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REPORT

Workshop on tourism data sharing, governance and integration



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REPORT

Workshop on **tourism data sharing, governance** and **integration**

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On 27 and 28 September 2023, the Directorate-General for Structural Reform Support (DG REFORM) organised a workshop on "Tourism data sharing, governance and integration" through the Technical Assistance and Information Exchange Instrument (TAIEX), with the Organisation for Economic Co-operation and Development (OECD) as the implementing partner of the Technical Support Instrument projects for the 2022 Flagship "Support to the tourism ecosystem: towards a more sustainable, resilient and digital tourism", and the beneficiary countries Greece, Spain, Croatia, Italy, Malta, Portugal and Slovenia.

This Report was prepared and edited by a team of DG REFORM Unit B3 Sustainable Growth and Business Environment (Panagiotis Markantonatos, Zinovia Tsikalaki, Milena Raykovska, Marcell Petho, Laura Morano), under the guidance of Kaspar Richter, and the OECD Tourism Team (Peter Haxton, Kristen Corrie, Julie Reimann) under the guidance of Jane Stacey.

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Apolonija Oblak Flander (workshop moderator), Jane Stacey, Sérgio Guerreiro, Marieke Politiek, Oliver Csendes, Stavroula Kefala, Eleonora Lorenzini, Amanda Stenström, Rod Battye, Simon Bley, Rebecca Taves, Márta Fazekas, Sandra Carvao, Ana Moniche, Juric Nives, Dolores Ordonez, Misa Labarile, Katarina Wakonen, Pascal Helfer, Marco Minghini, Paola Cianfriglia, Karolis Žemaitis, Filipe Batista, Peter de Rama, Federico Milani, Ana Jemec Špik and Tania Sultana.

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For the OECD, this work has been approved and declassified by the OECD Tourism Committee on 24 January 2025.

The names of countries and territories and maps used in this joint publication follow the practice of the EU.

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FOREWORD

This report serves as a record of the insightful discussions and valuable contributions made over the course of a two-day Workshop on "Tourism Data Sharing, Governance and Integration". The workshop was co-organised by the Directorate-General for Structural Reform Support (DG REFORM), through the TAIEX instrument, and the OECD. Experts from around the world gathered in Brussels and online to explore the opportunities and challenges to strengthen the evidence-base for tourism policy and decision-making.

As European Commissioner for Cohesion and Reforms, Elisa Ferreira, stated in her opening remarks, "...I applaud the groundbreaking work of those here today, who are blazing new trails in data collection for tourism." This sentiment encapsulates the spirit of the workshop, where participants from diverse backgrounds and organisations came together to exchange knowledge and experiences, all in pursuit of a common goal – to contribute to the development of a more sustainable and resilient tourism ecosystem.

The European Commission, together with the OECD as implementing partner of the seven Technical Support Instrument (TSI) projects (Croatia, Greece, Italy, Malta, Portugal, Slovenia, and Spain), brought together around 280 participants from 39 countries, giving the TSI a truly global dimension. In addition to representatives from TSI beneficiary countries, participants included other EU and OECD Member and non-Member States, as well as representatives from the United Nations World Tourism Organisation (UN Tourism).

Tourism was hit hard by the unprecedented impact of the COVID-19 pandemic, and as the world's leading tourist destination, Europe was not immune. Before the pandemic, the European tourism market generated a gross value added (GVA) of more than EUR 570 billion [1], and, considering the whole ecosystem, up to EUR 880 billion in GVA, employing almost 21 million people in the EU [2]. Tourism experienced a sharp decline in 2020, followed by a fragile and uneven recovery in 2021. The rapid increase in energy costs and in inflation have added to the already existing challenges posed by high seasonality. The effects of climate change, moreover, have been felt with particular intensity in the tourism sector.

In this context, the tourism ecosystem was prioritised when the European Commission launched the transition pathway process in March 2021 as part of its updated Industrial Policy. The process involved all stakeholders and civil society to sketch out the transition path for tourism towards achieving a more resilient, greener, and more digital identity.

In response to these challenges, DG REFORM in collaboration with DG GROW, ESTAT, and JRC, presented the TSI 2022 flagship "Support to the tourism ecosystem: towards a more sustainable, resilient and digital tourism". This initiative aimed to enhance data gathering and sharing frameworks across EU Member States and implement sustainable tourism management and monitoring tools at the destination level.

The Workshop on "Tourism Data Sharing, Governance and Integration" provided an opportunity for participating Member and non-Member States to share their experiences and progress in achieving these goals. The collaborative nature of these efforts was highlighted as a key factor in driving positive change within the tourism industry.

As readers explore the contents of this report, they will gain valuable insights into the innovative approaches, methodologies, and strategies employed by countries and international organisations to strengthen the evidence-base for a more sustainable and resilient tourism ecosystem in Europe, and beyond. Concentrating efforts on gathering the right information and facilitating access to this data will help foster informed decision-making and drive effective strategies to address pressing issues within the tourism sector.

Mario Nava
Director-General REFORM - Structural Reform Support

Kerstin Jorna
Director-General GROW - Internal Market, Industry, Entrepreneurship and SMEs

Nadim Ahmad
Deputy Director of the OECD Centre for Entrepreneurship, SMEs, Regions and Cities

(1) See Eurostat's "Tourism: €572 billion gross value added in the EU".
(2) See the Commission staff working document "Annual Single Market Report 2022".

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INTRODUCTION

Tourism is a complex, service-based sector built on the movement of people. The rapid succession of crises in recent years has highlighted the importance of having timely, granular and comparable tourism data available to inform policy and business decisions, transitioning towards a more sustainable, resilient, and digital tourism landscape. However, while significant advances have been made to improve tourism data, the timeliness of, and ability to share, available data to meet the needs of decision makers remains a challenge.



The workshop on "Data Sharing, Governance and Integration" was held on 27-28 September 2023 and undertaken as part of the EU's Technical Support Instrument (TSI) flagship project – *Support to the tourism ecosystem: towards a more sustainable, resilient, and digital tourism*. It was co-organised by the Directorate-General for Structural Reform Support (DG REFORM), through the TAIEX instrument, and the OECD, as the implementing partner.

Timely and accurate data plays a crucial role in making tourism sustainable and resilient. The purpose of the workshop was to facilitate and support the exchange of knowledge and good practices on data sharing and integration to enhance evidence-based policy and business decision-making.

The workshop provided a platform for diverse stakeholders from the participating TSI EU Member States and beyond to collectively address the complexities inherent in managing tourism data. By fostering collaboration and knowledge exchange, the workshop aimed to propel the tourism sector towards a future characterised by informed decision-making, sustainable practices, and digital resilience. Presentations provided examples of opportunities to measure tourism with new data sources, how to integrate tourism data sets to strengthen understanding of the sector, and along with key data sharing issues including data governance, digital infrastructure and how to meet the needs of the end user.

This report summarises the insights and discussions that took place in each of the five sessions of the workshop, providing an introduction, presentations and discussants' highlights, along with key takeaways and conclusions. The five sessions were:

- Session 1: What's the story – sharing data to improve tourism decision making
- Session 2: Ensuring good data governance with increased timeliness and granularity
- Session 3: Navigating the complexities of integrating diverse tourism data sets
- Session 4: Using data hubs and spaces to fill the gaps in tourism data
- Session 5: 'Digital infrastructure' – building data sharing platforms from the foundation

The full agenda, recordings and presentations from the workshop are available here.

SESSION 1: WHAT'S THE STORY – SHARING DATA TO IMPROVE TOURISM DECISION MAKING



Jane Stacey



Sérgio Guerreiro,



Marieke Politiek



Oliver Csendes

The demand for tourism data is at an all-time high. Providing access to tourism data has become a key priority in many countries to enable better decision making for the government, businesses and the local communities. As resource and capacity constraints continue to play a role in the sector, there is a need to consider what data is meaningful to accurately reflect the tourism context and enable decision making.

The presentations and subsequent discussions in Session 1 explored three key topics: The first topic was on ***what drives the need to share data***. Participants explored the driving forces behind the imperative to share data, differentiating between the needs of various types of decision-makers, including governments, businesses, and local communities.

The second topic concerned ***end-user needs and how to display data***. The discussion extended to the essential requirements of end-users and how data should be presented to effectively convey the narrative for decision-making purposes.

The third topic explored the ***prioritisation of and constraints on the timely provision of data***. Given constraints on resources and capacity, participants engaged in discussions on whether all data should be shared, or if a strategic selection of data is more prudent, considering the pressing constraints.

The discussion was moderated by **Ms. Jane Stacey**, Head of Tourism – OECD and the lead interventions were made by:

- **Mr. Sérgio Guerreiro**, Senior Director - Turismo de Portugal, Creating Tourism Data Hubs. Lessons from the Portuguese Experience.
- **Ms. Marieke Politiek**, Manager Intel & Insights - NBTC Netherlands Board of Tourism & Conventions, Building alliances for more data-driven policy making.
- **Mr. Oliver Csendes**, Chief Digital and Innovation Officer - Austrian National Tourist Office, From Data to Destiny: Navigating Europe's Tourism Data Landscape with the Data Space Framework.

GOOD PRACTICES, EXPERIENCES AND KNOWLEDGE SHARING

Portugal – the journey to a global hub of tourism data and intelligence



Portugal shared its experience in developing a data hub for the entire tourism industry – TravelBI by Turismo de Portugal. The ambition to become a global hub for tourism data and intelligence to support the Portuguese tourism industry was the basis of the project developed by Turismo de Portugal, positioning the NTA (National Tourism Authority) as the entity responsible for collecting and consolidating all relevant industry information on a single public platform.

The challenges are numerous and can be summarised by the phrase "providing the right data at the right time to the right people so that they can make the right decisions," with each aspect presenting its own challenges.



The platform was developed in 2016 and integrates official data from statistical authorities (Statistics Portugal and the Bank of Portugal), research from Turismo de Portugal, and various alternative data sources that have been tested and incorporated into the system. The platform, currently offers statistical data, reports, interactive dashboards, and a geodata portal to support the development of new projects. Last year, the platform had 56 000 unique users and over 300 000 pageviews, demonstrating its relevance in the ecosystem.

The process has evolved from data collection and descriptive analysis to generating insights for businesses. The next phases include predictive analysis and forecasting, which will be developed as part of the TSI project, and prescriptive analytics tools, which are also under development as part of a project financed by the Portuguese Recovery and Resilience Plan (Next Generation EU).

The presentation also emphasised the need to develop skills to support the project's various stages, and the importance of focusing on people, including the project team and users, who must actively participate and be highly engaged as the final recipients of all project outcomes.

Sérgio Guerreiro
Senior Director, Strategy & Knowledge Management / Turismo de Portugal

Greece – challenges in the Greek tourism statistical framework and TSI support



Greece confronts numerous obstacles in collecting and sharing tourism data to inform planning and strategic decisions. One significant challenge is data fragmentation, where tourism data is dispersed across various government agencies, tourism boards, and private entities, making coordination and integration difficult. Ensuring data quality is paramount, given the risk of inaccuracies stemming from inconsistent collection methods and standards. The Ministry of Tourism actively engages in methodological framework developments, supporting initiatives aimed at achieving a harmonised national framework.

Protecting sensitive tourist information while facilitating data sharing necessitates robust data security measures and compliance with privacy regulations like General Data Protection Regulation (GDPR). Adequate technology and infrastructure are essential for efficient data collection, storage, and processing, with interoperability being a major issue. Stakeholder collaboration is vital for successful data sharing, necessitating consent among government bodies, businesses, and tourism organisations. An info-Hub for tourism data has been established by the Ministry to tackle data fragmentation and promote an evidence-based policy.

Adapting to rapidly changing tourism trends and consumer preferences requires staying updated, particularly considering Greece's seasonal tourism patterns and the need to balance infrastructure investments throughout the year. Balancing tourism growth with environmental and cultural preservation presents a key challenge.

To address these challenges, the Ministry invests in data management, methodological training, and infrastructure while prioritising data privacy and security. Initiatives such as the National Observatory for Sustainable Tourism Development aim to highlight the comparative advantages of tourism destinations while respecting natural and cultural heritage. Collaboration with the United National World Tourism Organisation (UNWTO) involves establishing a Research and Monitoring Centre for Coastal and Maritime Tourism in the Mediterranean, inviting Mediterranean countries to contribute to a methodological framework and share data.

Participation in the European data space project aims to harmonise data sharing by fostering trust relations between data providers. To address data deficiencies highlighted during the COVID-19 pandemic, cooperation with DG REFORM and the OECD, with the support of the TSI, encompasses strengthening tourism statistics, developing sustainability indicators, enhancing the tourism environment for small and medium-sized enterprises, and promoting local destinations, aligning with Greece's efforts towards sustainable economic and social convergence, resilience, and recovery. Through these collaborative endeavours, Greece aims to foster evidence-based policymaking, monitor tourism policies effectively, and promote sustainable tourism practices.

Dr. Stavroula Kefala
Head, Directorate of Research / Ministry of Tourism

KEY TAKEAWAYS AND CONCLUSIONS FROM THE DISCUSSIONS

In adopting a user-centric approach, the importance of **understanding users and their specific needs** was emphasised. Access to raw data alone is not enough, as users require meaningful insights. Capacity building within teams is essential, particularly focusing on skills development to pick the right data, standardise it, and cultivate curiosity to go beyond raw numbers.

The session underscored the shift from data to insights, emphasising the importance of not just possessing data but deriving actionable insights. This involves moving beyond the quantitative realm into predictive and prescriptive analysis, where critical thinking plays a pivotal role.

For insights to be valuable, users must know the data source, how to access the insights, and how to use and understand the insights. **Effective communication**, coupled with ongoing education and upskilling initiatives, is vital to empower users to make informed decisions.

A **strategic focus** was recommended, prioritising the right tasks and executing them well rather than attempting to cover every aspect with less rigour. Understanding the feasibility of actions within the available resources is crucial. Focusing on use cases provides a structured approach to identifying, clarifying, and organising requirements, enabling an investigation into how these use cases can be scaled for broader impact.

The session and discussions stressed the importance of **'trying new approaches'**, acknowledging that nothing will be perfect on the first attempt, and lessons will be learned even through failure. Embracing a mindset of continual improvement is vital, recognising that data, technology, and users' needs will evolve over time.

Recognising disparities between national and regional needs and resources is crucial. Some analyses and dashboards may be better suited for local actors rather than national entities. Ease of data accessibility, such as through Application Programming Interfaces (APIs), is highlighted as a key enabler, ensuring that local actors can readily perform necessary analyses.

To summarise, the session underscored the significance of **aligning data sharing practices with user needs, fostering a culture of continual improvement and navigating the nuanced balance between national and regional requirements**. These takeaways provide a foundational understanding for shaping effective strategies in an evolving tourism data management landscape.

SESSION 2: ENSURING GOOD DATA GOVERNANCE WITH INCREASED TIMELINESS AND GRANULARITY


Eleonora Lorenzini


Amanda Stenström


Rod Battye


Simon Bley

Evidence-based decision making relies on the availability of timely and granular data. To fill existing gaps, new data sources and methodologies are being explored to complement traditional methods, but this comes with new complexities. Ensuring good data governance is essential to the integration of the new data sources for tourism measurement.

The presentations and subsequent discussions in Session 2 explored the key topic of how to ***ensure data governance and privacy*** when providing data at a more granular level. Workshop participants discussed how to adhere to regulatory requirements, ensuring ethically sound and legally compliant sharing of data, while still meeting the demand for the sharing of timely and granular data. Specificities regarding the sharing of aggregated personal data in real time, government data, and the linking of new approaches with existing tourism data were discussed.

The discussion was moderated by **Ms. Eleonora Lorenzini**, the Director of the Travel Innovation and the Digital Innovation in Heritage & Culture Observatories at the Politecnico di Milano, and the lead interventions were made by:

- **Ms. Amanda Stenström**, Project Manager Nordic RTSA - Swedish Agency for Economic and Regional Growth, A new model in measuring Regional Tourism and Tourism's Environmental Impact in the Nordics.
- **Mr. Rod Battye**, Manager Data Innovation and Partnerships - Tourism Research Australia, Integrating mobile phone and other new data sources to increase the timeliness and granularity of the Domestic Visitor Survey.
- **Mr. Simon Bley**, Statistical Officer - Eurostat, Closing data gaps with privately held data – The Eurostat Short-term rentals project.

GOOD PRACTICES, EXPERIENCES AND KNOWLEDGE SHARING

ESTAT – Closing data gaps with privately held data

Official statisticians are increasingly facing the limitations of traditional surveys in responding to users needing faster and more granular data. At the same time, the continued digitalisation of the economy opens perspectives to better exploit previously unavailable data sources. The future will no longer link one data source to one statistical product; it will combine several data sources into one or more statistical products.

The European Statistical System (ESS) achieved a milestone in June 2021 by publishing, for the first time, statistics on tourist accommodation booked via online collaborative economy platforms, using privately held data. The underlying data was made available to Eurostat by four major international platforms following the conclusion of non-disclosure agreements. The goal of the project was to explore the possibilities of measuring the collaborative economy by focusing on one case, namely the accommodation platforms. On a more specific level, the project filled an existing data gap in tourism statistics, namely the segment of holiday rentals.

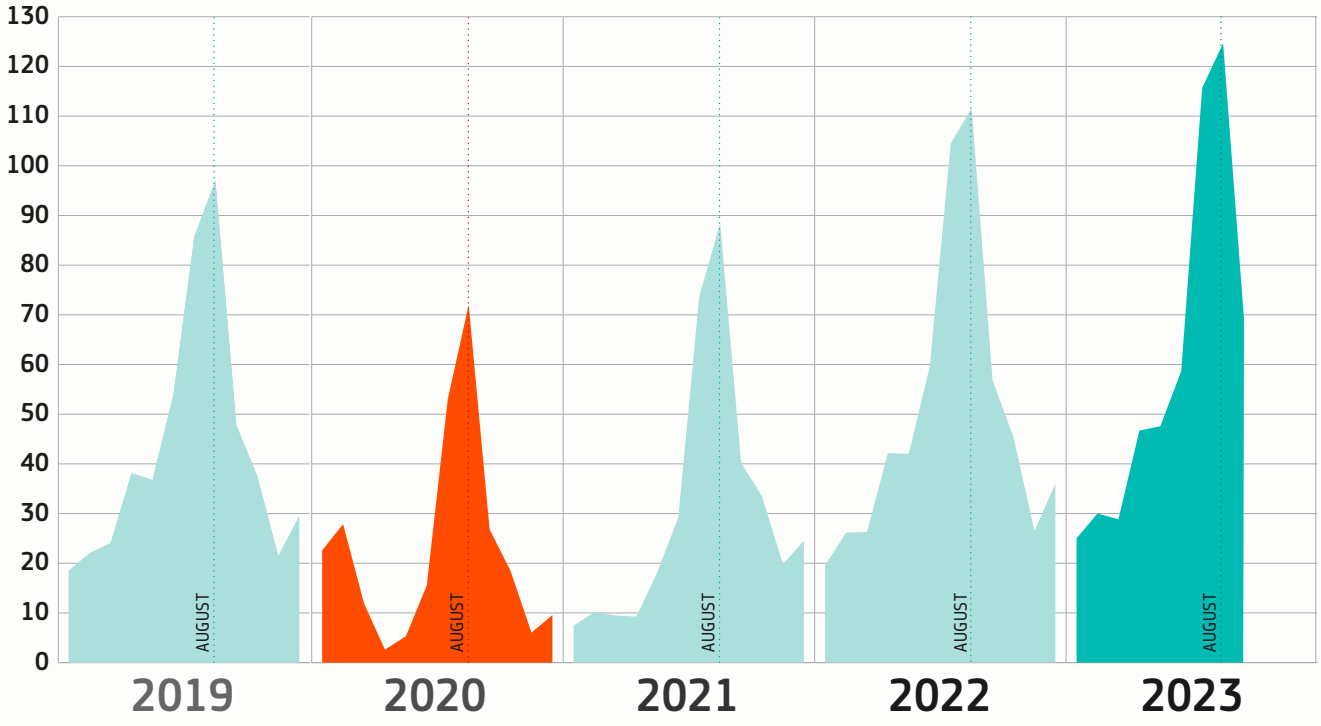
Traditionally, this segment was treated as a lower priority in tourism statistics, characterised by many small enterprises and individual households offering only a small number of bed places each. However, the rise of the platform economy meant that these previously hard to trace service providers now leave a digital footprint that can be used as a source for statistics.

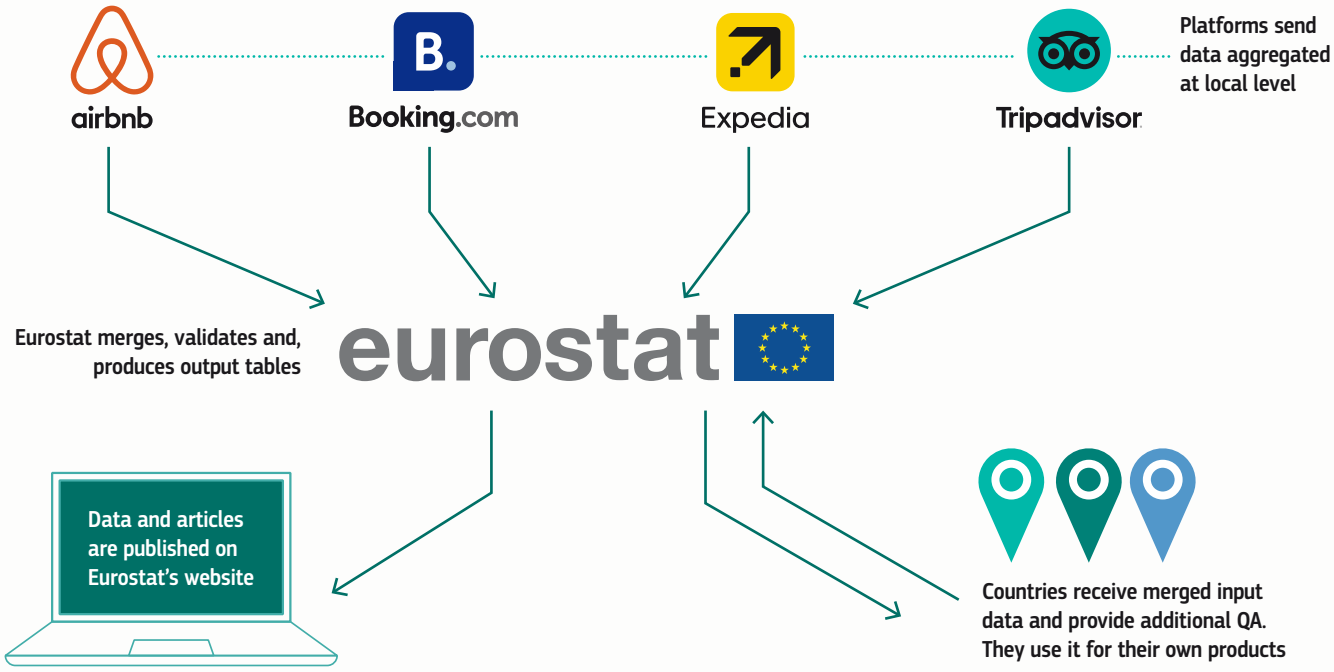
Under the terms of the agreements, the four platforms provide occupancy

MONTHLY GUEST NIGHTS IN THE EU, 2019-2023,

(million nights)

Nights spent in short-stay accommodation offered via online collaborative economy platforms (Airbnb, Booking, Expedia Group, Trip adviser)





and capacity data on bookings and nights spent in short-term rental facilities that fall under NACE category 55.2 "Holiday and other short-stay accommodation". Eurostat aggregates and validates the data and disseminates statistics derived from it. Additionally, the aggregated data is transmitted to National Statistical Institutes (NSIs) for additional validation and national dissemination programmes.

Currently, Eurostat disseminates occupancy data at EU, national, regional (NUTS 3) and city levels. The data is broken down by the origin of the guests and by accommodation characteristics, such as the number of available bed places. The data is released in two waves, with the first wave covering country-level data published 3 months after the reference quarter. There's a wide and diverse user base, including other NSIs, other Commission services such as DG GROW, academia, the media and tourism organisations.

In conclusion, the short-term rentals project successfully showcases the potential of privately held data for official statistics, acknowledging the pressing need for sustainable access to new data flows. The practical success of the inversed governance scheme employed for the project highlights the importance of trust in this evolving landscape. However, challenges like data volatility in oligopolistic markets, the complex integration of data that was originally produced without statistics in mind and the shift in statisticians' roles require careful consideration.

Simon Bley
Statistical Officer / EUROSTAT

KEY TAKEAWAYS AND CONCLUSIONS FROM THE DISCUSSIONS

New data sources offer several advantages such as timeliness and the ability to facilitate benchmarking across destinations with consistent definitions, especially when used to complement traditional sources. While usually coming at a price, these sources can be **more cost-effective** than traditional survey methods as survey costs rise, and response rates decline. However, challenges persist, including the difficulty of identifying tourists from usage patterns, restricted access to data due to data privacy (e.g., remote small population areas), and the limitation of certain data sources representing only a fraction of the entire market (e.g., transaction data versus all payments).

When implementing new data sources for tourism, **robust data governance and confidentiality measures** are essential. It is also vital to acknowledge the sensitivity of tourism data and the potential risks associated with its use. Impact assessments can play a pivotal role in understanding these risks and implementing necessary measures to safeguard confidentiality. This proactive approach ensures that data handling adheres to ethical standards and regulatory requirements from the outset.

The need to **ensure consistent definitions** is another key takeaway from this session. However, while on one hand establishing uniform definitions provides a foundation for standardised data, on the other, allowing for customisation at the destination level (e.g., in the case of Sweden and second homes), ensures adaptability to local nuances. Striking this balance is crucial for achieving a comprehensive and globally comparable understanding of tourism data.

Another insight is the recognition of the **inherent bias in all data**, including that associated with tourism. This includes both traditional data, like survey data, and new data sources, such as mobile network data. For example, in the case of surveys, falling response rates typically lead to a bias towards high-income households. It is important to understand and mitigate these biases. One solution is to use complementary data sources, enhancing data accuracy and contributing to more reliable insights.

Another challenge relates to the **uncertainties regarding the longevity of commercial data sources**. While concerns exist regarding potential changes in pricing models and availability of data, the consensus among the workshop presenters and participants seemed to be that this is unlikely. Rather, the prevailing view seemed to be that the functionality and utility of the data suggest that, for the time being, these commercial sources remain reliable and should continue to be utilised to inform tourism-related decisions.

SESSION 3: NAVIGATING THE COMPLEXITIES OF INTEGRATING DIVERSE TOURISM DATA SETS


Simon Bley


Rebecca Taves


Márta Fazekas


Sandra Carvao


Ana Moniche

Tourism is a complex sector where data is often fragmented and/or time-lagged. By combining different data sources, both from the realm of traditional tourism statistics and beyond, statisticians can generate new insights and overviews of the tourism and policy environment.

Session 3 explored three key topic areas:

The first topic, concerned how to **identify and combine appropriate data sets** in the complex landscape of tourism data, which involves a nuanced approach to identifying and combining the most appropriate datasets. Effective identification involves not only recognising relevant datasets but also understanding their interdependencies and potential synergies.

The second topic explored how to **ensure the timeliness and consistency of tourism data**, addressing the need for robust data management strategies and regular data updates. Ensuring a consistent and coherent storytelling process requires a meticulous approach to data reconciliation and temporal alignment.

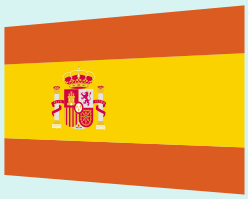
The third topic covered how to **integrate privately held data with official sources** for more predictive decision making. This process involves bridging the gap between proprietary datasets and publicly available information to derive richer insights.

The discussion was moderated by **Mr Simon Bley, Statistical officer at Eurostat** and the lead interventions were made by:

- **Ms. Rebecca Taves**, Section Chief Tourism Data Science, Centre for Special Business Projects (CSBP) - Statistics Canada, The Canadian Tourism Activity Tracker: Insight through the integration of diverse data sources.
- **Ms. Márta Fazekas** PhD, Program Director - Hungarian Tourism Agency, Data driven decision making in tourism – case study Hungary.
- **Ms. Sandra Carvao**, Director Market Intelligence & Competitiveness – UNWTO, From data to insights for action: building partnerships.
- **Ms. Ana Moniche**, Head of European Projects and International Networks - Turismo y Deporte de Andalucia, Complexity of combining data to regularly monitor tourism sustainability at the regional level.

GOOD PRACTICES, EXPERIENCES AND KNOWLEDGE SHARING

Spain - Spanish regions' endeavours for a common set of sustainability indicators: an update on integration complexities.



The project 'Support to Spain's tourism ecosystem: towards a more sustainable, resilient, and digital tourism' is a collaborative effort involving four Spanish regions: Andalusia, Catalonia, Navarra, and Valencia. Initiated in response to requests from national and regional Spanish authorities, the project aims to enhance the sustainability and resilience of the tourism sector as outlined in Spain's Recovery and Resilience Plan. Its primary objective is to establish a robust system of indicators for measuring and monitoring tourism sustainability.

This project aims to integrate diverse tourism data sets to create a unified and standardised set of sustainability indicators. It is essential to include not only conventional statistical data but also data from private providers for crucial aspects, including the following:

1. Water consumption: Quantifying water supply to different consumer segments (households, retailers, industries) is necessary for billing and policy implementation. This data, often held by private entities, must be accessible for effective sustainability policy implementation.

2. Energy consumption: Data on energy consumption is essential for billing and categorising different customer segments. Concerns regarding energy pricing and consumption extend beyond tourism, necessitating collaboration for data availability and comprehensive policy planning.

3. Waste generation and management: Effective waste management relies on understanding the quantity and types of waste generated in each locality. Collaboration with various stakeholders is vital to make this data accessible for policy implementation.

4. Education: The absence of a specific classification for post-compulsory education in tourism within the International Standard Classification of Education (ISCED) impedes comparisons with other sectors. Tailored education statistics are required to identify whether tourism workers have specialised education in tourism.

5. Quality jobs and education: Monitoring the skill levels of the tourism workforce is vital. Policy actions to address skill gaps require accurate data.

6. Accessibility, Certifications, and Standards: Destinations must integrate data from private stakeholders, to improve accessibility and adherence to certifications and standards, enhancing overall sustainability.

7. Greenhouse Gas Emissions (GHG): Regional estimates of national GHG figures are insufficient as actionable indicators for tourism policy. Collaboration is needed to align with European-level targets set by other entities.

Active participation from the European Statistical System is crucial in fostering a data-driven economy, with initiatives like the European Data Space playing a pivotal role. The expertise of official statistical bodies in collaborating with the private sector ensures data interoperability, confidentiality, and adherence to standards, contributing to the success of European Data Space initiatives.

Harmonising data collection and methodologies within a single Member State, exemplified by this TSI flagship initiative, is challenging yet essential for effective benchmarking. The advantage lies in the cohesive group of participating regions,

Andalusia, Catalonia, Navarra, and Valencia, all members of the European Network for Sustainable and Competitive Tourism (NECSTouR). They receive support from the Tourism of Tomorrow Lab, a dedicated department of the Network aiding these regions in methodology development and pilot exercises. The project is pivotal in addressing challenges relating to data integration in Spain's tourism sector. It provides valuable insights and networking opportunities with experts and other Member States, contributing to the development of broader EU tourism policies and statistical frameworks.

Ana Moniche
Head of European Projects and International Networks - Regional Government of Andalusia

Croatia - tourism development management: state of play & next steps



The Croatian government has initiated a comprehensive reform of tourism development management. This process began in 2020 and involves defining a strategy, establishing a system for data monitoring and analysis, and developing a legal framework to enable evidence-based policymaking to achieve strategic goals.

An essential aspect of the reform process is establishing a comprehensive and efficient framework for managing sustainable tourism development. We aim to establish a framework for evidence-based policymaking, implement a data collection system (to gather data at an appropriate spatial scale, in a timely and relevant manner), and monitor sustainability, considering all dimensions (economic, environmental, and social).

Our data collection system is based on the EU Tourism Sustainability Satellite Account (TSSA) methodology, the European tourism indicators system for sustainable destination management (ETIS), and the EU Tourism Dashboard. We are currently in the process of introducing the methodology and have commenced data collection. We anticipate having calculations at the national and regional levels by the end of 2024.

We have developed eVisitor, an IT tool for collecting visitor data. Service providers are obligated to enter a prescribed set of data, ensuring information for responsible bodies on the number and locations (by destination) of tourists. This data collection is GDPR compliant and serves as a basis for strategic decisions by relevant public bodies and businesses. The eVisitor tool collects data for hotels, camps, similar accommodations, and short-term rentals.

Additionally, we have established a data hub called TuRegister to collect data on Croatian hospitality service providers and TuSpot to make this data, along with a knowledge base and relevant tourism data, publicly available and free to use for all stakeholders, including the public and visitors.

The Tourism Act, in effect since 1 January 2024, defines the organisational framework for data collection and tools for monitoring and ensuring sustainability. We are also working on developing a Business Intelligence (BI) tool as a foundation for utilising big data. Its goal is to provide data from all relevant sources, facilitate data sharing, gather timely and relevant data, and ensure data accountability. The challenge in developing the BI tool lies in making it relevant and robust. Knowledge management is identified as the most significant challenge, underscoring the importance of workshops like this and sharing experiences.

Juric Nives
Chief Advisor to the Minister / Ministry of Tourism and Sport

KEY TAKEAWAYS AND CONCLUSIONS FROM THE DISCUSSIONS

Recognising the value of existing data sources emerges as a key takeaway in Session 3. The integration and combination of existing data sources can provide new insights and enhance decision making capabilities without the need for or cost of additional data collection. This underscores the significance of **strategic data integration practices** to extract new perspectives and nuances from the already available information.

Composite measures and indexes stand out as valuable tools for summarising complex data by offering a holistic view. However, it is necessary to make an in-depth analysis to understand the underlying data and to document and explain the methodological choices made during the construction of the composite. While composite measures provide a useful overview, a nuanced understanding of the raw data is essential to pinpoint both challenges and solutions within the tourism sector. The depth of comprehension gained from analysing underlying data can provide greater confidence in the data obtained, enabling a more informed and targeted decision-making processes.

The recognition of the **diverse purposes of different types of data** is another insight. Official statistics, while not as timely as some alternative sources of data, maintain relevance in long-term decision-making scenarios. In situations where fast and short-term decisions are important, especially in the face of emerging uncertainties or policy needs, complementing official statistics with timely indicators and data becomes essential. This adaptive approach acknowledges the dual significance of both historical and real-time data in shaping comprehensive decision strategies.

Creating a coherent and useful framework for evidence-based policy making in the tourism sector necessitates the **production and communication of accurate and credible data**. Significant challenges lie in ensuring relevance through thoughtful indicator selection and maintaining knowledge management. Ensuring purposeful and efficient communication through streamlined sets of directly related indicators, indicator dashboards, and compound and headline indicators is crucial.

This is an important, but complex, topic. The integration, harmonisation and standardisation of different data sources requires comprehensive efforts, while teams within statistical offices need to be adept at navigating the complexities of varied data sources. Efforts are needed to ensure the **comparability** and **interoperability** of data (within and between countries and regions), and to determine the **relevance of data** and indicators for end-users.

SESSION 4: USING DATA HUBS AND SPACES TO FILL THE GAPS IN TOURISM DATA


Dolores Ordonez


Misa Labarile


Katarina Wakonen


Pascal Helfer


Marco Minghini

The tourism sector is composed of many different branches and is dominated by SMEs that co-exist with a few large global players. Existing tourism and administrative data can make it difficult to identify tourism businesses and design targeted support. There is a role that data hubs and data spaces can play to help fill this information gap.

The presentations and subsequent discussions explored three key topics:

The first topic explored how to **leverage data spaces and hubs to bridge gaps in tourism information**. Data spaces serve as dynamic environments where diverse datasets coexist, offering a holistic view of the tourism landscape. Data hubs, on the other hand, act as centralised repositories that facilitate the collection, organisation, and sharing of relevant data. The synergy between these two concepts creates an ecosystem where gaps in tourism information can be effectively identified and filled. By leveraging the strengths of data spaces and data hubs, stakeholders gain access to a comprehensive repository of information that spans a wide cross-section of the dimensions of the tourism sector, enabling more informed decision-making processes.

The second topic concerned what **key elements should be captured in the data spaces to enhance decision making**. The effective use of data spaces for decision-making relies on capturing key elements that are integral to the tourism system. This involves curating a diverse array of datasets, including demographic information, traveller behaviour, economic indicators, and environmental factors. The key is not just in the quantity of data but in the quality and relevance of the information captured.

The third topic explored how to **link data hubs and spaces to create a comprehensive understanding of the tourism system**. Data hubs serve as repositories that accumulate and organise information, while data spaces provide a dynamic environment for the exploration and analysis of this data. Linking these components ensures a seamless flow of information, allowing stakeholders to move beyond isolated datasets and toward a more holistic comprehension of the tourism ecosystem.

The discussion was moderated by **Ms. Dolores Ordoñez**, Director of AnySolution, and the lead interventions were made by:

- **Dr. Misa Labarile**, Policy officer - DG GROW, The common European Data Space for Tourism: opportunities and challenges.
- **Ms. Katarina Wakonen,** Head of Business Intelligence - Visit Finland, The Visit Finland DataHub - how we and our partners use it for marketing and decision making.
- **Mr. Pascal Helfer,** Manager Data Hub NRW – Tourist Board North-Rhine Westphalia, Data Hub NRW – basis for an agile digital transformation (online).
- **Mr. Marco Minghini**, Scientific Project Officer - Joint Research Centre, Scientific evidence supporting the establishment of data spaces (online).

GOOD PRACTICES, EXPERIENCES AND KNOWLEDGE SHARING

Future actions of the common European tourism data space

Tourism needs high quality data to inform its offer and develop more sustainable services. We want to facilitate the sharing of information from diverse sources, allowing a large range of users to access the information they need.

As announced in the July, 2023, communication from the Commission, 'Towards a common European tourism data space: boosting data sharing and innovation across the tourism ecosystem', in the spring of 2024, the Commission will launch a test case aiming at sharing data from various sources, with the goal of showcasing the potential of a data space for the tourism sector.

A new project funded under the Digital Europe Programme will kick off in 2024, with the goal of building a solid and sustainable infrastructure for the data space over the next three years. However, governance will be as important as the technical solutions for interoperability. In this sense, discussions are ongoing to determine the feasibility of a European Digital Infrastructure Consortium (EDIC) as a multi-country project run by Member States, in partnership with civil society and the private sector, capable of governing and managing the future common European data space.

Misa Labarile
Policy officer / DG for Internal Market, Industry, Entrepreneurship and SMEs / Tourism & textiles

Scientific evidence supporting the establishment of data spaces

The 2020 European Strategy for Data has set the ambitious vision to create a pan-European single market for data through the establishment of common European data spaces in all strategic societal domains. The Joint Research Centre (JRC) is the science and knowledge service of the Commission, with a mission to back-up policies with independent scientific evidence. At the same time, the JRC is itself a major provider and consumer of data, with its own corporate data strategy, a dedicated big data infrastructure, a catalogue with over 3 000 datasets and hundreds of publications focused on data sharing. In particular, the JRC has acquired a longstanding experience in supporting cross-sectoral policies around data sharing from both the technical and organisational perspectives.

Stemming from this long-term commitment and research around relevant topics about data sharing and use, the JRC has recently developed a knowledge base on data spaces to distil technical and organisational lessons learned from its scientific work that can inform the scoping and implementation of common European data spaces. The knowledge base was presented in a recent JRC Science for Policy Report[1], where the JRC evidence was positioned as an instrument to translate policy conceptualisations and theoretical understandings of data spaces into a practical framework for implementation. Based on the overarching vision to create an EU single market for data, a set of principles for data spaces grounded on European values were

[1] Refencence: Farrell, E., Minghini, M., Kotsev, A., Soler Garrido, J., Tapsall, B., Micheli, M., Posada Sanchez, M., Signorelli, S., Tartaro, A., Bernal Cereceda, J., Vespe, M., Di Leo, M., Carballa Smichowski, B., Smith, R., Schade, S., Pogorzelska, K., Gabrielli, L. and De Marchi, D., European Data Spaces - Scientific Insights into Data Sharing and Utilisation at Scale, EUR 31499 EN, Publications Office of the European Union, Luxembourg, 2023, ISBN 978-92-76-53522-5, doi:10.2760/400188, JRC129900.

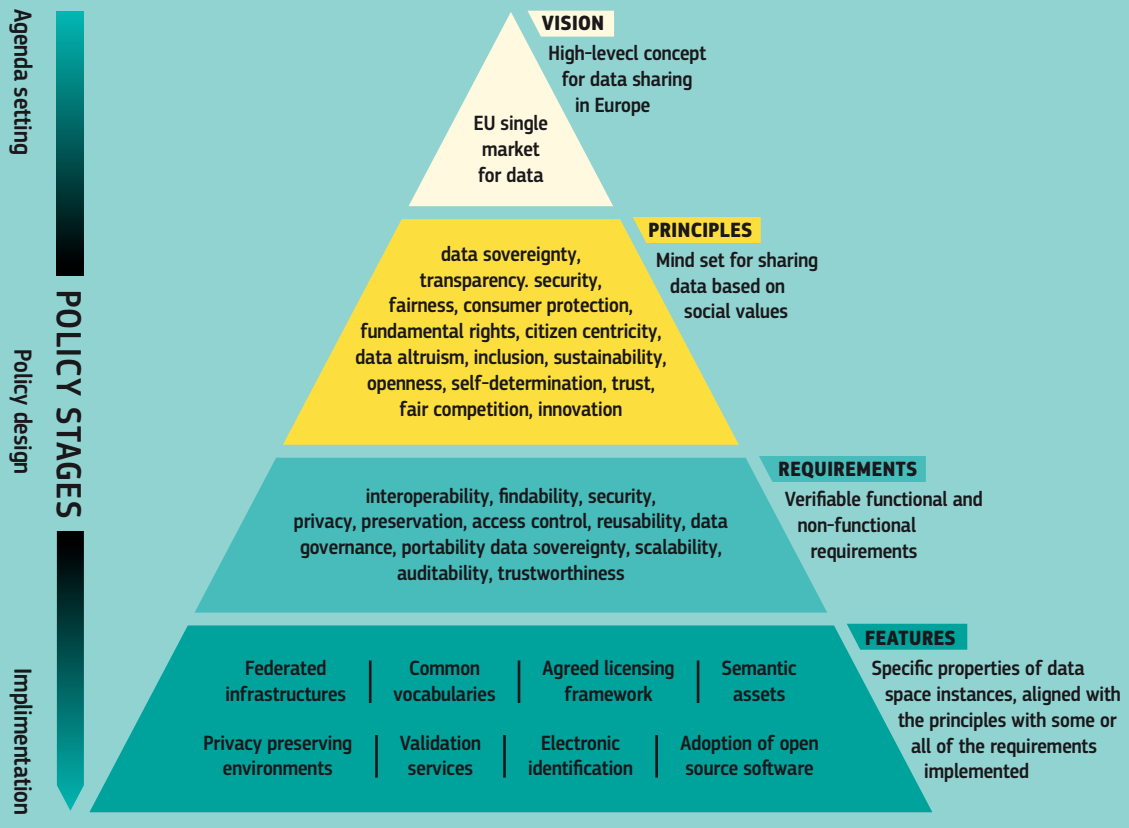
first identified and then translated into functional and non-functional requirements (based on the analysis of relevant policy documents) and finally into specific features of data spaces (see figure below). In addition, a set of data-sharing how-to guides were provided, which offer the JRC perspective on specific technical aspects (e.g. how to select the most appropriate standards for a given data space) and organisational aspects (e.g. how businesses can benefit from data sharing in a given data space). In each how-to guide, a different problem is presented and several solutions reflecting the JRC view are proposed, complemented by recommendations for data space actors (data providers, users, data intermediaries, standardisation bodies, etc.).

The JRC knowledge base on data spaces also comprises: i) a dashboard[2], which allows users to search and extract all JRC scientific publications on data spaces and data sharing for a set of keywords corresponding to each of the identified requirements; and ii) a dedicated wiki space[3], which offers a web-friendly access to all JRC resources on data spaces.

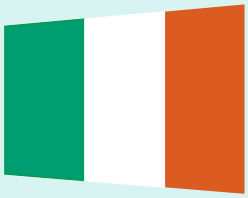
A key highlight in the investigation of the technical and governance aspects of common European data spaces is that, due to the specificities of each thematic domain, there is no single technical or organisational strategy that can be applied for the establishment of all common European data spaces. Therefore, adopting a community-based approach through co-creation and co-design, which considers the domain-specific context, is the only feasible way forward to ensure buy-in by a broad spectrum of stakeholders. Finally, scientific evidence should continue to play a central role in the conceptualisation and operationalisation of common European data spaces.

Marco Minghini
Scientific Project Officer / Joint Research Centre

[2] See https://jeodpp.jrc.ec.europa.eu/eu/dashboard/voila/render/DataSpaces/JRCResourcesData.ipynb
[3] See https://wikis.ec.europa.eu/display/jrcdataspaceswiki



Italy – Tourism Digital Hub: update and next steps



The speeches delivered in this session, along with the preceding ones, have played a significant role in advancing the use of data in tourism. Specifically, they have effectively highlighted the intricacies of data hubs and spaces, the opportunities they present, the role of data in decision-making, and the gaps that require attention. Some points of interest and considerations drawn from our experience in Italy include the following:

- Tourism is a crucial driver of economic growth not only for Italy but for the entire European Union.
- One of the main challenges is understanding the impact of tourism on destinations.
- The search for unique experiences and personalised services by tourists has placed pressure on industry businesses. However, more than 90% of these businesses consist of SMEs that struggle to keep pace with the digital revolution in the sector.

Through data research and analysis, the entire tourism industry can benefit economically and socially. In line with this, Italy, like other countries, is developing a digital hub to strengthen connections among industry stakeholders and tourists.



Italy participates in the European data space for tourism (DATES), a project aimed at creating a common tourism data space. This project is led by a public-private consortium, with Italy being the only public member represented by the Ministry of Tourism. DATES has identified the minimum technical and interoperability requirements necessary for effective data collection. The results of the project were reaffirmed during the high-level Event, attended by members of the DATES Consortium, held in Brussels on 25 and 26 September 2023. Additionally, Italy has coordinated the establishment of an interministerial committee for DATES, in collaboration with Spain. This committee consists of the tourism ministries of 15 EU Member States who have subscribed to a joint statement outlining the benefits of a common European tourism data space and the opportunities arising from data-driven strategies.

Italy is also engaged in other projects, such as the data-driven destinations hub project (D3Hub) and the TSI project, with a particular emphasis on enhancing tourism governance. This responsibility, constitutionally assigned to regions in Italy, poses a complex challenge to manage. Moreover, the project will assist Italy in strengthening statistical analysis and data management, along with enhancing the digitalisation of tourism operators.

In conclusion, Italy is committed to maintaining its role as a strategic partner in tourism data collection and analysis and is keen to continue developing data studies to inform decisions and enhance the tourism sector.

Paola Cianfriglia
Director Office I – General Secretariat / Ministry of Tourism

KEY TAKEAWAYS AND CONCLUSIONS FROM THE DISCUSSIONS

Establishing **rules for data collection and sharing** is necessary for effective data utilisation. While the ideal scenario is open access, practical considerations necessitate a nuanced approach for data hubs: to be as open as possible, but as closed and secure as necessary. Striking this balance is crucial for getting as much out of the data as possible while respecting privacy and confidentiality concerns.

Setting **clear boundaries for data hubs** is equally important, outlining both what they can provide and what falls beyond their scope. This ensures transparency and manages expectations regarding the capabilities and limitations of data hubs. A clear understanding of these boundaries is essential for fostering trust and promoting informed usage of the shared data.

Beyond technical infrastructure, the development of a **robust governance infrastructure** is also key to making data spaces work. Developing strategies, establishing standards, and implementing legal frameworks are foundational elements. Furthermore, when sharing data across borders or countries, jointly developing of data-opening initiatives, addressing underlying licensing laws, and harmonising standards all become imperative.

Recognising that **data can originate from diverse sources** (both traditional and non-traditional), underscores the importance of flexibility in data collection. Product data hubs emerge as valuable tools in filling gaps relating to tourism businesses, especially in cases where definitions might be ambiguous or challenging. Eurostat and traditional statistics play a key role in Data Hubs and Data Spaces. It is very important to be used as a benchmarking tool among destinations.

For data sharing, the questions regarding **costs, data needs, and necessary skills** are relevant. Addressing these questions may require hands-on involvement, such as running pilot programmes, to gather practical insights and refine the data-sharing strategy.

Interoperability for data spaces is also crucial because of the **transversality** of tourism with other sectors such as mobility, cultural heritage, agriculture, smart cities and communities, etc.

Ensuring that **data is accessible and comprehensible to the sector** is pivotal, especially for SMEs. While the data may not always be technical, users need to know what they are looking for and how to find it. Effectively communicating the contents of the data to end users, in a user-friendly manner, can help prevent them from being overwhelmed by the amount of available information. Data spaces must establish clear rules and easily implementable building blocks to enable the advantages of data sharing to affect the entire tourism value chain.

Ultimately, the main **challenge is not technological but strategic**. Developing a cohesive strategy involves organising the collaboration of various stakeholders within the system. This strategic approach ensures that technology serves as an enabler, aligning with overarching goals and fostering a collective effort towards optimised data utilisation within the tourism sector.

SESSION 5: ‘DIGITAL INFRASTRUCTURE’ BUILDING DATA SHARING PLATFORMS FROM THE FOUNDATION


Apolonija Oblak Flander


Karolis Žemaitis


Filipe Batista


Peter de Rama


Federico MILANI

Sharing tourism data is essential to enable better decision making. With complex data systems and multiple time series, managing the data and digital infrastructure is a challenge.

The presentations and subsequent discussions explored three key topics.

The first concerned the **necessary digital infrastructure to combine data sources and share data**, covering, among other things, data storage solutions, interoperability of systems, and scalability to handle the dynamic nature of tourism data, data security, encryption protocols, and relevant data protection regulations.

The second topic explored the **role of data architecture in organising data for effective and efficient sharing**. This includes discussing standardised data models, data management tools, version control, and metadata. Well-designed data architecture not only expedites the sharing process but also contributes to the overall quality and usability of the shared data.

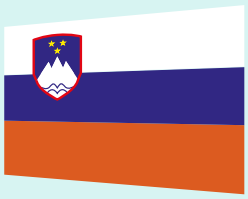
The third topic concerned **suitable platforms for data sharing**, given the constraints of tourism data. Selecting the right platforms for tourism data sharing requires a nuanced understanding of the specific constraints inherent in tourism data, and the ideal platform(s) should therefore provide a balance between accessibility, security, and scalability.

The discussion was moderated by **Ms. Apolonija Oblak Flander**, the Head of Division of the Statistical office of the Republic of Slovenia, and the lead interventions were made by:

- **Mr Karolis Žemaitis**, Vice-Minister of the Economy and Innovation of the Republic of Lithuania, Development and implementation of the TravelTech Sandbox to provide daily tourism data updates (online).
- **Mr. Filipe Batista**, Project leader - Joint Research Centre, The EU Tourism Dashboard: underlying data and infrastructure for a new policy monitoring tool.
- **Mr. Peter de Rama**, Executive Director, Data & Digital Innovation – Destination Canada, Technical Foundations to Build Data Products at Scale.
- **Mr Federico MILANI**, Deputy Head of the Data Policy and Innovation Unit - DG CNECT, Common European data spaces for sharing data in a trustworthy and secure manner (online).

GOOD PRACTICES, EXPERIENCES AND KNOWLEDGE SHARING

Slovenia – Intelligent data hubs



The Slovenian Tourist Board is spearheading an initiative to establish a Data Hub in response to rapid technological advancements and a growing focus on sustainability. This platform will aggregate tourism-related data from local, national, and international sources to facilitate data-driven decision-making. Central to the project is the goal of streamlining decision-making processes by providing comprehensive and reliable information in one accessible location. The prototype of the Data Hub is structured around social, environmental, and economic pillars, ensuring it meets the diverse needs of stakeholders in the tourism sector.

The primary focus of the National Information Hub is to accelerate Slovenia's green and digital transition within the tourism industry. By leveraging data, the Hub aims to identify opportunities and challenges in real time, enabling stakeholders to make informed decisions aligned with sustainable practices. Additionally, the Data Hub will focus on measuring tourism impacts and managing tourism flows, enhancing the efficiency and effectiveness of the Green Scheme of Slovenian tourism. To ensure widespread adoption, the Slovenian Tourist Board plans to focus on user education and empowerment, bridging the gap between information and action.

In ensuring the platform's success, speakers emphasised several key strategies. Firstly, they highlighted the importance of creating instructional videos to guide users on navigating the platform effectively. Additionally, they stressed the need to precisely identify the target audience and tailor the platform to meet their specific needs, ensuring user-friendliness and resonance. Moreover, accommodating users' varying levels of technological proficiency emerged as crucial, emphasising the importance of accessibility and inclusivity.

Furthermore, speakers emphasised the concept of co-creation with users, involving them in the development process to ensure the platform aligns with their preferences and needs. This collaborative approach fosters a sense of ownership and engagement among users, increasing the likelihood of sustained usage. Finally, speakers highlighted the necessity of placing responsibility on users, encouraging active participation and a shared commitment to the platform's success.

In summary, by implementing strategies such as instructional videos, user-centric design, accommodating user proficiency levels, co-creating with users, and instilling a sense of responsibility, the platform aims to maximise usability, inclusivity, and user engagement, ensuring its widespread adoption and success.

Ana Jemec Špik,
Head of Data Analytics Hub / Slovenian Tourist Board



Malta – Creation and Maintenance of an AI Tourism Platform



The Ministry for Tourism and Public Cleanliness in Malta, in collaboration with the Malta Tourism Authority, is currently engaged in the development of an artificial intelligence (AI) Tourism Platform, initiated in May 2023 and anticipated to conclude by April 2025.

This platform aims to utilise Artificial Intelligence techniques to process diverse data sources, enhancing understanding of tourism dynamics and facilitating informed decision-making. The project's specific objectives include consolidating pertinent data from multiple stakeholders into a unified central repository, prototyping machine learning methods for data analysis, offering visual dashboards for tourism stakeholders, and creating user-friendly open-data APIs. These APIs, among other functions, will enable the personalisation of experiences within both internal and third-party tourist applications.

Key data sources for this platform include those from the National Statistics Office, the Malta International Airport, and Heritage Malta. While traditional research methods have historically generated most data, efforts are underway to integrate additional 'big data' sources such as short-term rental accommodation data and explore new sources like mobile and credit card data.

Effective governance is crucial for ensuring the effectiveness and sustainability of the platform. This includes engaging stakeholders through frequent meetings to address technical and ethical considerations associated with data sharing. Also, the development of data sharing agreements promotes transparency, anonymity, and accountability. To address accountability and security concerns, the project implements a Technology Assurance Sandbox (TAS) supervised by a technical expert.

Data ownership is a complex issue, with different entities owning the data hosted on the platform. Efforts to clarify rights and responsibilities associated with data sharing are underway, alongside the establishment of secure infrastructure.

Post-project sustainability is a priority for the Malta Tourism Authority, with comprehensive training planned for its research team to ensure continued development and exploration of new data sources and insights post-project completion.

The development of the AI Tourism Platform is closely linked to the DG REFORM TSI project "Support to Malta's tourism ecosystem: towards a more sustainable, resilient, and digital tourism." This initiative aids Malta in updating and implementing the Tourism Satellite Account (TSA) and developing a set of indicators that facilitate evidence-based policymaking, addressing the current data gaps in measuring the economic contribution and the sustainable impact of tourism. Similar to the AI Tourism Platform, the successful implementation of this project requires the collaboration of various entities at an international and local levels, including the National Statistics Office, environmental organisations and education institutions. Eventually, the AI Tourism Platform will play an important role in measuring and visually communicating the relevant indicators identified in this project.

Tania Sultana
Head of Research / Malta Tourism Authority

The EU Tourism Dashboard – underlying data and infrastructure of a new policy support knowledge tool

Developed through the collaboration of DG GROW and the JRC, upon the Council of the European Union's request in 2021, the EU Tourism Dashboard emerged as a pivotal knowledge tool, aimed at charting the transition of tourist destinations towards greener, more digital and socio-economically balanced and resilient tourism activity.

The dashboard includes two fundamental components: first, an indicator framework encompassing over 30 indicators updated annually, which provides a comprehensive coverage of EU and European Free Trade Association (EFTA) tourist destinations, and second, a web portal conceived to visualise and disseminate the data. These indicators are organised into three policy pillars (green, digital, and socio-economic) and a set of descriptors characterising tourist destinations' offerings, demand and supply (see Figure 1).

The indicators were conceptualised and elaborated by the JRC and based on data sourced from official or authoritative sources, including Eurostat and the European Environment Agency, the European Organisation for the Safety of Air Navigation (Eurocontrol), the Foundation for Environmental Education, Ookla, TripAdvisor, the United Nations Educational, Scientific and Cultural Organisation (UNESCO), entities managing environmental labels and schemes for tourism accommodation. The selection and design of indicators are guided by the policy objectives outlined in the Transition Pathway for Tourism. This process is steered by an annual dialogue with key stakeholders from EU Member States and is further shaped by the prerequisites of data availability and quality.

FIGURE 1:
INDICATOR FRAMEWORK OF THE EU TOURISM DASHBOARD AS OF OCTOBER 2023.

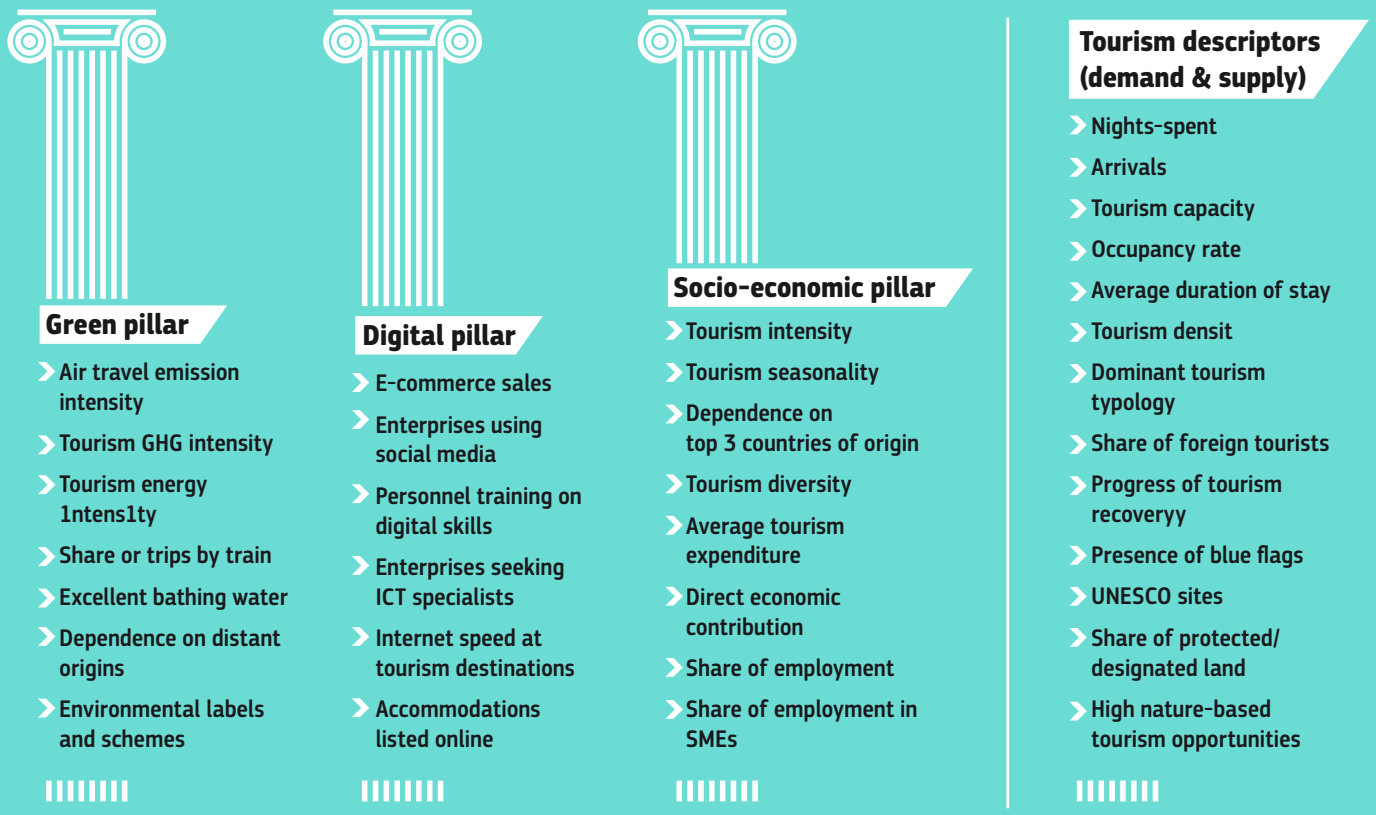
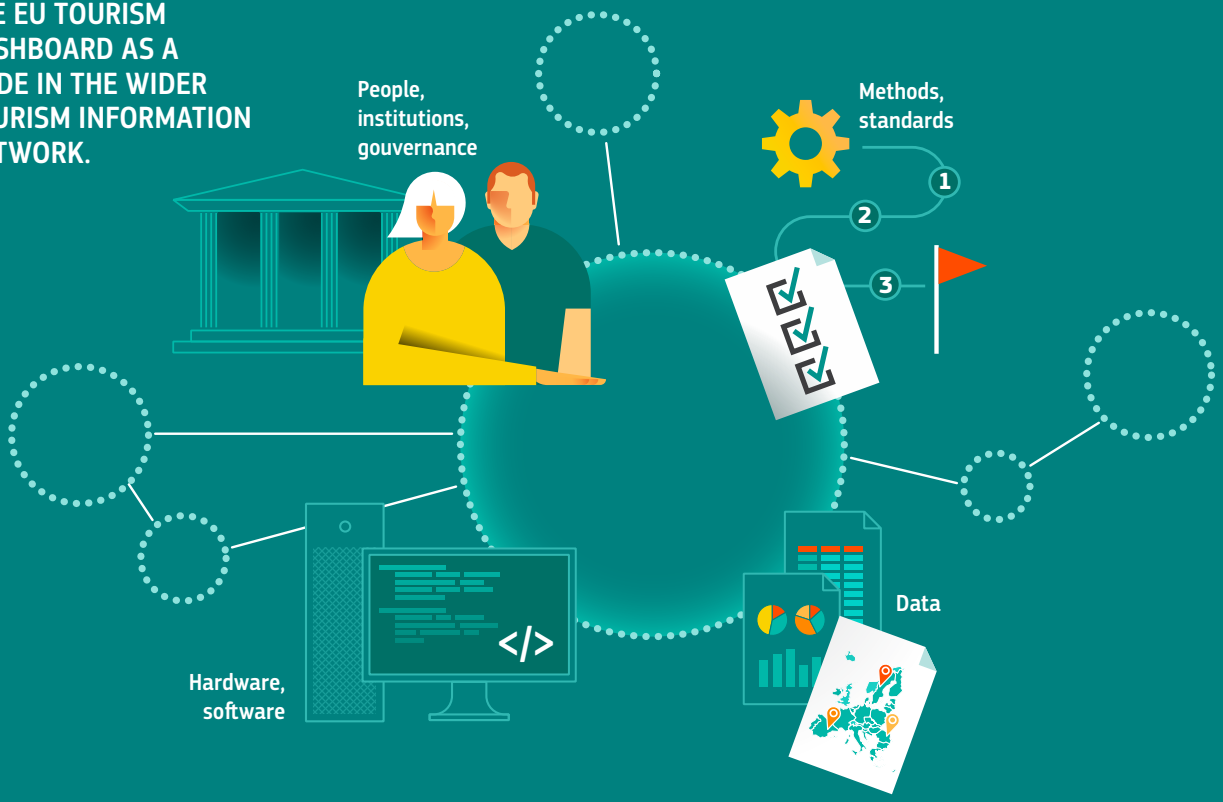


FIGURE 2:
THE EU TOURISM DASHBOARD AS A NODE IN THE WIDER TOURISM INFORMATION NETWORK.



Functioning as a node within a vast tourism information network, the dashboard not only collects but also reprocesses and redistributes data from various sources. For optimal operation, this interconnected knowledge system relies on four pillars: robust governance and the involvement of people and institutions, the necessary hardware and software, standardised methods and protocols, and, crucially, data (see Figure 2).

To ensure the EU Tourism Dashboard's interoperability and effectiveness as a knowledge tool, several practical elements have been considered. These include semantic interoperability through the anchoring to established definitions e.g. the Eurostat tourism glossary, the tourism ecosystem definition from DG GROW, NACE classifications, Tourism Satellite Accounts (TSAa), adherence to the NUTS nomenclature for geographical statistical units, comprehensive documentation including metadata on the EU Open Data Portal, and the pursuit of completeness and comparability of indicators across the countries covered.

From an IT perspective, the dashboard incorporates various data-sharing modes, such as visualisation tools, auto-generated printouts, and downloadable content (also via API), with an emphasis on popular and standardised data formats (e.g. csv, json-stat, pdf) and services (i.e. WMS). The development approach is modular, and the hosting solution is platform-independent, ensuring flexibility and broader accessibility.

The timeline of the EU Tourism Dashboard's development marks significant milestones, from its inception in May 2021 and the subsequent release of its proof-of-concept version in December 2021, to the launch of the first publicly accessible version in October 2022, and the most recent update in October 2023, which brought enhanced functionality and updated indicators. Today, the EU Tourism Dashboard stands as an innovative and dynamic tool, designed to provide policymakers and stakeholders with data and insights to support informed decisions and promote a sustainable, competitive, and resilient tourism sector in the European Union.

Filipe Batista
Project leader / Joint Research Centre

KEY TAKEAWAYS AND CONCLUSIONS FROM THE DISCUSSIONS

Session 5 reinforced the need for **adequate resources** to ensure the proper development of new sharing platforms. Sufficient investment is crucial to their effective establishment and fostering their evolution into robust tools for data dissemination and collaboration within the tourism sector.

For **data to be truly useful**, it must be **shared in multiple ways**, catering to diverse user needs and preferences. Facilitating online sharing, downloads, printouts, and API linkages offers flexibility, and allows users to access and utilise the data in modes that align with their preferences and requirements.

Creating **data products that provide value beyond raw data** is essential. Visualisations, heat maps, and other refined products enhance user understanding and engagement. Co-creation, involving users in the design of products and roadmaps, ensures that the end users are familiar with and find value in the products. However, this co-creation process is dynamic and necessitates ongoing evolution aligned with changing data landscapes and user needs.

Helping users **develop their skills to understand and use data and products** is a crucial aspect of promoting effective data utilisation. This involves educational initiatives and support mechanisms to empower users (from a variety of backgrounds) to derive meaningful insights from the available information.

As an example of a data sharing platform, the **EU Tourism Dashboard** operates as a node in a tourism information network, encompassing data, hardware and software, methods and standards, and people, institutions, and governance. This comprehensive approach ensures a holistic and interconnected system for efficient data collection, processing, and distribution.

Another example, the **TravelTech Sandbox in Lithuania**, shows how a country can address tourism sector challenges through innovative policies and strategies. These initiatives serve as catalysts for creative problem-solving and collaborative efforts within the tourism industry.

Some priorities to consider when building data products include data security, data protection, access to advanced analytics (e.g., AI), good data governance, and ease of integration. Addressing these priorities ensures the development of data products that meet high standards of functionality and security.

Three main challenges in building data products include:

1. integrating data quality processes in each step of the data lifecycle,
2. leveraging automation to generate efficiency, and
3. building data products collaboratively to reduce reliance on a central data team.

Overcoming these challenges requires **strategic planning** and a **commitment to continuous improvement** in data product development processes.

Some more technical considerations when building data products include the following:

- Semantical interoperability: Products should anchor to established definitions, such as Eurostat's tourism glossary, to ensure comparability between countries and/or regions (e.g. the official definition of a "night spent" and NACE classifications).
- Geographic nomenclature: Products should use established statistical units for geographical splits of data (e.g. the use of NUTS).
- Complete and available documentation: Products should provide sufficient policy and methodological background and descriptions of indicators. This documentation should be publicly available.
- Completeness and comparability across the chosen geography: The data should be available for the entire geography covered by the product (with as few gaps as possible) and comparable between geographies.
- Meaningful and useful indicators: Indicators in the product should be meaningful and useful for the users (e.g. when targeted at policymakers, the indicators should be relevant to inform policy).
- Multiple data-sharing modes: Multiple modes increase the relevance for users (e.g. appealing visualisations, download buttons, API access, etc.).
- Modular programming for development: Modular programming increases code legibility and enables the reuse of the code in other products (not necessarily tourism-related).

CONCLUSION

The COVID-19 pandemic and subsequent crises (Russia's war of aggression against Ukraine, energy, inflation) have highlighted the need for more accurate and timely data in the tourism sector. Traditional methods, such as surveys, face challenges like falling response rates and increased costs that can be mitigated by complementing them with new data sources. This recognition emphasises the importance of adopting a multi-faceted approach to data collection to enhance the accuracy and timeliness of information.

Important steps to ensure the usefulness of new data sources, and facilitate data sharing and integration, include: (i) complementing official statistics with new data sources to reduce time lags and provide greater granularity; (ii) involving industry to identify needs and develop consistent frameworks and methodologies; (iii) understanding the end-user needs to ensure that information is tailored to meet specific user requirements; and (iv) utilising relevant and standardised regional data. Each of these steps contributes to developing a more comprehensive understanding of the tourism landscape.

Improving forecasting capabilities emerges as a critical step to enable informed decision-making for governments, businesses, and communities, especially in adapting to changing tourist patterns. Similarly, to leverage the digital transformation of the ecosystem, encompassing technologies like AI and adopting open-data approaches, are pivotal to stay at the forefront of data utilisation in the tourism sector.

As Nathalie Berger (Director of Support to Member States Reforms, DG REFORM) highlighted in her closing remarks at the workshop, **"data is knowledge, and knowledge creates possibilities"**. These possibilities can be realised through joint approaches to creating data spaces; using data science and automation as a lever for tourism data; and using effective communication to facilitate cooperation between stakeholders.



Data is knowledge, and knowledge creates possibilities

ANNEX 1: TOURISM FLAGSHIP TSI PROJECTS

Support to Croatia's tourism ecosystem: towards a more sustainable, resilient and digital tourism

Tourism is an important economic driver in Croatia. However, its tourism activity is characterised by pronounced seasonality and regional concentration. This puts significant pressure on destinations and local communities during peak months. In addition, the sector has been hit hard by the COVID-19 pandemic, which exacerbated the underlying weakness in Croatia's tourism economy. Under Croatia's National Recovery and Resilience Plan, Croatia has committed to undertaking a comprehensive reform in order to move to a more sustainable and resilient tourism model, including by drawing up the Sustainable TSA of the Republic of Croatia and the entry into force of a new Tourism Act establishing a framework for monitoring and development of the tourism sector.

Support delivered includes:

- undertaking analysis of the current situation for the development of the Tourism Sustainability Satellite account;
- supporting and organising technical workshops on the development and implementation of indicators measuring and monitoring the sustainability of tourism;
- supporting a multi-country workshop on data sharing and integration;
- delivering a report, including guidance to support the Tourism Sustainability Satellite Account;
- undertaking comparative analysis of legislative frameworks to monitor and develop tourism;
- organising a technical workshop on developing an effective legal framework for tourism (Provide technical workshops and learning events, build capacity);
- delivering a report with guidance on the drafting of the new Tourism Law;
- Undertaking diagnostic of current Destination Management Organisations - DMOs (Desk research, analysis, assessment, consult with stakeholders);
- delivering a report, including guidance on strengthening DMOs.

The main results of this support project will be:

- upgraded tourism statistics with a focus on sustainability for better decision making;
- an improved enabling regulatory framework for a more sustainable, resilient and digital tourism ecosystem.

Support to the tourism ecosystem: towards a more sustainable, resilient and digital tourism in Greece

A key pillar of the Greek economy, tourism is characterised by pronounced seasonality and regional concentration, together with a heavy reliance on small and micro enterprises. This is putting pressure on destinations and weakening the resilience of the tourism ecosystem. Strengthening the evidence base on tourism would support more effective policy making and reforms to enhance the sustainability and resilience of tourism, especially as Greece, currently, lacks a consistent TSA. Additionally, while a new law establishing for the first time Destination Management and Marketing Organisations (DMMOs) and Model Tourism Destinations has been implemented, there is a need to understand and incorporate international good practices into

the drafting of a roadmap for their creation and operation. This should include a clear process for the *on-going* and *ex-post* evaluation of their operation. Greece's tourism sector is dominated by micro enterprises, which are extremely vulnerable to external and internal shocks. Support is required to build the growth and resilience of these businesses by addressing key issues such as resource shortages, skills progression, innovation and digitalisation and the building of effective networks is necessary.

Support delivered includes:

- analysing the current situation for implementing the TSA;
- a guidance note on how to compile the rest of the TSA and organising four capacity building/ technical working sessions to support its pilot implementation with the development of a proposal for an action plan;
- analysing the current situation and priorities for developing a system of indicators to measure and monitor the sustainability of tourism in Greece;
- organising two capacity building/technical workshops on compiling the indicators and developing a report with recommendations and guidance on compiling them;
- supporting a multi-country workshop on data sharing and integration;
- undertaking a diagnosis of current DMMOs and an analysis of criteria for Model Tourism Destinations;
- drafting a report, including guidance on strengthening DMMOs and criteria for Model Tourism Destinations for Integrated Management;
- undertaking an analysis of the current enabling environment for tourism SMEs, with a particular focus on micro-enterprises;
- preparing a report on how to enhance the enabling environment for tourism SMEs, with a particular focus on innovative solutions for micro tourism enterprises.

The main results of this support project will be:

- a narrowed TSA implementation gap;
- upgraded tourism statistics to improve and monitor sustainability and share data to support better decision-making;
- an improved enabling framework for a more sustainable, resilient and digital tourism ecosystem.

Support to Italy's tourism ecosystem: towards a more sustainable, resilient and digital tourism

In 2021, Italy created a dedicated Ministry of Tourism. The project will focus on reinforcing the Ministry's structure and capacity so that it can play a prominent role in consolidating a collaboration with public and private stakeholders' governance in a data-driven approach. This also requires that robust and timely data is available, regularly updated, and periodically analysed according to defined methodologies to support decision-making. Italy's National Institute of Statistics, ISTAT, prepares a TSA on a regular basis. However, a comprehensive and continuously updated data system is also needed to better understand the relationship between tourism demand and evaluate tourism's economic competitiveness in a rapidly changing environment. In this context, the Ministry has recently set up an internal statistical office whose governance, capacities and staff should be enhanced to ensure the Ministry can collect, manage and analyse tourism data and information. Additionally, reinforcing the digitalisation of the tourism ecosystem in Italy and creating value from the underlying generated data will help to enhance the competitiveness, sustainability and resilience of tourism businesses.

Support delivered includes:

- analysing the tourism data ecosystem with a view to enhance data access, management, and analysis processes;
- organising one capacity building workshop to upgrade the capacity to access, manage and analyse tourism statistics and preparing an action plan as a follow-up;
- analysing the current institutional framework and tourism governance situation;
- preparing a report, with guidance on designing and implementing an enhanced governance model for tourism;

- supporting recommendations to promote the digitalisation of the tourism ecosystem, with a particular focus on tourism SMEs;
- organising one technical workshop to discuss key challenges and opportunities to increase the uptake of digital technologies in the context of the Italian tourism sector and how to promote a greater digitalisation of the tourism ecosystem, with a particular focus on tourism SMEs;
- providing four technical workshops to boost administrative and stakeholder engagement capacity for effective and data-driven decision-making.

The main results of this support project will be:

- upgraded tourism statistics and a narrowed TSA implementation gap;
- a strengthened tourism governance model, and improved enabling framework for promoting a more sustainable, resilient and digital tourism ecosystem.

Support to Malta's tourism ecosystem: towards a more sustainable, resilient and digital tourism

Malta needs a stronger evidence base for tourism to support reforms and enhance the sustainability and resilience of tourism. Previous tourism strategies in Malta have encouraged sustainability but have not set clear strategic goals and timeframes for the sustainable development of the tourism sector. The lack of tools or indicator systems to assess the sustainability of tourism also means that decision-making processes and tourism planning are not sufficiently grounded in evidence to guide the incorporation of sustainability and resilience. Inadequate availability and the use of statistics and evidence to understand tourism developments, impact and economic contribution is currently a significant limiting factor to the development of evidence-based policy. In addition, Malta has a number of data gaps that need to be addressed to produce reliable results.

Support delivered includes:

- analysing the current situation for the implementation of the TSA;
- presenting a guidance note on how to compile selected tables of the TSA;
- prganising capacity building and technical workshops to support the pilot implementation of selected TSA tables and evaluating the pilot implementation;
- developing a proposal for a draft action plan to strengthen tourism statistics and support the implementation of the TSA;
- analysing the current situation and priorities for developing a system of indicators to measure and monitor the sustainability of tourism in Malta;
- developing a set of the indicators and preparing a toolkit to operationalise it;
- supporting a multi-country workshop on data sharing and integration;
- supporting learning from relevant experiences in peer member states with reference to tourism hubs.

The main results of this support project will be:

- a narrowed implementation gap of the TSA statistical framework;
- upgraded tourism statistics to include sustainability and put in place effective sustainable tourism management and monitoring tools at the destination level.

Support to Portugal's tourism ecosystem: towards a more sustainable, resilient and digital tourism

Sustainability is a central element of Portugal's tourism development strategy but measuring and monitoring the sustainability of tourism is still a major challenge. While Portugal has developed a set of sustainability indicators, experience in using them at the local level to compare Portuguese destinations with relevant destinations abroad is not available. There is also a need to incorporate sustainability as a fundamental element of the strategy of companies and destinations. To achieve this, it is essential to build a robust monitoring framework for measuring sustainability while at the same time providing the sector with a framework of indicators for monitoring recovery and predicting the future performance of tourism in the country. Portugal has made significant progress in expanding the data sources available for decision-making in tourism. However, further progress is possible through the use of data science methodologies to stabilise demand forecasting models, monitor consumer behaviour and preferences in a timely manner, develop competitive intelligence tools and provide insights to manage destinations sustainably by anticipating trends and preventing overcrowding.

Support delivered includes:

- analysing indicators for measuring and monitoring the sustainability of tourism at the local level;
- identifying a draft set of indicators to measure the sustainability of tourism at the local level and organising one technical workshop to refine it and support a pilot implementation;
- supporting a multi-country workshop on data sharing and integration;
- analysing international tourism demand-forecasting models;
- developing an initial feasibility assessment for an international tourism demand forecasting model for Portugal and organising one technical workshop to discuss it;
- analysing the measuring and monitoring of the competitiveness and attractiveness of tourism destinations;
- identifying a draft set of indicators to measure the competitiveness and attractiveness of tourism destinations in Portugal and organising one technical workshop to scope the feasibility of developing and implementing it.

The main results of this support project will be:

- upgraded tourism statistics with a focus on sustainability;
- an improved enabling framework for forward-looking decision making and sharing of up-to-date tourism data for citizens, entrepreneurs, and policy makers.

Support to Slovenia's tourism ecosystem: towards a more sustainable, resilient and digital tourism

Slovenia prepares its TSA every 3 years, following the same frequency of basic tourism surveys. However, the COVID-19 pandemic has highlighted limitations in the reliability of the estimates from tourism surveys in the event of shocks and unpredictable events and the need for more real-time input data. Exploration of new data sources to supplement, or eventually substitute survey data is required. There is also a need to ensure that tourism recovers sustainably and that the sustainability of the sector is monitored over time, which requires the development of a system of relevant sustainability indicators. Finally, more information is required to understand which activities can and should be digitalised by the SMEs of the tourism sector and how to best monitor digitalisation.

Support delivered includes:

- reviewing alternative data sources that could be used for the compilation of the TSA;
- supporting and organising a technical workshop on the use of alternative data sources to prepare tourism statistics;
- analysing the implementation of indicators for measuring and monitoring the sustainability of tourism;
- organising a technical workshop to support addressing key challenges and gaps related to the compilation of a core set of sustainability indicators;
- supporting a multi-country workshop on data sharing and integration;
- guidance on the development of a tool to publish tourism data in (near) real time;
- reviewing the current situation for technology use and identify possible indicators for digitalisation in tourism;
- a short paper focused on measuring digitalisation in tourism.

The main results of this support project will be:

- upgraded tourism statistics to include sustainability and digitalisation;
- available up-to-date tourism data for citizens, entrepreneurs and policy makers.

Support to Spain's tourism ecosystem: towards a more sustainable, resilient, and digital tourism

Monitoring tourism policies and measuring the sustainability of tourism are major challenges for Spanish regions, including Andalusia, Catalonia, Navarra, and Valencia. Under its National Recovery and Resilience Plan, Spain has set out a comprehensive reform agenda and roadmap to modernise and build a more sustainable, resilient and competitive tourism sector. This requires improved tourism information systems at the regional level, as available tourism data often lacks the granularity to provide comprehensive insights for decision-making at the regional destination level. Existing data gaps and time lags highlight the need for further investments in statistical capacity, while destinations face technical capacity, and budget difficulties in accessing and using new data sources. Moreover, previous experiences in developing a system of sustainable tourism indicators to support decision making have not had the desired impact, including due to the lack of a well-established methodology supported by the official statistical system.

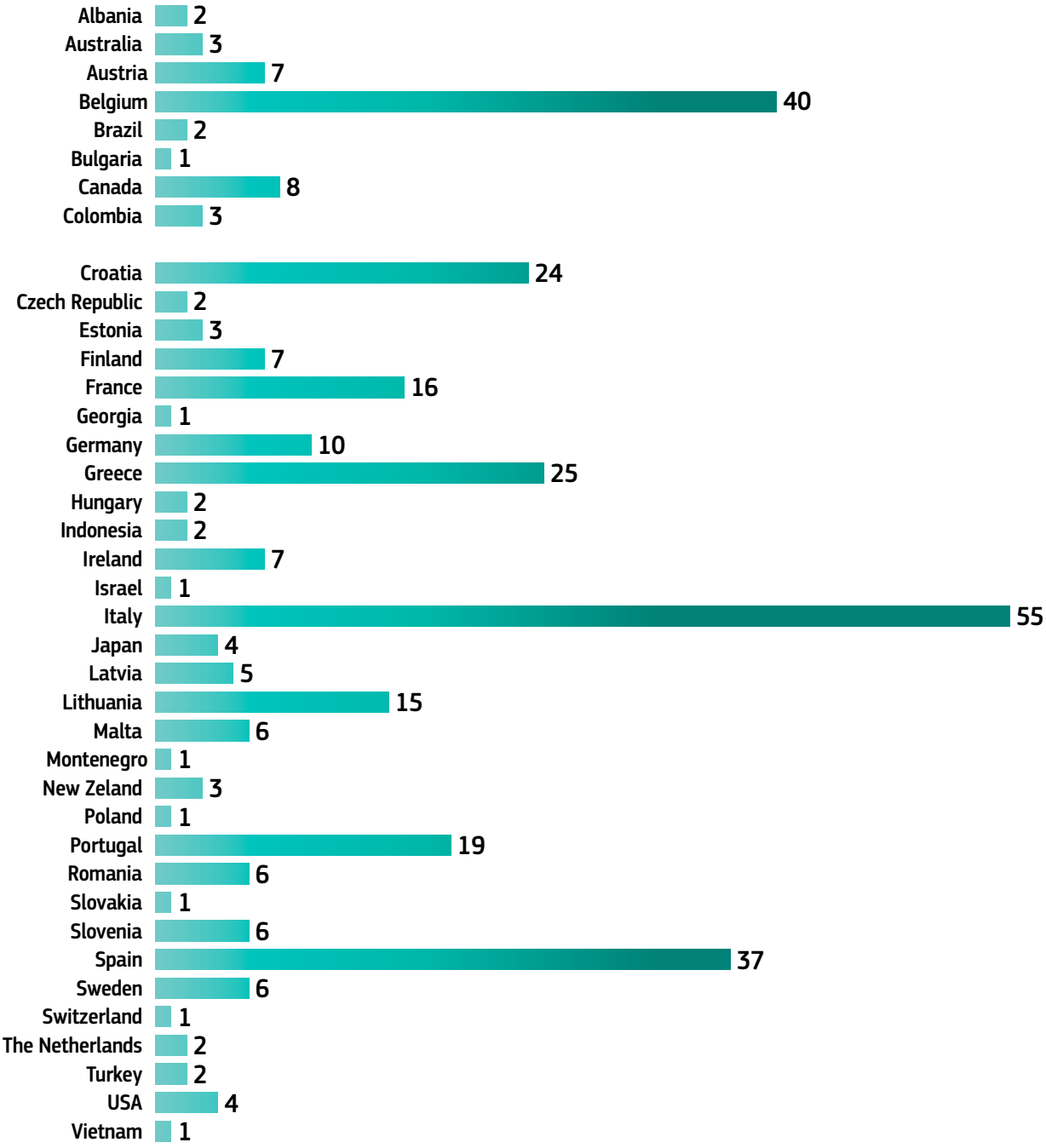
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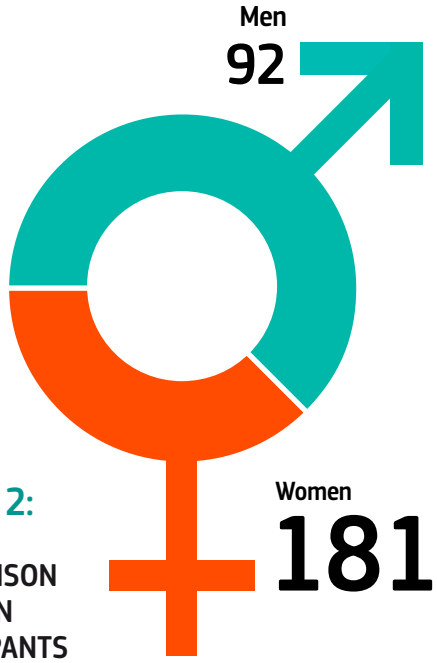
- analysing the current situation and priorities for developing a system of indicators to measure and monitor the sustainability of tourism;
- identifying a draft set of indicators to measure the sustainability of tourism in beneficiary regions and organising three technical workshops to refine it;
- developing a compilation guide to implement the sustainability indicators;
- supporting and evaluating the pilot testing of the indicators in selected destinations;
- supporting a multi-country workshop on data sharing and integration.

The main results of this support project will be upgraded regional tourism statistics to include sustainability.

ANNEX 2:
WORKSHOP PARTICIPATION AND EVALUATION STATISTICS

GRAPH 1:
NUMBER OF PARTICIPANTS PER COUNTRIES





GRAPH 2:
GENDER COMPARISON BETWEEN PARTICIPANTS

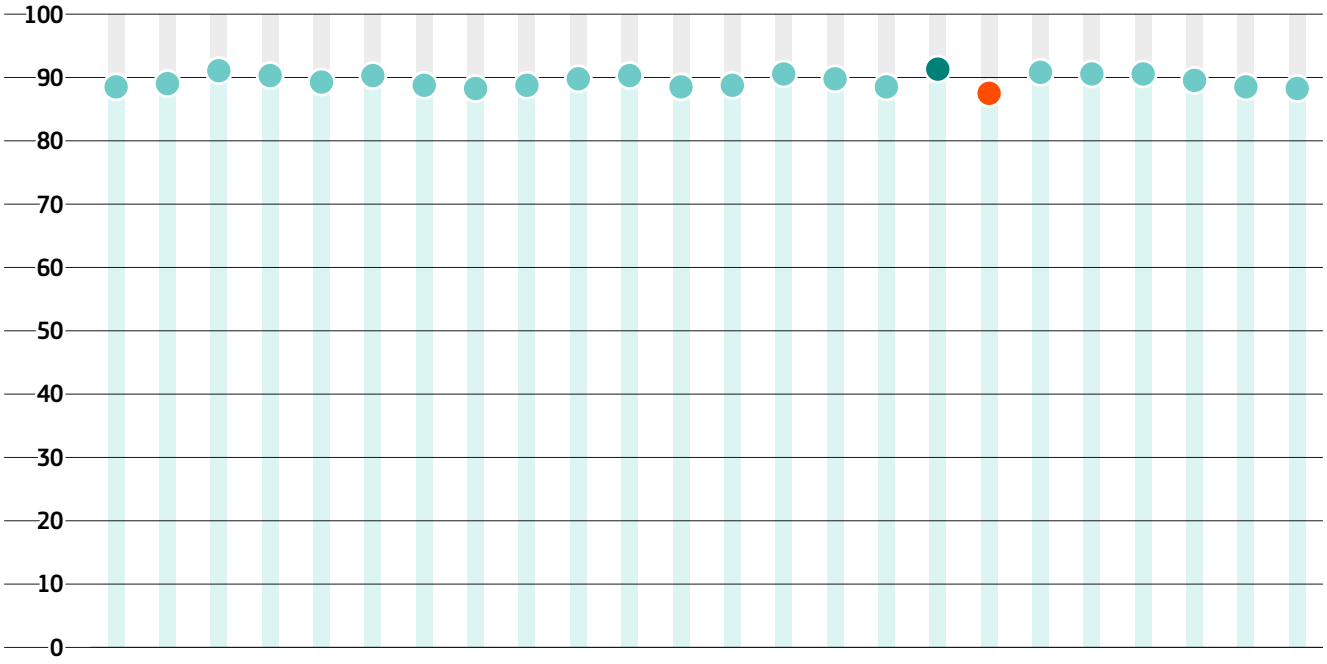
GRAPH 3:
NUMBER OF ONLINE AND IN PERSON PARTICIPANTS



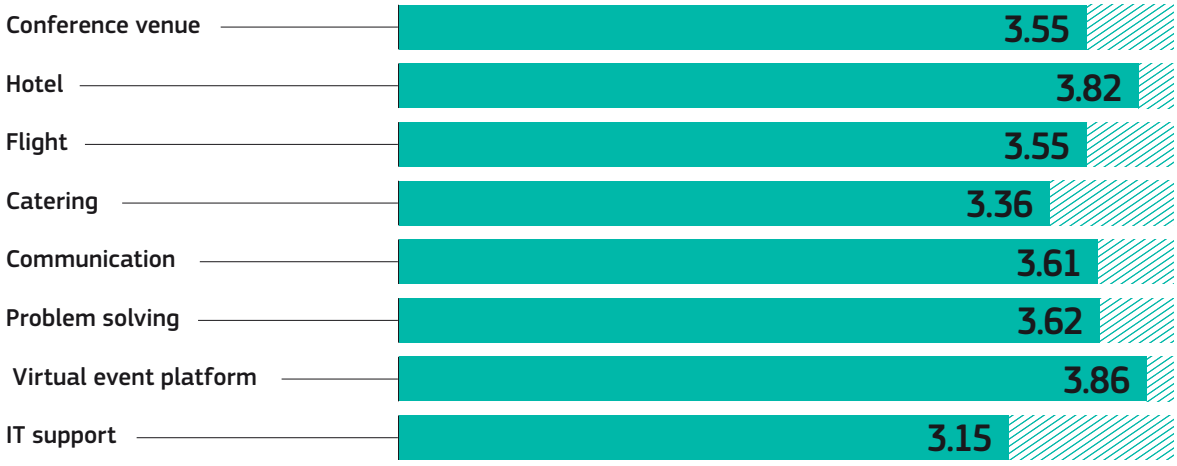
GRAPH 4:
EU / NON-EU COUNTRIES COMPARISON



GRAPH 5:
RATINGS OF THE EXPERTS (0-100)



GRAPH 6:
RATINGS OF THE LOGISTICS BY PARTICIPANTS (SCALE: 0-4)



GRAPH 7:
RATINGS OF THE EVENT ORGANISATION (SCALE: 0-4)



GRAPH 7:
RATINGS OF THE LOGISTICS BY PARTICIPANTS (SCALE: 0-4)



ANNEX 3: WORKSHOP AGENDA

WORKSHOP ON TOURISM DATA SHARING, GOVERNANCE AND INTEGRATION

Date: 27–28 September 2023
Venue: NH Brussels Berlaymont (hybrid)

AGENDA

Tourism is a complex, service-based sector built on the movement of people. The rapid succession of crises in recent years has highlighted the importance of having timely, granular and comparable tourism data available to inform policy and business decisions, and support the shift to a more sustainable, resilient and digital tourism. However, while significant advances have been made to improve tourism data, the timeliness of, and ability to share, available data to meet the needs of decision makers remains a challenge.

This workshop will support the exchange of knowledge and good practices on data sharing and integration to enhance evidence-based decision making for policy and businesses. It will consider opportunities to measure tourism with new data sources, integrate tourism data sets to strengthen understanding of the sector, and key data sharing issues including data governance, digital infrastructure and meeting the needs of the end user.

Registration

Please indicate your interest to participate here. After registering, you will receive the link to follow the live sessions.

Language

The workshop will be held in English.

The workshop will be recorded for the purposes of the organiser and personal data will be processed in accordance with the privacy statement of the TAIEX Instrument (see Privacy Statement) and in compliance with the Regulation (EU) 2018/1725.

Workshop Moderator

Ms. Apolonija Oblak Flander, Head of Division - Statistical office of the Republic of Slovenia

DAY 1

08:30 – 09:00 Registration

09:00 – 09:05 Workshop opening

Ms. Apolonija Oblak Flander, Head of Division - Statistical office of the Republic of Slovenia

09:05 – 09:10 Opening Remarks

Ms. Elisa Ferreira, European Commissioner for Cohesion and Reforms – video message

09:10 –09:40 Introduction and welcome

Moderator: **Mr. Kaspar Richter**, Head of Unit Sustainable Growth and Business Environment, DG REFORM

- **Mr. Mario Nava**, Director-General - DG REFORM
- **Ms. Valentina Superti**, Director Ecosystems II: Tourism & proximity - DG GROW
- **Mr. Nadim Ahmad**, Deputy Director Centre for Entrepreneurship, SMEs, Regions and Cities - OECD

09:40 - 10:00 Networking Coffee

10:00 – 12:00 Session 1: What's the story – sharing data to improve tourism decision making

The demand for tourism data is at an all-time high. Providing access to tourism data has become a key priority for many countries and the sector to enable better decision making for government, business and the local community. As resource and capacity constraints continue to play a role, there is a need to consider what data is meaningful to portray the tourism context and enable decision making.

Moderator: Ms. Jane Stacey, Head of Tourism - OECD

Lead interventions:

- **Mr. Sérgio Guerreiro**, Senior Director - Turismo de Portugal, Creating Tourism Data Hubs. Lessons from the Portuguese Experience
- **Ms. Marieke Politiek**, Manager Intell & Insights - NBTC Netherlands Board of Tourism & Conventions, Building alliances for more data-driven policy making

Mr. Oliver Csendes, Chief Digital and Innovation Officer - Austrian National Tourist Office, From Data to Destiny: Navigating Europe's Tourism Data Landscape with the Data Space Framework (online)

Participants will be invited to discuss and share experiences.

Topics for discussion:

- What is driving the need to share data, and what are the different needs of different decisions makers (government, businesses, community)?
- What data does the end user need, and how should it be displayed to tell the story for decision making?

- What is the priority data to share given resource and capacity constraints – should we share all data, or just some data?

12:00 – 13:00 **Group photo at the hotel lobby & Networking Lunch**

13:00 – 14:45 **Session 2: Ensuring good data governance with increased timeliness and granularity**

Evidence-based decision making relies on the availability of timely and granular data. To fill existing gaps, new data sources and methodologies are being explored to complement traditional methods, but this comes with new complexities. Ensuring good data governance is essential to the integration of the new data sources for tourism measurement.

Moderator: Ms. Eleonora Lorenzini, Politecnico di Milano, Director of the Travel Innovation and the Digital Innovation in Heritage & Culture Observatories

Lead interventions:

- **Ms. Amanda Stenström**, Project Manager Nordic RTSA - Swedish Agency for Economic and Regional Growth, A new model in measuring Regional Tourism and Tourism's Environmental Impact in the Nordics
- **Mr. Rod Battye**, Manager Data Innovation and Partnerships - Tourism Research Australia, Integrating mobile phone and other new data sources to increase the timeliness and granularity of the Domestic Visitor Survey, (online)
- **M. Simon Bley**, Statistical Officer - EUROSTAT, Closing data gaps with privately held data – The Eurostat Short-term rentals project

Participants will be invited to discuss and share experiences.

Topics for discussion:

- How to meet the demand for sharing of granular data in a timely way while addressing the issues this raises issues for data governance and privacy, particularly related to:
- aggregated personal data in real time
- government data
- linking new data approaches with existing tourism data
- What are the most promising data sources that can be used to provide more timely and granular data, but in a secure and robust way?

14:45 – 15:15 **Networking Coffee**

15:15 – 16:55 **Session 3: Navigating the complexities of integrating diverse tourism data sets**

Tourism is a complex sector, where data is often fragmented or time lagged. How can different tourism data sources be integrated or combined to provide an overview of the tourism and policy environment.

Moderator: Mr. Simon Bley, Statistical Officer - EUROSTAT

Lead interventions:

- **Ms. Rebecca Taves**, Section Chief Tourism Data Science, Centre for Special Business Projects (CSBP) - Statistics Canada, The Canadian Tourism Activity Tracker: Insight through the integration of diverse data sources (online)
- **Ms. Márta Fazekas** PhD, Program Director - Hungarian Tourism Agency, Data driven decision making in tourism – case study Hungary

- **Ms. Sandra Carvao**, Director Market Intelligence & Competitiveness - From data to insights for action: building partnerships (online)
- **Ms. Ana Moniche,** Head of European Projects and International Networks - Turismo y Deporte de Andalucia, Complexity of combining data to regularly monitor tourism sustainability at the regional level

Participants will be invited to discuss and share experiences.

Topics for discussion:

- How to identify and combine the appropriate data sets, considering the complexities of tourism data?
- How to keep tourism data up to date and deliver a consistent story, when faced with delayed and data covering different time periods?
- How to integrate private data with official sources for more predictive decision making?

16:55 – 17:00 **Day 1 Closing remarks**

Ms. Apolonija Oblak Flander, Head of Division - Statistical office of the Republic of Slovenia

19.30 **Networking Dinner NH Brussels Berlaymont**

Day 2

9:00 – 9:10 **Welcome**

9:10 – 10:40 **Session 4: Using data hubs and spaces to fill the gaps in tourism data**

The tourism sector is composed of many different branches and dominated by SMEs which co-exist with a few large global players. Existing tourism and administrative data can make it difficult to identify tourism businesses and design targeted support. There is a role that data hubs and data spaces can play to help fill this information gap.

Moderator: Dolores Ordonez, Director - AnySolution

Lead interventions

- **Dr. Misa Labarile**, Policy officer - DG GROW, The common European Data Space for Tourism: opportunities and challenges
- **Ms. Katarina Wakonen,** Head of Business Intelligence - Visit Finland, The Visit Finland DataHub - how we and our partners use it for marketing and decision making
- **Mr. Pascal Helfer,** Manager Data Hub NRW – Tourist Board North-Rhine Westphalia, Data Hub NRW – basis for an agile digital transformation (online)
- **Mr. Marco Minghini**, 'Scientific Project Officer - Joint Research Centre, Scientific evidence supporting the establishment of data spaces (online)

Participants will be invited to discuss and share experiences.

Topics for discussion:

- How can information in data spaces and data hubs can help fill the gaps in tourism information?
- What should be captured in these data spaces, and how can it be used for decision making?
- How to link data hubs and data spaces to create a complete understanding of the tourism system?

10:40 - 11:00 **Networking Coffee**

11:00 – 12:30 **Session 5: 'Digital infrastructure' – building data sharing platforms from the foundation**

Sharing tourism data is essential to enable better decision making. With complex data systems and multiple time series, it can be difficult to understand how to best organise the data the digital infrastructure required and how to make best us of the resources that are available.

Moderator: Ms. Apolonija Oblak Flander, Head of Division - Statistical office of the Republic of Slovenia

Lead interventions:

- **Mr Karolis Žemaitis**, Vice-Minister of the Economy and Innovation of the Republic of Lithuania, Development and implementation of the TravelTech Sandbox to provide daily tourism data updates (online)
- **Mr. Filipe Batista**, Project leader - Joint Research Centre, The EU Tourism Dashboard: underlying data and infrastructure for a new policy monitoring tool
- **Mr. Peter de Rama**, Executive Director, Data & Digital Innovation – Destination Canada, Technical Foundations to Build Data Products at Scale
- **Mr Federico MILANI**, Deputy Head of the Data Policy and Innovation Unit - DG CNECT, Common European data spaces for sharing data in a trustworthy and secure manner (online)

Participants will be invited to discuss and share experiences.

Topics for discussion:

- What is the required digital infrastructure to combine data sources and share data?
- How do you organise data to share it in an effective and efficient way?
- What suitable platforms for data sharing considering the constraints of tourism data?

12:30 – 12:45 **Closing remarks and next steps**

Moderator: Ms. Apolonija Oblak Flander, Head of Division - Statistical office of the Republic of Slovenia

- **Ms. Jane Stacey,** Head of Tourism – OECD (online)
- **Ms. Nathalie Berger**, Director for Support to Member States' Reforms - DG REFORM

12:45 – 13.45 **Light lunch**

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