finally, the seasonality of tourism activity also affects the commitment and long-term prospects of the tourism businesses' employees. With high rates of unemployment in Greece, especially among the youth (36.8% as of May 2022 according to Eurostat - the highest in the EU) (24), many young people from various sectors and different backgrounds consider working in the tourism industry as a short-term solution. In many cases this constitutes an obstacle when it comes to businesses and employees investing the necessary time and resources to build their capacity towards their long-term involvement in the sector and their contribution to its digital and green transition.



6.3 SPAIN

The tourism sector in Spain faces some weaknesses that might condition its future growth (35):

- Dependence on the sun and beach product. It works extraordinarily well but must be strengthened to make it more efficient in the face of the possibility of losing profit margins.
- The great dependence on certain markets. The United Kingdom, France, and Germany account for more than 50% of international visitors.
- The high seasonality in the consumption of the Spanish tourist offer, which is derived from the previous dependencies.
- The saturation of the citizen space of some urban destinations. This is due to the constant growth of tourist homes. In some cities they already exceed the number of hotel beds.
- The obsolescence of some pioneer vacation destinations that affects their competitiveness.
- The waste of tourism potential in rural areas because, despite the fact that rural accommodation companies have tripled in the last 15 years, rural tourism continues to fail to establish itself as a viable economic alternative for many inland territories.

- The digital divide, which excludes many SMEs from tourism activity, either because they are not visible in the digital space, or because they are unable to meet the demands of the new connected client.
- And finally, the progressive poorness of working conditions in the sector, which especially affects women.

What concerns digitalisation of tourism, we have seen before (3.3.2) that some significant progress has been achieved in some areas but that that improvement is still needed in others. Taking the three main areas of an industry digitalisation into consideration:

- digital assets (capital and human resources)
- interactions in the value chain (with customers, suppliers and public administrations)
- and the intensity of the usage of the existing and emerging technologies

We can single out the second area as a strong point within the tourism sector, which has developed significantly in recent years, especially in regard to its interactions with customers. It reached high levels of digitalisation, on the one hand mainly as a result of the appearance of OTAs (online travel agencies, such as Booking.com or Expedia) and the development of direct sales on-line carried out by large hotel chains. On the other hand, within the same area, the interactions with suppliers and banks need improvement. In general, the tourism sector should continue evolving in the same direction, searching and

implementing digital solutions that can improve, strengthen and revitalise relations with tourists, offering new possibilities to improve their experience, new purchasing procedures, etc.

The weak points are the other two areas:

- Technological capital, investments in R&D, as well as the preparedness of the workforce, all these components of digital assets don't show high indicators. SMEs often lack human resources and skills to digitalise, as well as resources required for training and further introduction of technologies. Tourism has not been characterised by the incorporation of technical profiles in its organisational structures and now, when it is essential to do so, they don't know how to attract and retain these new profiles of workers, scarce and with more attractive offers in other productive sectors.
- The same concerns the usage of expanding (cloud computing, big data, IoT, robotics) and emerging (AI, 3D printing, VR, blockchain and nanotechnology) technologies that are currently gaining presence and strategic planning, but whose practical application and technical development has not yet had a notable advance.

Another difficulty is the lack of coordination between the public and private sectors, which prevents the correct and efficient promotion, encouragement and the consequent implementation of technological solutions in the day-to-day tourist business. There are probably still cases where tourist agents have not joined the technological

change due to mere lack of knowledge, regardless of the fact that the use of technologies has been shown to benefit all companies despite their size.

It can also be observed that the agents most committed to digital innovation in the economy tend to be large, usually multinational companies, while micro and small enterprises remain in the background due to the lack of knowledge and/or funding. The process of digitisation of tourism requires the collaboration of all agents in the sector, so that they are not only recipients of tools and resources, but also commit to assume their participatory role in the process.

7. How to assess one's needs and select the right tools to reach aimed for objectives?



Finding the right tools to reach one's objectives as a tourism professional can be a challenging task. It demands a thorough analysis of multiple variables such as internal operational capacity and structure, the nature of one's tourism ecosystem including other players and competitors, possible collaborations, overall local and regional strategies and last but not least the needs of the consumer. Barriers such as financial or regulatory constraints along with limited digital skills or capacity can make it hard for professionals to understand potential benefits and find the right angle to get started with the development of digital solutions. In some cases, the cost of solutions will definitely also play an important role when it comes to making a decision about which tools to pick. In general, each case has to be analysed individually to establish the most effective solution. Therefore, we are only providing a brief introduction to the different areas outlined as part of the methodology and the deployment of digital tools to meet different overall objectives.

Sustainable business management

Multiple tools exist to support more sustainable operations. Possibilities are particularly advanced in the hospitality sector, notably hotels. The focus lies predominantly on software solutions that support more efficient management of resources. However, as can be seen from the best practices collected, by developing partnerships with providers (various mobile apps), hospitality businesses can also go further, for example by offering soft transport solutions, finding solutions to avoid food waste or encouraging the participation in sustainable tourism experiences.

Promotion of local products

The Covid-19 pandemic led to considerable activity within this segment, finding quick digital solutions, for example through online networks and platforms to support local producers, farmers and artisans in creating direct links with the customer. Digital solutions can support the growing demand of consumers to understand where their food comes from and how it has been produced and at the same time, they benefit local business and sustainable agriculture, production and distribution. In this area we have mainly encountered web platforms, but we have also discovered interesting solutions that could be adapted to supporting local products or tourism experiences in general. In order to choose the best solution it is essential to establish the target group, in other words, is the tool meant to target mainly locals or tourists or both.

Promotion of sustainable rural development

A variety of online platforms and apps can have considerable positive impact on the development of rural areas through the promotion of slow and sustainable tourism. We have found that this is one of the most crowded categories in terms of practices available to explore further. A very broad range of solutions is available that caters to a variety of target groups looking for sustainable tourism experiences and vacations. Solutions range from personalised complete holiday packages to more local and tailor-made applications for specific geographic locations. In order to decide on the right tools, it will be key to establish the main impact one would like to make for rural development based on the key assets and needs of a place. It will also be essential to establish partnerships for the roll-out of the tool and have a

thorough understanding of customer demand and need to ensure the tool can be successful.

Fostering social inclusion

Overall, the partnership has noted that online platforms and applications along with other digital tools or solutions aimed at mainstream users pay very little attention to accessibility and social inclusion. Therefore, they are less attractive to customer segments with a disability or reduced mobility. Users with special needs would need to investigate tailored solutions and certainly do not have the same array of opportunities at their disposal when it comes to the use of digital tools to find sustainable tourism experiences adapted to their needs. Therefore, including features that support disadvantaged groups or those with a disability or mobility issues can bring competitive advantages, since up to 15 % of the European population reports a disability of some kind and the current digital offer for this target group is very limited.

Promotion and conservation of cultural heritage

Cultural heritage includes both tangible and intangible cultural assets which means that the opportunities for the application of digital tools to highlight and promote cultural heritage are quite broad. In fact, safeguarding cultural heritage might also mean directing visitors to lesser-known sites and finding ways to balance visitor numbers in places with a tendency for over-tourism. Virtual tours, Augmented Reality (AR) applications and innovative hybrid visitor experiences that allow for more immersive overall experiences are very much the trend. Technologies in this area develop incredibly fast and might be quickly out of

date. Those interested in this type of experiences need to speak to industry professionals to understand likely future directions and to find out about the latest technologies.

Circular economy

In the area of circular economy there is room for development when it comes to tailored digital tools or applications that are targeting tourists and how they behave when visiting a destination. The best practice collection includes some relevant examples that can give a first taste of what is possible. When it comes to tourism professionals, there is a close link between tools that support a more circular economy and those who promote sustainable operations or management of a tourism business. Most tools focus on a particular aspect of the circular economy, for example food or plastic waste or reuse or upcycling of used items. The circular economy is a very comprehensive topic, however, and there is not enough room in this document to look at all the different relevant areas.

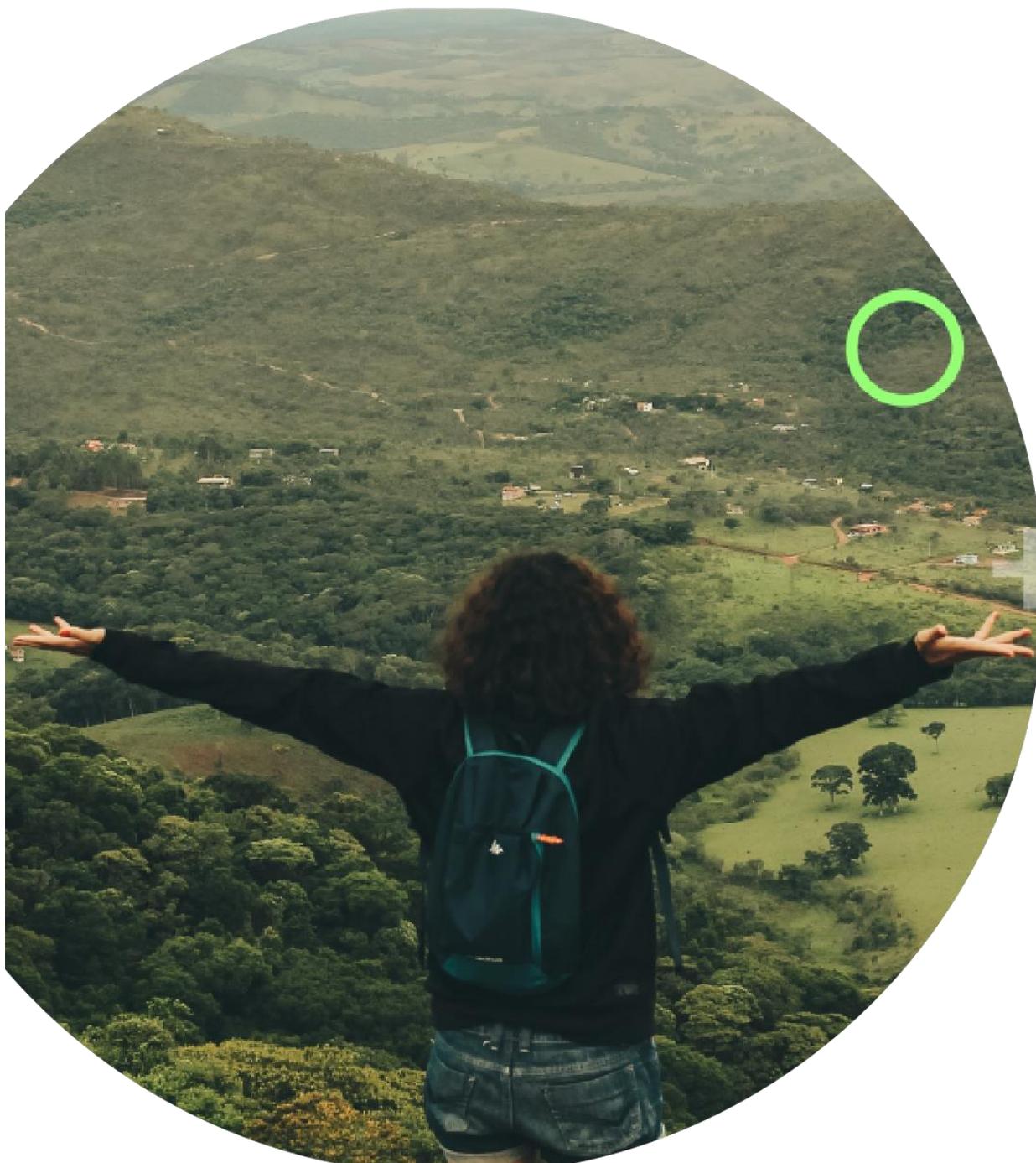
Environmental protection and conservation

A very delicate balance needs to be struck between promoting destinations of natural beauty and ensuring their protection and conservation. Most available platforms and tools promoting experiences in rural areas, be it hiking, biking for example or staying in lesser-known or remote areas, are targeting sustainability conscious travellers who are seeking to connect with nature away from buzzing cities and crowded destinations. However, as the offer develops and an increasing number of visitors show a preference for nature tourism and clean and unpolluted environments, some destinations have started to feel the

pressure. Digital tools have a very important role to play, not only when it comes to guiding tourists and visitors through natural environments, but also to educate them about these environments and how they can best be protected for future generations. Again, which tools are best suited for the destination is highly dependent on the individual case.



8. Skills needs linked to digital tools and sustainability and recommendations for educators



8.1 Skills Needs linked to digital tools and sustainability

The main need identified regarding the uptake of digital tools from tourism businesses is the **lack of awareness** of their contribution to the mid- and long-term sustainability of the sector that professionals and employees showcase.

Tourism professionals have access to **limited and often scattered information** about the variety of digital tools available and about their impact towards sustainability due to the fact that almost all tourism businesses are SMEs with limited capacity in terms of specialised human resources.

As part of the SMART project, 7 main categories of digital practices were identified, loosely corresponding to the Global Sustainable Tourism Council's industry criteria for hotels and destinations. Those seven categories were used to assess the skills needed by tourism professionals.

- Sustainable business management
- Promotion of local products
- Promotion of sustainable rural development
- Fostering social inclusion
- Promotion and conservation of cultural heritage
- Circular economy
- Environmental protection and conservation

Digital skills gaps and limited knowledge of available options are some of the main

needs of professionals in these areas, as is a lack of understanding of their contribution towards a more sustainable business model in the mid- to long- term. Finally, **concerns regarding the operational cost and uptake** is also evident among professionals, as is the hesitation to adopt new operational methods.

The digital skills necessary for the uptake and use of specific tools is also another main identified need among tourism professionals.

To further identify the specialised needs on behalf of tourism professionals, the EU's Digital Competence Framework was used. Out of the five main competence areas (1. Information and data literacy 2. Communication and collaboration 3. Digital content creation 4. Safety 5. Problem solving) SMART partners have identified the specific competences required. They are the following:

Managing data, information and digital content

To organise, store and retrieve data, information and content in digital environments. To organise and process them in a structured environment.

Collaborating through digital technologies

To use digital tools and technologies for collaborative processes, and for co-construction and co-creation of resources and knowledge.

Netiquette

To be aware of behavioural norms and know-how while using digital technologies and interacting in digital environments. To adapt communication strategies to the specific audience and to be aware of

cultural and generational diversity in digital environments.

Managing digital identity

To create and manage one or multiple digital identities, to be able to protect one's own reputation, to deal with the data that one produces through several digital tools, environments and services.

Identifying needs and technological responses

To assess needs and to identify, evaluate, select and use digital tools and possible technological responses to solve them. To adjust and customise digital environments to personal needs (e.g. accessibility).

8.2 Recommendations for Educators on how to use good practices

An educator in the hospitality and tourism sector guides his/her students towards professional success and contributes to the tourism sector his/her grain of sand in matters of quality, efficiency and tourism innovation.

As an educator, one teaches future professionals all the key concepts of the tourism industry, fundamentally: business concepts, analysis of the sector, the tourism market, marketing and market research, as well as processes and structures of the different restaurant, gastronomy and accommodation subsectors. Also tourist destinations and the intermediation of tourist and travel services. The future of the entire industry lies in sustainability, whether as a legal obligation (taking into account global, EU and national initiatives, strategies and policies) or as a desire to stay in the market and be a profitable business that

satisfies customer demand for sustainable tourism (we have seen the Eurobarometer data (Introduction) on Europeans' attitudes towards tourism) and is attractive for new investments and financing. For this reason, sustainability cannot be missing from any educational curriculum.

As part of the SMART project partners focus on the use of digital tools as the way to contribute to the development of sustainable tourism. For this purpose, we have gathered a collection of good practices of SMART and sustainable tourism, which show how digital tools can contribute to more sustainable businesses, organisations and destinations. Our practices are suitable for all types of the public, from the end-user (tourist) to business professionals. When discussing the challenges associated with developing and using digital tools, we found that there is often a lack of knowledge about their existence, as well as concrete examples of their use and opportunities to share practical knowledge with peers. Our collection shows examples of effective use of some tools.

One of the new technologies that is gaining popularity is **blockchain**. There are examples of successful usage of this technology by some businesses to provide a secure and smooth travel experience. Tourism and blockchain could complement each other with various travel applications, including reservations, identity verification, loyalty programs, digital payments, and inventory management. (See the practices "Bedswap project", "Blockchain").

Virtual and augmented technologies are going to transform the way we interact with the destination, its attractions and tourist services, providing new ways to

help to preserve natural and cultural resources at risk. Virtual reality continues to advance and will be a very commonplace in a few years. On the other hand, augmented reality allows one to put different layers of content on top of what one is seeing. A connection between the physical and virtual worlds that increases interaction and participation in tourist services (e.g., visiting a museum from home) or letting people experience the digital reconstruction of historical sites. Information about the different tourist resources is accessed through mobile devices. This new technology can have great implications in the world of travel. Our good practices provide some examples of its successful application in the tourism industry (See “Culture App”; “Normandine Tourisme”; Project Caverne du Pont D’Arc “Vista AR”).

Many ready-to-use **eco-applications** and **platforms** have already been developed. We have selected some of them that can be used by both tourists and businesses. These applications offer an experience based on sustainability by providing various types of elaborated tours (hiking, biking, accessible places, promotion of local products ...), calculating the CO2 emissions of your trip, helping users to take action against climate change, etc. The spectrum of these applications is very wide. To make it easier to find a suitable tool, each application is marked with one or more icons indicating under which of the sustainability categories it falls. As an educator, you can use these apps to raise awareness of your students about sustainability issues and show them how they can take advantage of similar apps by using them in tourism businesses. Some of the apps need to expand the network of businesses included in their offer, so collaborating with them will increase one’s market reach and, taking into

account their ecological profile, will make one appear in the search results of tourists looking for sustainable travel options. On the other hand, one can also improve one’s relations with the suppliers, thus improving interactions within the value chain by building a better collaboration with local producers and service providers.

Although most applications are not geographically limited, some have a national or regional scope. However, they can also serve as a guide for you to find similar offers in your own country/region.

Artificial intelligence and **Big Data** are the tools that are being used in all sectors, and tourism is no exception. They help to create more sustainable models of tourism given its potential for a more efficient use and supply of renewable energies, or to reduce tourist saturation in real time in hot spots of tourist influx (monuments, museums, historic centres...) and promote less visited attractions or develop new routes.

The amount of data processed at the various points where a user interacts is a tremendous source of information that makes it possible to better understand what tourists value most, while offering them services that match their preferences. Artificial intelligence helps to automatically process many of the analyses carried out with this data, and at the same time generate forecasts about future situations, improving the predictions of traditional statistical systems, and helping to save the costs at the same time.

Some of the practices showcase how these tools are used in the tourism sector. (See “GIB 5.0”, “Revapp”, “Tourism 4.0 for the Black Sea Project”).

In addition to a wide selection of best practices, we have a separate section dedicated to educational programmes and offerings. It can serve as a tool for you to improve your own knowledge and skills in sustainable tourism. Moreover, you can make a comparison of different curricula and elaborate or expand your own educational offer or propose some of these programmes to your students as extracurricular studies and activities.

9. Conclusions

With this Manual, partners hope to support the acceleration of the sustainable transition of professionals within the tourism ecosystem by anticipating skills needs and offering tools to adapt to new expectations within the sector. According to Cedefop & ETF (2020) the uptake/development of relevant CVET programmes had moderate success in 2015-2020 & there is a need for more materials for professionals to adapt to new labour market needs through transversal skills & competencies.

The manual aims to bring clarity to professionals about the benefits of digitalisation for sustainability and offer practical examples for VET students and educators in tourism.

The essence of SMART, to promote more sustainable tourism through digitalisation and adequate tools, has been incredibly timely and has generated considerable interest. As part of the work carried out, partners have identified gaps in the market regarding digital tools for social inclusion that have also been confirmed as part of recent research. Discussions around sustainable tourism still very much circle exclusively around environmental sustainability. While this is fully understandable, considering the current climate urgency, the partnership has noticed that there is very limited awareness about inclusion being an integral part of sustainability and that tourism strategies, in order to be successful, cannot focus on environmental impact alone. Also, according to the recent Inclusive Travel Insights Report by Expedia (September 2022), 92% of consumers think it is important for travel providers to meet the accessibility needs

of all travellers, yet only half of consumers have seen options that are accessible to all abilities when they are searching for and booking a trip. Furthermore, just 52% of consumers said they have seen options that are inclusive of all types of travellers. Therefore we believe that there is considerable potential in developing digital solutions that support the social pillar of sustainability.

Overall, partners also believe that the interoperability and connectivity between tools remains very limited, which is mostly due to the fact that they have been developed as stand alone solutions with different business models. Interoperability could definitely also be integrated into business models but it is an aspect that would have to be considered from the very early stages of development.

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Annex 1: Online Platforms

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
1. Sustainable business management	RevApp	<p>Most hotels and vacation rentals are currently stuck with the fixed-rates pricing model. Especially the small hoteliers, who lack the essential financial resources, try to implement the pricing on their own. This results in time-consuming and challenging tasks that require a lot of time and resources when it comes to hotel management and moreover, due to the high number of variables that are correlated with the market rates, this approach leaves enough room for pricing mistakes and missed opportunities.</p> <p>RevApp is offering a machine learning room pricing tool, currently focusing on small and mid-sized hoteliers and vacation rental managers that will allow them to capture any missed profits by maximising their revenues and reducing their fixed costs and time allocated to this task. It contributes to sustainability by digitalising hotels' operation and by supporting the sustainable and cost-effective business operation of SME hotels. The app offers a machine learning room pricing tool, currently focusing on small and mid-sized hoteliers and vacation rentals' managers that will allow them to capture any missed profits by maximising their revenues and reducing their fixed costs and time.</p>	To be paid for - Monthly Subscription model depending on the plan and features	No, it can be taken up by any hotel manager or hotelier. The platform is user friendly and accessible online.	Greece	Professionals	https://getrevapp.com/
1. Sustainable business management	OAKY	<p>Pre-stay: Oaky sends automated pre-arrival communication to guests at optimised times between reservation and arrival, proven to have a positive effect on conversion</p> <p>In-stay : Oaky gives hotels a supportive presence by allowing guests ongoing access to relevant add-ons and upgrades throughout their stay.</p> <p>Oaky helps customers to buy upgrades, deals and services from hotels. It also helps hotels with branding options, choice of what hotels sells and deals, and which guests should see what type of deal.</p> <p>Oaky harnesses the power of automation to earn hotels more revenue per guest without burdening their operations. One can use it in very imaginative ways to help with sustainability like Van der Valk Brussels Airport, that lets guests rent Fons the goldfish in their room for a 3€ fee that goes to charity.</p>	To be paid for		Headquarters in Amsterdam and Singapore. Can be used worldwide	Professionals	www.oaky.com
1. Sustainable business	OPERTO	<p>Operto Connect integrates smart devices to create a contactless guest experience and streamlined operations.</p> <p>Whether hotels operate a handful of properties, or hundreds – Operto's</p>	To be paid for	None	Vancouver, British Columbia	Professionals	https://operto.com

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
management		<p>Guest, Tech and Teams products function both independently and as a tightly integrated hospitality operating system, delivering outstanding and scalable solutions specific to their need. The company offers different services :</p> <p>Operto guest: The mobile-first web app that reimagines your guest experience, minimises dependency on staff, increases positive reviews and delivers a premium guest experience.</p> <p>Operto tech: Automate access and proactively reduce property damage and operational costs using smart devices like smart locks, thermostats, sensors...</p> <p>Operto Teams : Streamline and automate team operations. The company partnered with Veritree and promised to plant trees for every demo their sales team provides, and one tree for every door activated on the Operto Platform.</p>					
1. Sustainable business management	ALICE	<p>ALICE brings all hotel departments together with a single operations platform for internal communication and task management, it helps hotel staff act as a team to provide consistently excellent service. The set of tools provide housekeeping managers with a comprehensive view of their department's operations, including room attendant assignments and task sheets, room clean status and any special requests and personalised guest details. Managers will be able to automatically and quickly prepare staff task sheets and balance assignments based on location and priority level. The platform lets the housekeeping team go fully digital, cutting out paper waste while boosting efficiency and communication.</p>	To be paid for	The platform could be developed to take sustainability data into account.	US, New York	Professionals	https://www.aliceplatform.com/
1. Sustainable business management	Tourmie	<p>In order to improve visitor experience, Tourmie is constantly developing its network of partners from trusted service providers throughout Greece, so that every visitor can learn more about the place they are visiting, through various authentic local experiences. Instantly after booking a stay, Tourmie becomes the guest's personal digital assistant, offering a personalised page with personalised suggestions. From that point, the guest can book services provided by the hotel in-house or outsourced (e.g car rental, taxi, activities and breakfast), check useful information about his / her stay (e.g check-in, arrival instructions and WiFi code) and finally, to solve any issues via live chat with the front desk or the host.</p> <p>The practice contributes to sustainability by accelerating the digitalisation of the accommodation offer. Tourmie is a simple but yet powerful tool, which facilitates the collaboration between accommodation and service providers. Using Tourmie, accommodation providers have the opportunity to increase their income from travel service sales, while service providers can promote their services to new sales channels. The service helps accommodation providers manage visitor inquiries for travel services efficiently and with ease</p>	To be paid for	Tourmie can be adapted to every hotel, BnB owner, property manager and every travel business, such as car rental companies, transportation companies, and many others, who are interested in offering a unique experience to each of their guests, while expanding their business opportunities and getting more	Greece	Professionals	https://tourmie.com/

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
		as well as payments and partnerships through detailed reports. Last but not least, both service and accommodation providers receive their agreed payments electronically and with transparency within 24h once a service is completed. The platform is user friendly and accessible online.		customers through outsourcing collaborations.			
1. Sustainable business management	Sustainable Balearic Islands	<p>Since 1 July 2016 the Sustainable Tourism Tax has been applied to all stays in tourist accommodation in the Balearic Islands. Thanks to this contribution, important investments have been made in order to compensate for the impact that tourism has on the land and environment in Mallorca, Menorca, Ibiza and Formentera. In order to provide all the necessary information on this tax, this website was created. Data is gathered on each and every project funded by the Promotion of Sustainable Tourism Fund and includes a section to keep the information relating to the Sustainable Tourism Tax, among other information, up to date. In this way, the portal enables residents of the Balearic Islands and tourists or project managers alike to know how the Sustainable Tourism Tax works and everything that it entails.</p> <p>All the projects financed from the taxes fund are published on the platform. The projects prioritise activities of an environmental nature and aim to have the following purposes:</p> <ul style="list-style-type: none"> - environment; -sustainable tourism; - cultural heritage; - scientific Research; -training and employment; -social renting 	Free	Covers only Balearic Islands	Spain	Professionals	http://www.illessostenibles.travel/
2. Promotion of local products	Digilor touch screens	Beyond the simple dissemination of information, the digital terminal helps guide customers and present the activities of a campsite. The touch screen can also give information about nearby recreation and points of interest. Installing an interactive kiosk at a campsite can be beneficial in many ways as it also allows destinations to guide tourists towards more sustainable tourism offers and activities. It can for example also provide information about healthy food options such as local producers, markets or restaurants prioritising local products or about local cultural or nature focussed activities. Strategically placed touch screens at campsites or other places can help raise tourists' awareness about the availability of sustainable tourism experiences and activities that also benefit the destination. The touch screen offers considerable flexibility with regard to the messages that can be passed on to visitors and can also help to find out what travellers are looking for at a destination. As such the practice is very relevant for tourism professionals and DMOs, public authorities and policy makers.	Free for end users	The platforms can be used to guide visitors and tourists towards more sustainable places, activities, or experiences and for example towards ordering local products if they are on offer.	France	Professionals	https://www.digilor.fr/tourisme/

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
2. Promotion of local products	Devours Tours	Devour Tours is a company that delivers tours in Spain and some other countries (France, Italy, Portugal, Uk and USA) with the aim of promoting vibrant local culture. With their tours and local guide experts they support small local businesses. Their small groups and commitment to responsible tourism make a difference in communities.	Free website, paid services	No adaptation is needed.	Originated in Spain but expanded worldwide	Professionals	https://devourtours.com/
2. Promotion of local products	Voy'Agir	Voy'Agir is a collaborative platform for responsible tourism where travellers reference tourist addresses (accommodation, restaurants, activities, museums, shops, etc.) that have adopted a more united, organic and local approach that helps to reduce their ecological impact in the countries visited. Voy'Agir proposes collaborative solutions that allow independent responsible travellers to find the information they need to organise their trips based on the recommendations of other travellers and their advice. The website allows all the institutions involved to have more visibility on the internet and helps travellers improve their behaviour and their social and environmental impact.	Free	None	France	Professionals	https://voyagir.org/
2. Promotion of local products	Du Potager à la Table	Initially a solidarity project aiming to ensure visibility and cash flow to restaurateurs during the COVID-19 pandemic, this project almost immediately took on more sustainable, long term objectives. It has the shared ambition of raising the gastronomic profile of the Hauts-de-France region. Du Potager à la Table is a website that facilitates the pre-purchase of restaurant meals online through a gift voucher system offering creative culinary experience in the restaurant. The website will promote friendly regional restaurants. They will engage customers who enjoy sharing their love of good food with their friends. This website is becoming a meeting place for a community of people who share a taste for good quality locally sourced food and friendly service. Du Potager à la Table aims to become the central website for good food in the region, providing information, being a promotional tool and offering the online purchase of culinary experiences. The tourist offices recruit restaurants according to carefully selected criteria based on common values. <ul style="list-style-type: none"> • To encourage the restaurant owner to use local produce. • To help restaurant owners in the design of culinary experiences that are lacking in Hauts-de-France. • To offer Tourist Offices the opportunity to reconnect with the region's restaurant owners through an approach that brings meaning and value and to rethink the way they are presented to visitors. 	Free with experienced to be paid for	None but the idea could be applied to other tourism contexts.	France	Professionals	https://dupotageralatable.com/

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
2. Promotion of local products	Locavore	Locavore is an app, which recommends eating both seasonal and local fruits and vegetables to its users based on the location, which the app detects thanks to the GPS installed on their mobile phones. It means that everyone can use it anywhere in the world. Moreover, one can also search for agricultural venues such as open farms located nearby. It is innovative as it not only helps local communities ensuring a source of income but it also aims at minimising carbon emissions which are produced as a result of transportation of products from far away.	One can join, browse or post listings free of charge but the platform charges a commission which equals 5% for sales.	It can be used by anyone since anyone can browse through the options or list their items. The app could be adjusted to tourists. It could also be adapted to be available in several languages.	It can be used worldwide.	Professionals in possession of their own farm or agricultural venue and prospective clients.	https://app.locavore.co/infos/about
3. Promotion of sustainable rural development	Eco Tourism in Spain	The Ecotourism Club in Spain is a pioneering initiative that offers sustainable ecotourism experiences, ensuring the valorisation of travelers' contribution to the local development and to the conservation of biodiversity in the protected areas they visit and in the tourist services they enjoy. The Ecotourism Club developed a web portal where you can find: - Protected areas throughout Spain which stand out for their landscapes and for implementing a sustainable tourist plan. - Professional and high quality accommodation and tourist service companies, which collaborate with protected areas, supporting conservation and local development. - Experiences and various activities suitable for all ages and interests to enjoy while discovering the spaces (birdwatching, wild watching, hiking, cycling, cultural activities, local gastronomy, etc.) A natural selection for ecotourism practice where local actors are committed to promoting sustainable tourism and nature conservation areas. - Updates about ecotourism.	Free	It covers just Spain.	Spain	Professionals and Educators	https://ecotouristinspain.com/
3. Promotion of sustainable rural development;	Tourinsoft SIM	The platform makes it possible to promote the local tourism offer on several sites and applications at the departmental level and the data is also shared in OpenData on the DATAtourisme website which makes it possible to group tourist information and distribute it to the promoters of digital projects. There is currently no specific focus on the promotion of sustainable offers, activities or accommodation. However, this type of tool could be very relevant in promoting such an offer as well as highlight those businesses and providers who engage in sustainable practices.	Free	Yes if there was a reference to sustainable professionals and stakeholders among all of those participating then this could be a very good tool for a local ecosystem to work with.	France	Professionals	https://prezi.com/view/PcVWjTC6a68rc10EelWB/ and https://www.tourinsoft.com/

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
3. Promotion of sustainable rural development;	The Local Flavour	The Local Favour connects the modern independent traveller with a curated network of travel experts who will provide local insight and crafted itineraries based on the traveller's personality, travel motive and tastes. After filling out a fun questionnaire, he gets matched with a local expert and books a video session to work together on the ideal authentic experience in Greece. Depending on the level of assistance he wishes, every traveller receives simple yet insightful local recommendations or a fully customised itinerary. After reaching the chosen destination, our experts provide on-the-go assistance via chat for tweaks and changes in the schedule and help when something goes wrong. The Local Favour aims at empowering Greek travel experts by providing them space to communicate their passion, promote sustainable travels by helping local communities and economies, and combat over-tourism by showcasing lesser-known destinations. The practice contributes to sustainability by promoting lesser-known destinations as well as their cultural heritage and products. Booking a first session with the Local Flavour's guides is straightforward through an online form.	To be paid	Professionals and/or educators can be part of the Local flavour network	Greece	Professionals and Educators	https://www.thelocalfavour.com/
3. Promotion of sustainable rural development;	Pitaca Platform	In May 2019, the Pitaca platform won the Regional Prize for Tourism Innovation. The project consists of creating an intelligent digital tourist information point, embodied by a virtual tourist adviser. The initial objective of the project is to increase the tourism consumption of visitors staying in the rural area of Nièvre, in Bourgogne-Franche-Comté, and to make all tourist information accessible 24 hours a day, 7 days a week, using modern and innovative tools. The smart digital tourist information point is a welcome, information and recommendation portal run by a smart digital tourist adviser, searchable using natural language. Its missions are to inform visitors about offers (news, events, service providers, etc.), to support them in their search for information, to provide them with recommendations depending on the context, to answer their questions, to guide them and push useful tips and good plans. The objective of this tool is to provide tourists with information and recommendations, more specifically outside office opening hours and throughout the area. It is also a question of guiding and informing tourists of the news and good plans and enabling them to make online reservations. There is no specific mention of the sustainable offer of the tool. In any case the project can certainly support rural tourism and rural development and local businesses.	Free	The platform has potential to be adapted and to be used in other rural areas. There could be a special focus on sustainable offers to raise awareness about sustainable tourism.	France	Professionals	https://ec.europa.eu/regional_policy/fr/projects/France/a-smart-digital-platform-for-tourists-developed-in-nievre-france
5. Promotion and conservation	Genuine Spain	It is a website formed by people from Spain who are passionate about their country and sustainable tourism. They design tailor-made travel itineraries that put their varied cultural and natural heritage in the spotlight, connecting	The website is free, the services are not	Only Spain	Spain	Professionals	https://www.genuinespain.es/

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
of cultural heritage;		travellers with local realities, but also with unknown destinations and with their carefully selected local hosts that work towards creating a better industry. They base their work on the following pillars and action lines: - taking care of sustainable tourism in every aspect of their supply chain; - promoting positive impact travel; - contributing to local development and to the conservation of natural and cultural heritage; - offering quality tourism products and experiences, encouraging innovation, creativity and professionalism					
7. Environmental protection and conservation	Alentour	Alentour connects leisure activity professionals with hotels, campsites, lodges, inns, bed and breakfasts, and tourism institutions so that visitors can instantly book a rich and varied range of local activities. This platform is part of the trend of slow-tourism and sustainable tourism: geared towards the quest for experience, it wants to promote the local economy and the protection of the environment. The tool is available through a website and as a QR code at destinations.	Free	Professionals can add their information on the website. The tool could be a way to promote an overall more sustainable tourism offer.	France	Professionals	https://www.alentour.fr
7. Environmental protection and conservation	Glooby	Glooby is a travel search engine that enables users to find and compare prices of airplane tickets and hotels, while indicating the most fuel-efficient flights and eco-labelled hotels. Glooby works with leading airlines, travel agencies and booking sites to find the most sustainable flights to the best prices. They also search over 500,000 hotels from a variety of booking sites and hotel chains and show the client all information they need to make better travel decisions.	Free	None	International	Professionals	https://www.glooby.com/
7. Environmental protection and conservation	EcoMode App and game	The EcoMode App is designed to transfer basic principles of eco-innovation training and set essential strategies to activate eco-innovative processes in the hospitality industry. This app aims at supporting managers in intercepting ecological requirements of customers and optimise their managerial operations by minimising energy consumption and waste. The app provides information on different activities to help owners in making decisions according to a more eco-innovative perspective. With the EcoMode app, you can also identify what your current skills on eco-innovation are, and the weaknesses of your own business to be boosted. The app promotes a series of activities and games to support SMEs in the hospitality industry to become more sustainable and develop new eco-skills in own business. The app is available on the app store for devices using Android	Free	No adaptation is needed; it is designed to target hotel SME managers	EU	Professionals	http://eco-mode-project.eu/

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
		and IOS.					
7. Environmental protection and conservation	Electrek Explorer	Electrek Explorer is developing the following key products. Nat Nav : To help manifest their vision of tackling the climate crisis by promoting low-carbon, electric vehicle travel and nature-based tourism, they have created a Nature Navigation System that helps to recharge and reconnect in nature by navigating through scenic routes with adventures along the way. Electrips promote the exploration of the natural world for E-Bikes and electric cars while connecting carbon-conscious explorers with nature sites through road trips, trails, walks and activities. The navigation system promotes sustainable nature-based tourism experiences while at the same time contributing to low carbon travel and tourism.	To be paid	The navigation system could be further adapted to indicate local sustainable tourism offers and experiences.	Scotland	Professionals	https://www.electrekexplorer.com/
7.Environmental protection and conservation	Spinlister	Spinlister is an app and online platform, which aims at connecting tourists with bike owners. The bikes can either be rented or borrowed, depending on the decision of the lender and they can be booked in advance thanks to a calendar that indicates availability. The app is innovative as it facilitates the search for bike rentals and it makes bikes more accessible. It is the first step to popularise the use of bikes during, for instance, city breaks, instead of relying solely on cars, trains or buses. For those who decide to rent or borrow their bike, Spinlister offers protection options to ensure safety.	Listing a bike is free of charge, however, to be able to rent a bike one needs to pay the amount that was agreed between the lender and the borrower. Apart from that, Spinlister takes 17.5% of the amount earned by the lender.	Anyone can list a bike as well as anyone can create an account to rent or borrow it.	It can be used worldwide.	People who are in possession of a bike and are willing to put it up on rent as well as prospective clients who enjoy riding a bike.	https://www.spinlister.com/

Annex 2: Mobile Apps

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
1. Sustainable business management	OptiWatti	OptiWatti is a company that provides easy-to-use solutions for saving energy. A smart energy management solution that can save up to 40% on heating and cooling without the need for any major renovation. OptiWatti can optimise energy usage based on user preferences, weather forecast and electricity prices, and is easily controlled via an app. Radiators, underfloor heating, ceiling panels, air-source heat pumps and boilers can all be easily controlled so that when rooms aren't being used, hotels are not using unnecessary energy. OptiWatti can be used on computer, tablet or smartphone and all heaters are controlled via one user interface.	To be paid	None	Finland	Professionals	https://www.optiwatti.com
2. Promotion of local products	Locavore	Locavore is an app, which recommends eating both seasonal and local fruits and vegetables to its users based on the location, which the app detects thanks to the GPS installed on their mobile phones. It means that everyone can use it anywhere in the world. Moreover, one can also search for agricultural venues such as open farms located nearby. It is innovative as it not only helps local communities ensuring a source of income, but it also aims at minimising carbon emissions which are produced as a result of transportation of products from far away.	One can join, browse or post listings free of charge but the platform charges a commission which equals 5% for sales.	It can be used by anyone since anyone can browse through the options or list their items. The app could be adjusted to tourists. It could also be adapted to be available in several languages.	Worldwide	Professionals in possession of their own farm or agricultural venue and prospective clients.	https://app.locavore.co/info/about
2. Promotion of local products; 6. Circular economy	Go Zero Waste	The app supports the fight against plastic. Go Zero Waste, from Barcelona, shows the bulk or zero waste stores that are close to you, wherever you go. Thus, when you are traveling and need to make a purchase, you can make sure that you do it in the most sustainable way. Its founders want to make life easier without plastic and they intend to eliminate the excuses of time or not knowing the city you are going to visit. The best way to create sustainable habits, inside and outside your locality. Besides facilitating more sustainable and local shopping, the app also has another functionality - to provide users with a series of challenges to help them build more sustainable consumption	Free; for businesses there are different price plans for custom activities. The app is available on the app store for devices using Android and IOS.	No content adaptation is needed. Could be made available in additional languages to be implemented in other places.	Worldwide, Today, the app includes more than 4000 stores in 35 countries.	Both (Professionals and Educators)	https://gozerowaste.app/

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
		habits. As they carry them out, a counter marks the waste saved with their actions. For the businesses Go Zero Waste helps find greener ways to operate.					
3. Promotion of sustainable rural development	Dirfys Topoguide	Dirfys, is the highest part of the Central Evia (second largest Greek island) mountain range. Its shape, which somewhat resembles a volcano, is very characteristic and in all seasons, but especially when there is snow, its steep conical shape is distinguishable from all of central Greece. The app identifies the nearest route and actively navigates to it and then along it, with frequent messages to the user, and informs him of any photographic snapshots nearby. Finally, it instructs him to return to the route if he gets more than 20 m away from it. The application includes navigation, descriptions, and photos for 24 hiking routes, 2 cycling routes, the 2 routes of the Dirfys Marathon mountain running race and 1 offroad route, spreading in the wider region of Central Evia. Each Route has a detailed description, photos and a Points of Interest table. The hiking routes proposed by the app are short and longer hikes or mountaineering climbs, with a total length of 135 km. The cartographic company AnaDigit, creator of the app, has previously published a detailed map at a scale of 1:25,000 for Dirfi, and has also published hundreds of hiking maps for all of Greece. To build the app and ensure maximum accuracy of the data, all routes in the area were walked in 2016 and 2018. The app promotes hiking and eco-friendly tourism as well as the beauties of a relatively unknown region. Both in the city and beyond, the apps feature walking tours, hiking tours, cycling tours, road maps, and cultural tours, as well as natural and archaeological attractions also promoting local cultural heritage. The app is available on the app store for devices using Android and IOS.	To be paid	Yes; similar applications can be developed in collaboration with developers and tourism professionals to promote local hiking paths and eco-friendly tourism.	Greece	Professionals and Educators	https://www.topoguide.gr/ You can see the available routes here: http://www.topoguide.gr/mountains/sterea_ellada/hiking_on_dirfys.php

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
4. Fostering social inclusion	Turismo Accesible en Andalucia	This application allows tourists to check the accessibility of tourism destinations of Andalusia. Each resource has a description, photographs, contact details and assessment of the indicators measured with regard to accessibility, grouped by categories: Access to resource, mobility inside, toilets for public use, information and spaces/services specific resource use. The goal of the app is to promote accessible tourism, encouraging actions that favour the promotion and consolidation of those tourist destinations committed to quality and excellence throughout the tourism value chain. The app is available on the app store for devices using Android and IOS.	Free	The app is just for Andalusian region but could be adapted to other places.	Spain	Professionals and Educators	http://www.iuntadeandalucia.es/ctril/destinoturisticsosaccesibles/
4. Fostering social inclusion	Access Earth	Access Earth provides accessibility and COVID-19 related information, to help support everyone looking to make informed decisions on where they can feel the safest and most welcome while shopping, eating or experiencing the world around them. The app promotes accessible tourism and social inclusion with a focus on people with disabilities.	Free	Tourism businesses can be part of the database and promote their accessibility through the website.	International	Professionals	https://www.accessearth.com/
4. Fostering social inclusion	Wheelmap	Following the model of Google maps, the Wheelmap app and website showcases accessible locations in the map for people on wheelchairs. This free and easy to use app promotes accessible tourism and social inclusion with a focus on people with disabilities.	Free	Tourism businesses can be part of the database and promote their accessibility through the website.	International	Professionals	https://wheelmap.org/
4. Fostering social inclusion	AccessLab	AccessLab was established in 2017 in Athens as a partnership of urban planners and geoinformatics engineers. It aims at constantly providing smart solutions to improve accessibility and urban mobility. AccessLab develops digital applications and tools, being a trusted partner for local authorities, businesses and individuals. Modern cities have to successfully face the issues of accessibility and urban mobility. Technological advances open up new horizons and lead to the adoption of social innovation methods. AccessLab is a startup company of urban planners and geoinformatics engineers. They aim to be an integral part of the technology ecosystem and to provide smart mobility solutions for	Free	Tourism and hospitality businesses can be part of the database and seek an accessibility certification.	International	Professionals	https://accesslab.gr/

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
		disabled people. Using AccessLab tools, people with disabilities can safely move around the city and search for accessible places with touristic interest. AccessLab is user friendly and promotes accessible tourism and social inclusion with a focus on people with disabilities.					
4. Fostering social inclusion	FairTrip	It offers the travellers only inclusive and sustainable tourism options. FairTrip's objective is to create a dynamic for a true and deep change in the way we travel so that the tourism industry can truly become a lever of inclusive and sustainable economic growth as well as a vector of world poverty reduction. The FairTrip app helps travellers to find local and authentic places that would allow them to live special and unforgettable travel experiences while at the same time having a positive impact on the visited place by directly benefiting the local community. FairTrip references restaurants, different types of accommodation or outings, shops, associative structures, farms... More than 2,000 ethical and responsible establishments all over the world are referenced for their positive impact. As a user on the website or the application, everyone can easily add their favourite places, but they must meet certain criteria: be authentic, green, local, supportive and fair. FairTrip team validates the places submitted and registers them on the platform. Everyone can become a contributor to the guide and enrich it! To be referenced on FairTrip, each place needs to promote fair, social, solidary and sustainable tourism, meeting a set of guidelines. FairTrip aims to promote and develop sustainable tourism according to the World Tourism Organization (UNWTO)'s definition. The app is available on the app store for devices using Android and IOS.	Free	None	France	Professionals	https://www.fairtrip.org
5. Promotion and conservation of cultural heritage	Culture App	Culture App is an augmented reality mobile application for use inside the archaeological site. Individual visitors are using their mobile devices and the augmented reality technology (A.R.) to gain access to 3D representations of the monuments, with written and audio historical information. Tour guides can also enhance their narrative by using the application's digital material. It contributes to sustainable tourism by promoting cultural heritage in an innovative way. A web platform called Culture VR that offers a reservation system, digital material (3D models, photos, videos, audio and text) and interactive features for an easy remote virtual tour of the archaeological sites. This allows cultural visitors who cannot visit an archaeological site and be physically present, to take either remote live-guided tours by tour guides or self-guided tours.	To be paid	Yes, it can be enriched by other experiences and virtual tours. Those tours can act as an introduction to local cultural heritage and also attract the interest of cultural guests and visitors.	Greece	Professionals and Educators	https://cultureapp.eu/

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
		At the same time, tour guides benefit from creating a new source of income all throughout the year. The app is user friendly and available on the Google play store.					
5. Promotion and conservation of cultural heritage	Normandie Tourisme	The department of Hauts-de-Seine, together with a number of partners is working on the development of a digital tool for impressionist archipelagos which will serve as a digital mediation tool for several sites the entire larger destination. The digital tool will allow visitors to have information about Impressionism but it will also promote roaming between the different sites that make up the destination. The tool will combine presence at the different sites and virtual reality and will be targeting both French and international visitors and tourists in order to engage them in unforgettable experiences through a mix of onsite experiences combined with virtual reality features. Impressionism will be used as a means to link up different sites of the destination and promote world renowned cultural heritage. At the time of writing the name of the tool is not yet known and the tool is not yet in service.	Free (TBC)	To be determined once the tool is in service.	France	Professionals and Educators	https://pronormandietourisme.fr/nos-actions/contrats-de-destination/destination-impressionnisme/innovation-un-outil-digital-pour-les-archipels-impressionnistes/
5. Promotion and conservation of cultural heritage;	WHATIZIS	With the help of artificial intelligence and visual recognition, this travel guide 2.0 offers to take pictures of the monuments encountered by chance during walks in the city, and thus to benefit from professional audio guides. The application currently references around 400 monuments in Paris. The application allows visitors to explore cultural sites and discover local cultural heritage. The app is available on the app store for devices using Android and IOS.	Free		<u>France</u>	Educators and Professionals	https://whatizis.com
5. Promotion and conservation of cultural heritage;	TOTEMUS	Currently available all across Belgium the App makes it possible to discover lesser-known areas and destinations through walks of different length with tasks and stories along the way which allow the discovery of legends, stories, gastronomy, cultural heritage etc. The app guides people to lesser-known destinations and to the discovery of local culture and heritage. It also provides an interesting option for local and domestic tourism. Users receive badges after the completion of every walk which encourages them to collect them	Free	None	Belgium	Professionals and Educators	https://totemus.be/

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
		and continue discovering local and regional sites. Currently the app is targeted towards domestic tourism and is only available in French. The app is available on the app store for devices using Android and IOS.					
6. Circular economy	Tookki	<p>The app is available for Paris, Lyon, Bordeaux and Marseille. The collaborative app has already referenced 100 places with a sustainable approach in the capital, selected by users but also by the app team according to five criteria:</p> <ul style="list-style-type: none"> - Local provision - Organic: food and textiles - Green: less impact (waste, energy and resource management) Fair trade: from recognised channels Solidarity: inclusive equipment and professional integration <p>Tookki is a sustainable city guide that helps users reduce their ecological footprint during their leisure time and city trips. With the app people can find an eco-friendly hotel, organic restaurant, slow-fashion shop, a green activity or a zero emission means of transportation that are aware of the environment.</p>	Free, the app is available on the app store for devices using Android and IOS.	The app could be extended to other cities or places in France and Europe, or similar apps could be developed that reflect local and regional needs.	France	Professionals	https://www.tookki.com
6. Circular economy	Refill	<p>Refill works by connecting people with locations where they can eat, drink and shop with less waste.</p> <p>Besides making refill and reuse options more available, the app also helps to:</p> <ul style="list-style-type: none"> -Tackle plastic pollution and reducing waste; -Combat climate change; -Provide access to safe, clean drinking water; -Empower individuals and communities. <p>Anyone can download the free app to find local refill stations near them. Businesses that would like to participate can simply sign up to the app and put a sticker in their window, alerting passers-by that they are welcome to come on in and get a refill.</p>	Free, the app is available on the app store for devices using Android and IOS.	The offer of the app could be expanded, and some features might need to be adapted to other locations.	UK including international online retailers	Professionals and Educators	https://www.refill.org.uk/

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
6. Circular economy	Too Good To Go: End Food Waste	<p>How it works for the end user:</p> <ul style="list-style-type: none"> • Search the map to find a restaurant, cafe, or shop near you that has unsold food • Buy the food through the app • Collect your food at the pre-set time, and enjoy it knowing you've done something good for the planet <p>There are many popular restaurants and hospitality companies enrolled in the app: users can choose from stores such as Costa Coffee, Greggs, Caffè Nero, Morrisons, Planet Organic, LEON, YO!, and your favourite local independents - more than 90,000 stores fight food waste with us across Europe and North America, with more joining every day. Its main aim is to contribute to sustainability by eliminating food waste. Hotels that offer services related to food such as breakfast, lunch and/or dinner can join the network of enterprises and sell their food surpluses through the app.</p>	Free; they have a special price plan for custom activities for the companies. The app is a free to download and user friendly.	Accommodation managers can add their business to the app as a partner alongside other hospitality businesses such as restaurants and cafes and sell their food surplus to interested customers at a very low price	UK and international	Professionals	https://toogoodtogo.org/
7. Environmental protection and conservation	Giki Zero Pro	<p>Giki Zero Pro is an employee sustainability programme that helps individuals who want to reduce their carbon footprint and helps companies who want to engage staff on ESG (environmental, social and corporate governance) issues and measure the impact of their actions.</p> <p>How do they achieve that?</p> <p>On the one hand, employees are provided with an engaging, science based digital platform to understand, track and reduce their carbon footprint. It also encourages collective action with teams, leader boards and information on the carbon, water, land and single use plastic that colleagues have saved together. The results of the teamwork serve as a good trigger for behavioural change. On the other hand, they provide a toolkit for Sustainability Leads (those responsible for company sustainability) to drive engagement and action. The toolkit provides the resources needed to run an engaging, high impact, sustainability programme as part of a company culture.</p> <p>They can also support clients with tailored programmes, bespoke carbon calculations and new ideas to encourage participation. Clients can get the</p>	Giki Zero for individuals is free; Giki Zero Pro has different price plans depending on your needs (it is necessary to get in touch with them to get a quote)	None	EU	Professionals	https://giki.earth

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
		data that measures the impact they are having. The app is relevant to professionals working in any industry.					
7. Environmental protection and conservation	Bikemap	Bikemap has the goal to share incredible routes with cyclists that like to travel using bikes. This app offers over 9,4 million unique routes in more than 100 countries, helping people to find the most suitable route for the purpose. Providing the user with technology for route planning and navigation, the app promotes cycling and makes it easy for anyone to get on the bicycle. Cycling is not just good for health, but it also improves local air quality and reduces carbon emissions. It is also a way to discover local natural and cultural heritage in tune with nature.	Free, the app is available on the app store for devices using Android and IOS.	None	Worldwide	Professionals and Educators	https://www.bikemap.net/
7. Environmental protection and conservation	Green Travel	The Green Travel app helps the user to make climate friendly travel decisions. The app provides the user with their journey's contribution to their carbon footprint. In particular, with the help of this app the user can: -know their daily emissions; -plan their journey with awareness about their carbon footprint; -compare the carbon footprint depending on what transport type is chosen; -check their journey details	Free	None	UK	Professionals and Educators	https://www.green-travel.co.uk/
7.Environmental protection and conservation	Spinlister	Spinlister is an app and online platform, which aims at connecting tourists with bike owners. The bikes can either be rented or borrowed, depending on the decision of the lender and they can be booked in advance thanks to a calendar that indicates availability. The app is innovative as it facilitates the search for bike rentals and it makes bikes more accessible. It is the first step to popularise the use of bikes during, for instance, city breaks, instead of relying solely on cars, trains or buses. For those who decide to rent or borrow their bike, Spinlister offers protection options to ensure safety.	Listing a bike is free of charge, however, to be able to rent a bike one needs to pay the amount that was agreed between the lender and the borrower. Apart from that, Spinlister takes 17.5% of the amount earned by the lender.	Anyone can list a bike as well as anyone can create an account to rent or borrow it.	It can be used worldwide.	People who are in possession of a bike and are willing to put it up on rent as well as prospective clients who enjoy riding a bike.	https://www.spinlister.com/
7. Environmental protection	Giki Badges	Giki Badges is an app thanks to which one can scan the barcodes of various products to learn about them in terms of chemicals that might influence one's health in a negative way; animal welfare standard; additives; and the amount	Free	The app could be spread to other countries	UK	Both	https://giki.earth/giki-badges-impact-score

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
and conservation		of sugar, salt or fat. The products available in the app are marked with the use of 15 different bandages that provide its users with information concerning notions such as sustainability, health as well as fairness. The app can be used not only by tourists but also by owners who can decide which products they wish to use in their restaurants, bars, or coffee places to ensure safety and health of their customers, welfare of the animals, as well as protection of the environment.					

Annex 3: Other

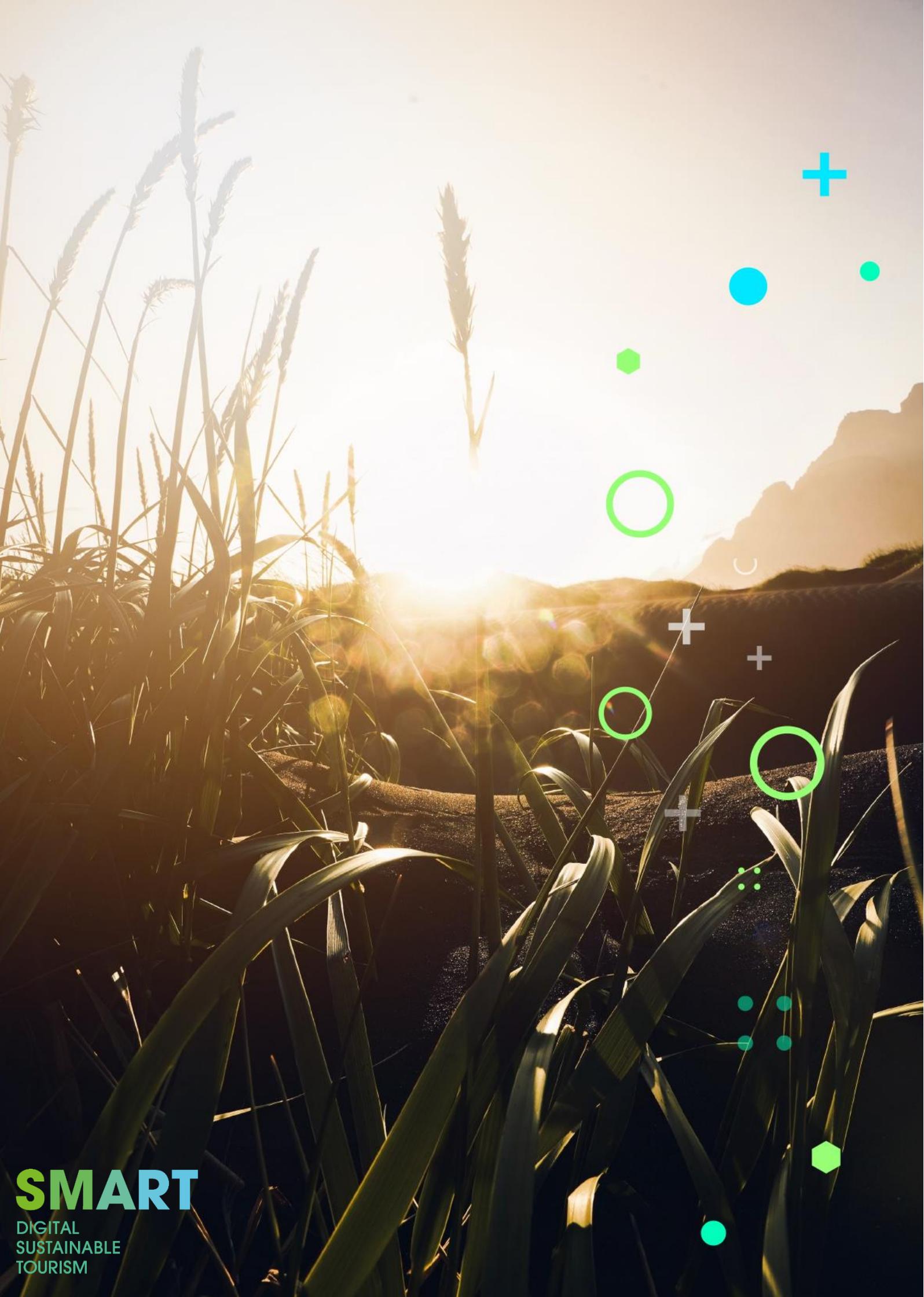
Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
1. Sustainable business management	BedSwap project	<p>The company's BedSwap project uses a blockchain-enabled system to maintain records of hotel bed inventories in real-time. That bed inventory can then be offered across markets within seconds, and there is no need for an intermediary such as Expedia to manage the information.</p> <p>The advantages of blockchain in the travel industry:</p> <ul style="list-style-type: none"> - A decentralised marketplace equals a democratised market. - A blockchain system is controlled by all involved and cannot be manipulated. - Cost savings and increased efficiencies will be realised since intermediaries are no longer part of the process. - Blockchain provides an immutable and secure payment and data transfer platform. - The cost to set up a blockchain system is minor compared to setting up and maintaining a system such as Expedia. - Blockchain could enable an easy-to-implement loyalty rewards program. 	N/A, it is a technology elaborated by TUI group for their own usage;	It can be used as a good practice for other hotel industry managers if they think of implementing blockchain technology into their business.	Worldwide	Professionals	https://www.tuigroup.com/en-en/media/stories/special-themed-section/digitalisation-and-innovation/2017-06-22-tui-to-use-blockchain-opportunities
1. Sustainable business management	Gensuite Eco Treasure Hunt	<p>Gensuite's Eco Treasure Hunt is a tool that can be useful for the hospitality industry as a whole as well as for other organisations that would like to boost their sustainability, increase their savings, and at the same time contribute to protecting the environment. The primary purpose of the tool boils down to calculating potential benefits on condition that the organisation switches to more sustainable options, for instance, to more efficient light bulbs. This is how it works: one needs to provide various pieces of information, such as (among others): the model as well as the usage, and subsequently the app is able to calculate the money that could be saved through the adaptation of a particular good practice.</p>	No information provided	None	India and Worldwide	Professionals	https://www.gensuite.in
1. Sustainable business	Kleesto	<p>Kleesto is a next generation back-office system for travel companies helping them digitalise, automate, and optimise their business. The</p>	To be paid for	None	Greece	Professionals	https://kleesto.com/

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
management		<p>system covers the market's needs in a holistic way.</p> <p>Users can streamline a plethora of their company's operations like distribution, communications, personnel and suppliers' management, resources and equipment management, yield management, payments and expenses management, as well as advanced pricing management. Kleesto addresses OTAs, and resource-heavy tour operators (Private transfers, Boat charters, etc), helping them grow their revenue.</p> <p>Kleesto focuses on companies working with transfers, tours, outdoor activities & experiences helping them optimise their operations. Their need is to keep up with the digital expansion of the tourism market and to provide their services on scale by connecting with fast-growing companies. Making their services accessible next to accommodation and transportation is a priority followed by a need for interconnectivity with new partners to create unique and appealing travel products. Market leaders like TripAdvisor, Booking & Airbnb are leaning towards experiences to serve the trending traveller needs. The main problem is that experience providers are not well-organised and find it difficult to scale up their business because their operations are neither streamlined nor time-efficient. The practice contributes to sustainability by accelerating the digitalisation of the operation of travel companies.</p>					
1. Sustainable business management	Tourism 4.0 for the Black Sea project	<p>Most smart tourism initiatives around the world focus on technological advancements. However, the project partners of Tourism 4.0 understand technology is an enabler while collaboration is the key to tourism for the future. The aim of the partners is co-creation of tourism for the future through data analytics. The Tourism 4.0 for the Black Sea project will boost sectoral cooperation and allow greater usage of the Industry 4.0 technologies in tourism. The project is based on the idea that data driven tourism will enable more sustainable development of tourism in the future. The project ran between November 2019 and December 2021. For more details regarding accessibility please contact the project partners.</p>	Free	Unknown	Slovenia, Greece, Ukraine, Romania, Georgia	Professionals	https://www.t4bs.eu/

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
1. Sustainable business management	BOS4.tours	Bos4.tours is a platform/software for online booking and placement of tours and activities. BOS platform offers digital transformation for tourism providers and the possibility of combining all offers from the destination and networking with a closer or wider region or placement through thematic sites through which future tourists can book online services. In this way, destinations have the opportunity to form a common brand and distribution channel tailored to the target markets and target audiences. They also have the ability to create their own promotional campaigns and thus stimulate demand. As a result, they will have the opportunity to monitor big data on the basis of which they will create new tourism products and new strategies in the future (SMART tourism). The BOS team brings together experts in tourism and digital marketing, and in addition to the technological solution they offer, they are able to provide a complete "business in a box" for SMEs from your destination. They thus ensure their resilience and competitiveness through better uptake of sustainability principles, innovation, digitisation, enhanced quality, and cooperation along the tourism value chain. BOS4.eu are adapting their offer to new market conditions and starting all marketing and promotional activities towards the target market and target audiences, following the achievement of results.	To be paid for/not accessible	Not applicable	Serbia	Professionals	https://bos4.tours
5. Promotion and conservation of cultural heritage	Vista AR	The purpose of Vista AR is to increase the tourism revenue of cultural and heritage sites, via a rise in visitor numbers. It will bring partners from the fields of tourism, digital and the economy together. In the digital age, cultural and heritage sites wishing to innovate their offer to the public can take advantage of two solutions: virtual reality/augmented reality applications and tools for analysing visitor experiences. These tools are usually either prohibitively expensive or are still under development. Vista AR creates new visitor experiences by adopting advanced digital technologies at partner cultural and heritage sites. These sites face significant economic challenges in today's climate. VISTA wants to work to develop various tools and make them available to the greatest number of sites via a cloud system.	Free		France and England	Professionals and Educators	https://www.vista-ar.eu/

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
5. Promotion and conservation of cultural heritage	Caverne du Pont d'Arc Project	The reproduction of historical charcoal and red ochre drawings from the Chauvet cave considered the largest repository of Palaeolithic art in the world. The drawings have been replicated in a hangar using digital and high-tech tools. The use of technology to reproduce historic monuments or paintings is abling the protection historical sites in danger because of tourism. The replica opened to the public in 2017 (with works between 2007 and 2017) after the local government had recognised that an international audience had requested access to the cave. Reproductions using digital technology as well as the development of virtual tours support the conservation and promotion of cultural heritage sites and as make a considerable contribution to sustainable tourism development.	To be paid for	The practice can be used as an example for the use of digital technology for conservation and virtual tourism. Virtual tourism tools would need to be adapted frequently to stay appealing to users.	France	Professionals and Educators	https://incroyable-montelimar.fr/grotte-chauvet/ and https://archeologie.culture.fr/chauvet/fr
6. Circular economy;	MyHotelBike	MyHotelBike creates a complete cycling experience for visitors from all around the globe, saying goodbye to closing times, high deposits and strict rules, and welcoming the ease of having bikes in front of hotels. For guests it is simple to rent out a bicycle from the hotel, and for hotel staff it is easy to track occupancy and repair status. Invoicing is all automated, which means no paper trail. A green way for guests to explore the area without the need for public transport, plus an extra source of revenue for hotels.	To be paid for	None	Netherlands		https://myhotelbike.com
7. Environmental protection and conservation	GIB 5.0	The company launched GIB 5.0, an Artificial Intelligence proprietary application to support its sustainable tourism projects around the world. GIB 5.0 allows Big Five's travellers to better support giving back to local people and the planet in the destinations they visit. Big Five is expanding its support to encompass more short-term projects based upon the United Nations Sustainable Development Goals by using the AI technology to present a rich variety of options to guests that are closely aligned with their personal interests when they travel, allowing them to better channel their philanthropic support.	To be paid for	None	Worldwide	Professionals	https://bigfive.com/big-five-uses-ai-to-advance-sustainable-tourism-impact/ https://bigfive.com/sustainable-tourism-big-five/gib-5-0/
Various categories	Blockchain	More in general the blockchain is mainly used to trace and certify data. In particular with the security of the IOT (Internet of things) where it improves the integrity of data and their confidentiality. This is to ensure	To be paid for	Blockchain is an interesting option for sustainable	Worldwide	Professionals	https://www.disruptordaily.com/blockchain-startups-travel/

Practice Category	Practice or Tool	Description	Cost	Adaptation needs	Country	Target group	Website
		that the files are not intercepted, read and/or manipulated. This traceability and certification can thus be applied to many areas. In tourism, the use of blockchain can lead to considerable innovation, an example is Futourist which is a platform for travel-loving creators to upload original content, leave reviews, and engage in other activities that would be beneficial to those considering a vacation – while being rewarded for their contributions. Most popular travel review sites do not have systems for directly compensating contributors, whose perspectives are immeasurably valuable. Their FTR coins are the means by which reviewers get paid for sharing their experiences and impressions. In general, Blockchain can lead to more sustainable tourism through traceability of products and services and the possibility of innovative business models within the sustainable tourism industry		tourism professionals to explore when they are looking at developing innovative tourism offers.			Futourist : https://partner.booking.com/en-gb/click-magazine/sustainable-tourism-slovenia
Various categories	Use of drones	With the help of drones in tourism, operators can for example visit places without being there physically. It can also protect cultural sites from too many visitors.					



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