Federal Ministry
for Digital
and Transport

mFUND
Funding Future Mobility

Welcome to the workshop series

DRIVEN by DATA

The mFUND Workshops Series about Mobility in Europe

Workshop No. 14

Intelligent Paths, Smart Destinations: Creating Smart and Sustainable Tourism in Europe

Federal Ministry for Digital and Transport
Division DP 20
27.03.2025

www.linkedin.com/groups/12778505

Empowering European tourism:

Integrating data-driven strategies with smart technology and sustainability

Estrella Díaz

Professor of Marketing,
University of Castilla-La Mancha, Spain

A bit more about myself...

Background across EU and the US

Living abroad

Bournemouth University

Università degli Studi Firenze

Università degli Studi di Torino

San Diego State University 1897

University of Richmond

UCLM Universidad de Castilla-La Mancha

H2020

European Travel Commission

Marie Curie Actions

Principal Investigator of SMATOURISM project

Passionate about traveling and tourism

+27 countries

+220 cities

20 years as University Professor of Marketing

(Full Professor)

Expert in **smart tourism**

3 years as Distinguished Researcher

Full member of the **Young Academy of Spain, Global Young Academy, the Academy of Social Sciences and Humanities** of Castilla-La Mancha, Spain

150+influencers in tourism in Spain

one of the **250 pioneering experts in market research** and business intelligence in the world (ESOMAR)

+16 prizes, awards and work/research recognition

+40 publications in top journals

1 Book

11 Book chapters

+70 international conferences

15 projects

6 contract agreements with companies

190 weeks of **research stays**

Collaborations with r**esearchers from 8 countries**

How do we define *smart tourism*?

Smart tourism is.....

Smart technologies

Smart tourism leverages the latest technologies to enhance experience and sustainability.

Human and social factors

Smart tourism development involves the local community to improve their quality of life.

Sustainability

Smart tourism drives sustainability and regenerative tourism.

Smart Travel Trends

Sustainable tourism
Responsible travel
Local culture
Memorable experience
Climate change
Environmental protection
www.yonature.com
Economic benefits
Ecotourism
Economy
Social development
Traditions
Green tourism
Ecofriendly gestures
Responsible travel

Definition and objectives of sustainable tourism

How do we apply sustainability to tourism?

Sustainable tourism should facilitate **better quality of life for residents and generate high satisfaction for tourists**.

Increase **awareness** of sustainability issues and encourage sustainable tourism practices.

Sustainability

Where can sustainable tourism evolve to?

Regenerative tourism

Local products

“Cozido das Furnas”

Azores

Success stories

Sustainability Success Stories

Environmental sustainability

HOTEL
TALASO ATLÁNTICO

Recycling and water harvesting systems
Solar panels for water heating
Local and seasonal products

Sustainable architecture with bioclimatic design
Ecological materials
Use of geothermal energy
Ecological vegetable garden

Finca de los Arandinos
Bodega | Hotel

MAS SALAGROS
ecoresort & AIRE ancient baths
Vallromanes - Barcelona

First certified green resort in the Iberian Peninsula
Uses 100% renewable energy
Zero waste program
Promotes biodiversity conservation in a nature reserve

Avoiding food waste

THE RITZ-CARLTON

Marriott HOTELS · RESORTS · SUITES

MGM RESORTS INTERNATIONAL™

H 10 HOTELS

SIX SENSES

Gardens and composting
Seasonal menus

Composting program
Collaboration with local organizations

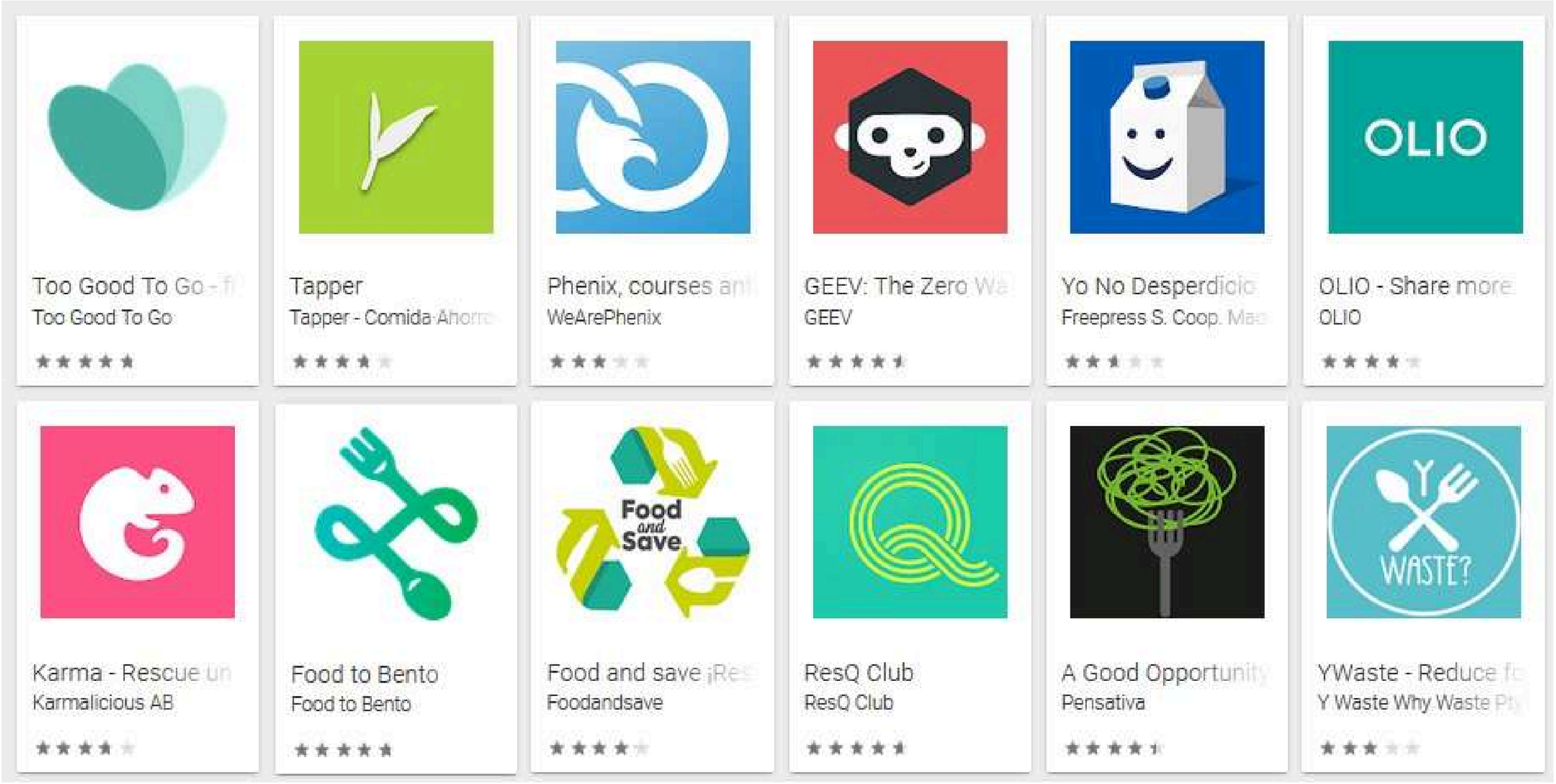
ACCOR

Planet 21 Program
Technology
Responsible Buffets

Training program
Buffet reduction

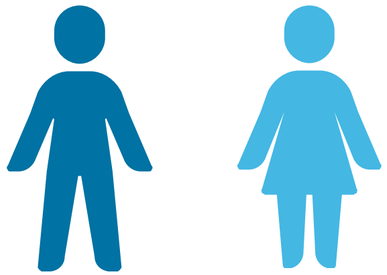
HYATT®

Apps


Too Good To Go - fi
Too Good To Go
Tapper
Tapper - Comida Ahorra
Phenix, courses ant
WeArePhenix
GEEV: The Zero Wa
GEEV
Yo No Desperdicio
Freepress S. Coop. Mad
OLIO
OLIO - Share more
OLIO
Karma - Rescue un
Karmalicious AB
Food to Bento
Food to Bento
Food and save ¡Res
Foodandsave
Food and Save
ResQ Club
ResQ Club
A Good Opportunity
Pensativa
YWaste - Reduce fo
Y Waste Why Waste Pty
WASTE?

How to offer
personalized travel
experiences to
your customers?

New tourist profile



Consumers seeking customization

Consumers informed and critical

Sustainable consumers

Hyperconnected consumers and influencers

Consumers seeking experiences

PERSONALIZATION of EXPERIENCES
tourism

Events with unique experiences

sun&blue.

Blue Tourism
Innovation Congress

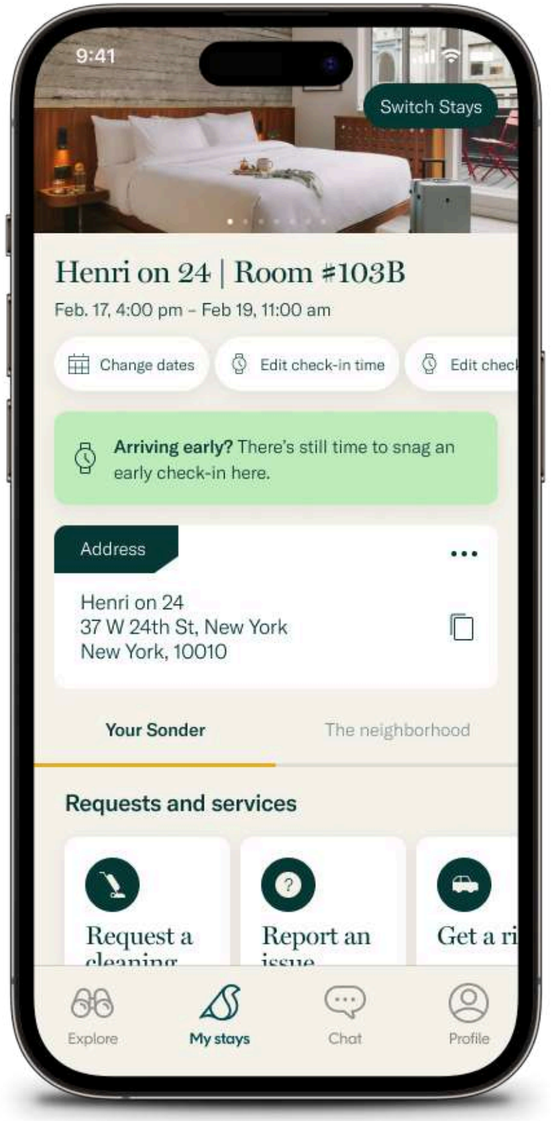
PERSONALIZATION of EXPERIENCES

tourism

Customized mobile applications

Sonder

BONVOY



PERSONALIZATION of EXPERIENCES
tourism

Use of big data and predictive analytics

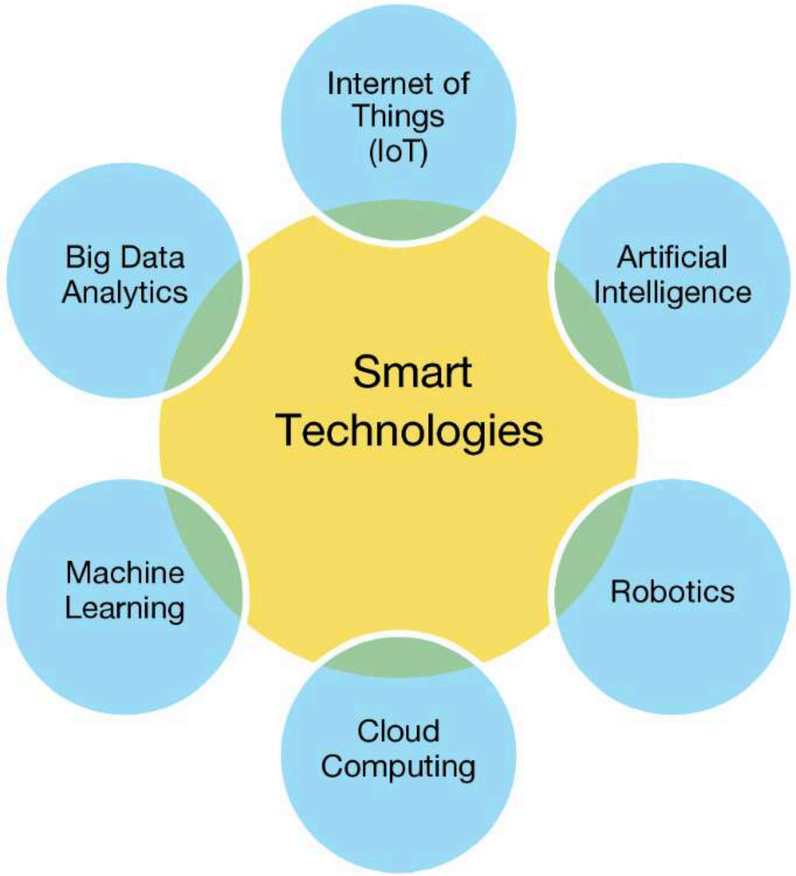
Disney MagicBand

TECHNOLOGY

Where is technological transformation headed?

TECHNOLOGICAL TRANSFORMATION

SMART TECHNOLOGIES-DATA



What is smart technology?

Smart technology is that which, through **automated processes**, studies and **makes decisions** based on collected **data**.

Digital marketing
Data governance
Data management

Tourism companies must have a great deal of knowledge and interaction with tourists.

Empowerment through different digital marketing strategies.

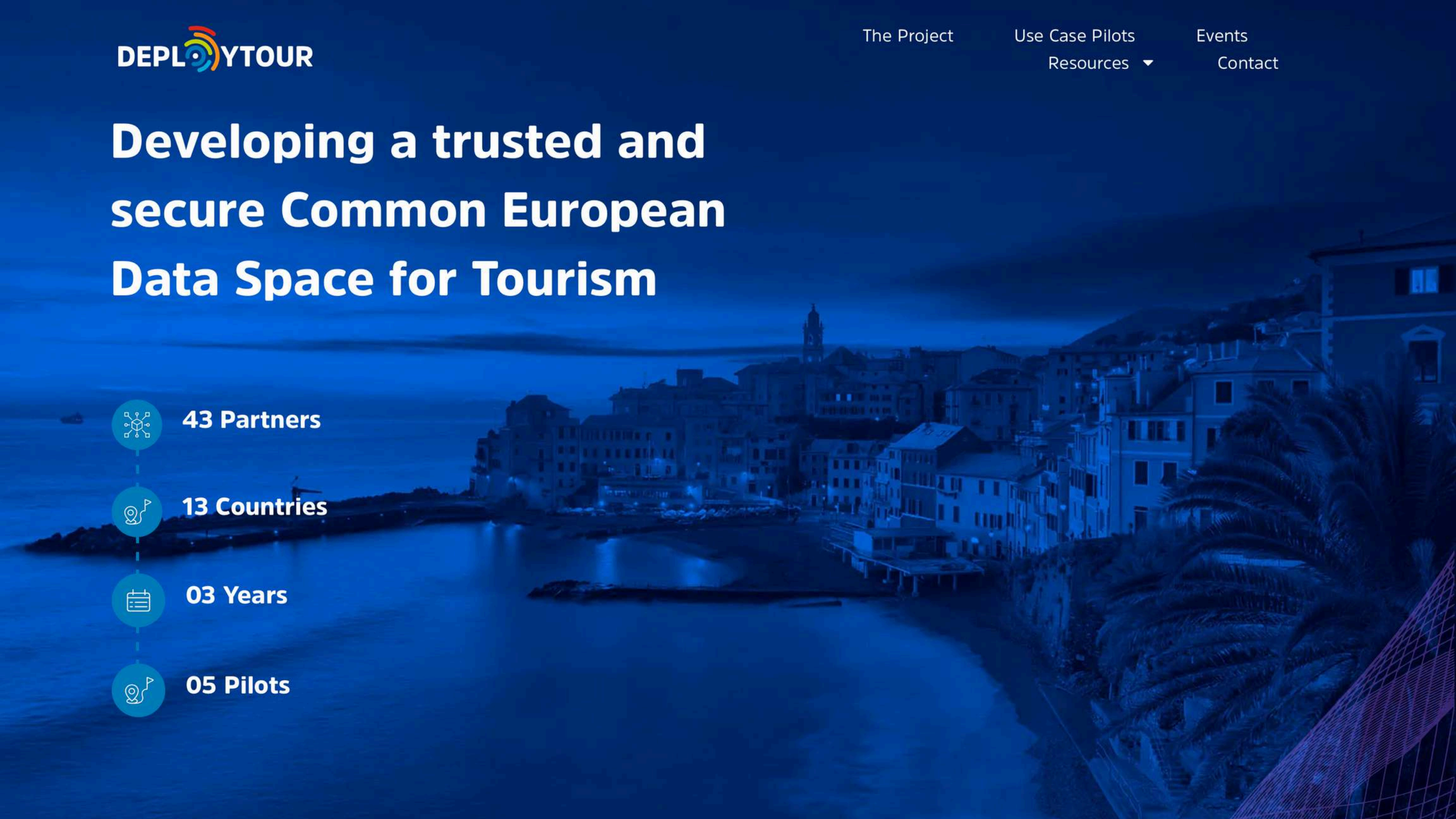
Data
Insights

Why is DATA important in tourism?

Where is Europe heading?

DEPLOYTOUR

Developing a trusted and secure Common European Data Space for Tourism



- 43 Partners
- 13 Countries
- 03 Years
- 05 Pilots

NECSTouR
Breda University of Applied Sciences
europeana
LAPIN AMK
Lapland University of Applied Sciences
EONA-X
CITY DESTINATIONS ALLIANCE
amadeus
PLEXUS TECH
FIWARE FOUNDATION
amadeus
Fraunhofer
hiberus
Conselleria de Turisme, Cultura i Esports
Agència d'Estratègia Turística
tecnalia
Andalucía
NTT DATA
DISSET.
Universitat de les Illes Balears
amadeus
Avoris
ICT TECHNOLOGY CENTRE
AdQuiver
libelium
ANYSOLUTION
gmv
INDUSTRY INNOVATION CLUSTER
Austria Tourism
MODUL UNIVERSITY
PRIVATE UNIVERSITY VIENNA
TURIZEM BOHINJ
ARCTUR
UNPARALLEL
TURISMO DE PORTUGAL
NOVA IMS
MINISTERO DEL TURISMO
intellera
Part of Accenture Group
DATA APPEAL
TRENITALIA
POLITECNICO MILANO 1863
Pleiades
HELLENIC REPUBLIC
MINISTRY OF TOURISM
uni systems

EU Tourism Dashboard

Green pillar

- Air travel emission intensity
- Tourism GHG intensity
- Tourism energy intensity
- Share of trips by train
- Excellent bathing water
- Dependence on distant origins
- Adoption of ecological schemes

Digital pillar

- E-commerce sales
- Enterprises using social media
- Personnel training on digital skills
- Enterprises seeking ICT specialists
- Internet speed at tourism destinations
- Accommodations listed online

Socio-economic pillar

- Tourism intensity & seasonality
- Dependence on top 3 countries of origin
- Tourism diversity
- Average tourism expenditure
- Contribution of tourism to employment
- Economic contribution of tourism

Tourism descriptors (demand & supply)

- Nights-spent
- Arrivals
- Tourism capacity
- Occupancy rate
- Average duration of stay
- Tourism density
- Dominant tourism typology
- Share of foreign tourists
- Progress of tourism recovery
- Presence of blue flags
- UNESCO sites
- Share of protected/designated land
- High nature-based tourism opportunities

European Commission

Initiatives in Europe

SMART TOURISM DESTINATIONS

Promoted by the **European Commission - DG GROW**, the Smart Tourism Destinations Project is managed by **Intellera Consulting**, **CARSA**, the **University of Malaga**, and **PwC EU Services**.

The project aims to **support EU destinations implementing data-driven approaches to make tourism more sustainable and accessible**.

The project can also count on the support of **10 independent experts** including private sectors practitioners and academic researchers.

SELECTED DESTINATIONS

48 Destinations have been selected to be part of the Project, having the possibility to **learn from experts and peers** and work on **their Smart Tourism Destination's Roadmap.**

2025 EUROPEAN CAPITAL & GREEN PIONEER OF SMART TOURISM COMPETITIONS

INITIATIVE OF THE EUROPEAN UNION

APPLY NOW

EUROPEAN CAPITAL OF SMART TOURISM

EUROPEAN GREEN PIONEER OF SMART TOURISM

TOURISM OF TOMORROW DATA DRIVEN DESTINATIONS HUB

Creation of a Competence Centre to support data management in tourism destinations

Build a knowledge support scheme to assist EU tourism destinations

Provide tailor-made digital solutions and data for DMOs and tourism SMEs

Integrate results and learnings into a business plan to set up and sustain the Centre

Upscale beyond the partnership and build a data-driven tourism community

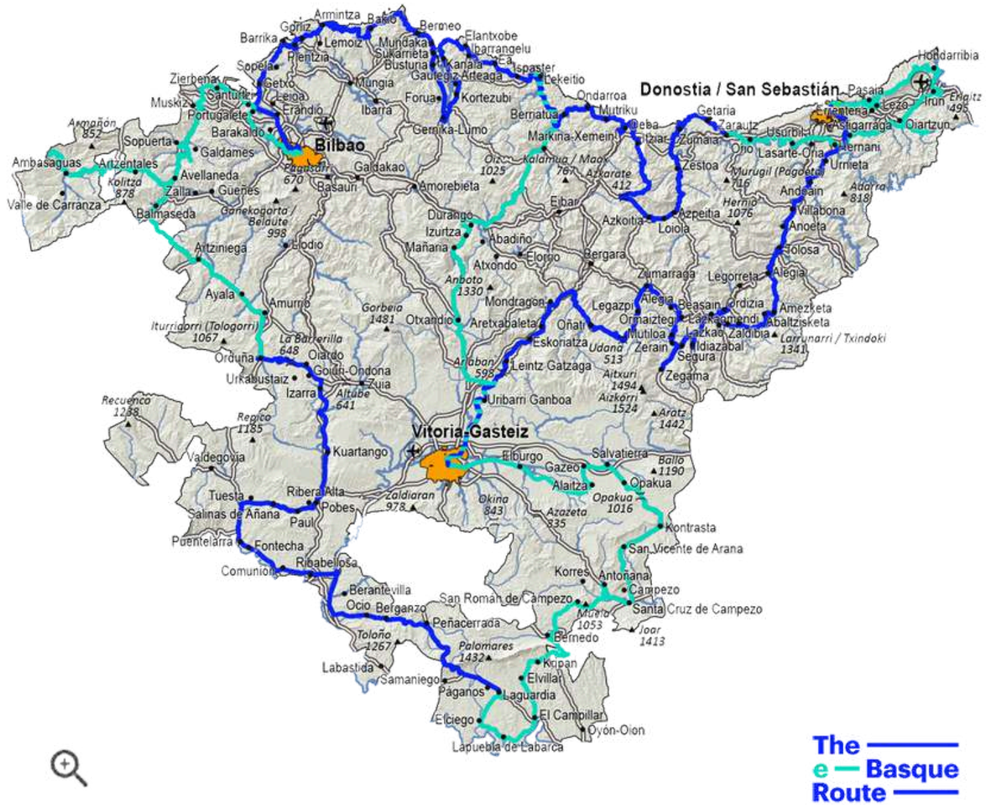
Implement the Centre and ensure its continuity

Best practices

BEST PRACTICES

The e-Basque Route

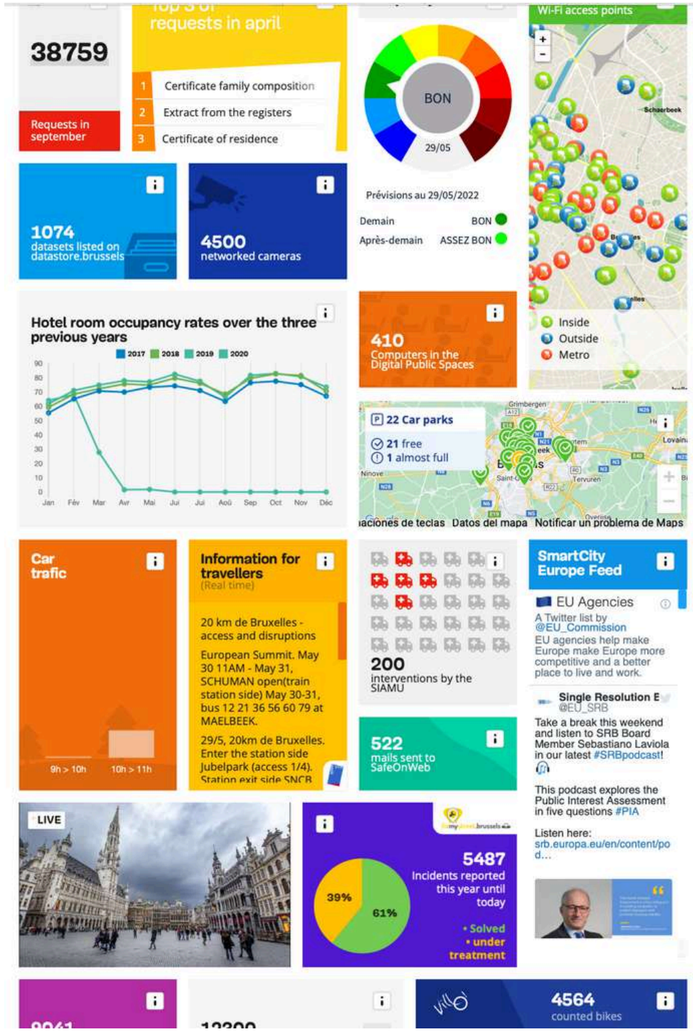
Distribution of tourist flows
Electric mobility



The E-Route is the first Spanish tourist road route prepared for electric vehicles.

It has a network of electric recharging points that allows tourists to visit and explore the Basque Country along the 950 km route in a comfortable and more sustainable way.

Basque Country-Spain



Improving tourism intelligence

Development of data visualization dashboards

Development of specialized services for the sector:
- Scorecard of tourism indicators
- Tourism quality consulting
- Advice on protocols and prevention
- Greater presence in planning

The availability of data for tourism management provides all the agents involved in the destination with a solid knowledge of the tourism sector useful for decision making.

Brussels-Belgium

Chiclana. Calculation of the floating population based on waste generated

Data importance

Kiosks

Service management for Porto Tourism Office

These systems ensure a better organisation of services, optimise service processes and end the traditional queue, which translates into greater comfort in service, both for customers and employees.

In tourism, and taking into account that people may be on vacation, it is important to ensure that they do not have to wait too long for their turn. In addition, there is better organisation and management of the flow of visitors.

Porto-Portugal

Ribera de Navarra. Circular economy, technology and tourism

Data
Promotions
Colaborations between stakeholders

Facing the overtourism challenge

Venice to track cell phones, use hundreds of cameras to manage tourist entry

Venice is deploying hundreds of CCTV cameras and a mobile phone tracking system to keep tabs on who's entering the city.

Venice's goal is to track every person who enters in Venice with a system of 468 cameras and sensors that allow officials to differentiate residents from visitors, track origins and destinations, and determine how fast people are moving.

The city plans to use an app for reservations and is testing turnstiles that could shut out visitors if the city becomes too crowded. On the water, Venice plans to measure gondola traffic and speeds.

Venice-Italy

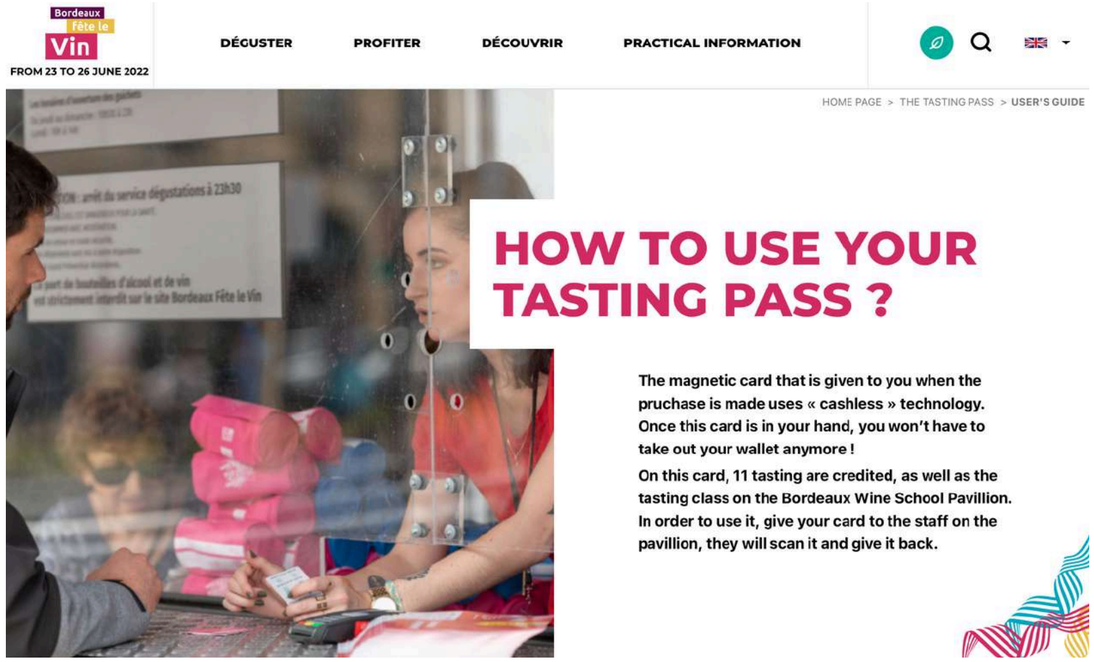
Visitor flow tools

Real-time information

Use of Internet of Things (IoT) and artificial intelligence to calculate the tourism carrying capacity

Santander

Santiago de Compostela



Tasting pass

RFID card

Tasting Pass, an RFID card which allows attendees to enjoy 11 tastings from the 80 different appellations present on-site at pop-up wine bars along the waterfront.

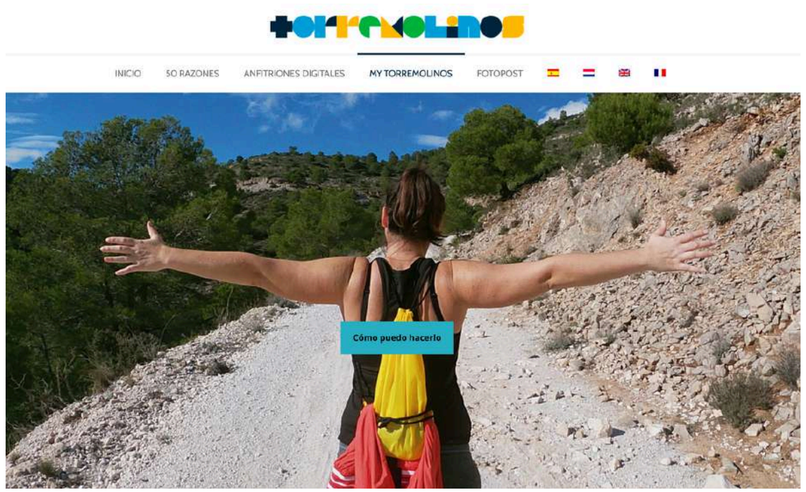
The pass also includes entry to an ‘initiation to tasting’ workshop at the Bordeaux Wine School, all providing an opportunity to discover the diversity found among Bordeaux wines.

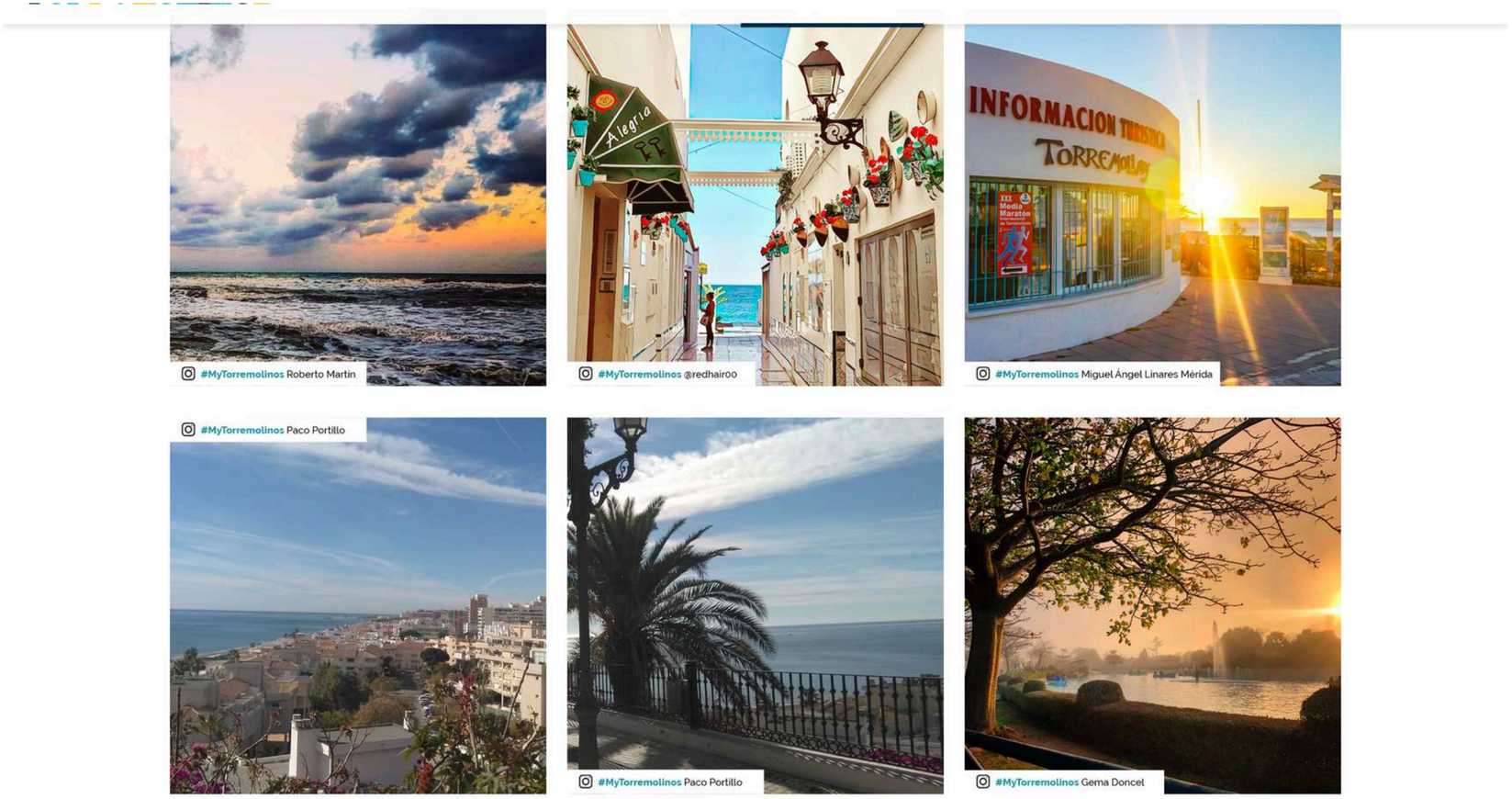
Bordeaux-France

INNOVATION, CULTURAL HERITAGE AND CREATIVITY

Valdepeñas. The archaeological park “Cerro de las Cabezas” incorporates the experience of virtual and augmented reality.

Torremolinos. “Digital Hosts” and ‘My Torremolinos’. Involvement of the local population with the destination.





Local influencers

Design for all

A wide range of innovative solutions and improvements to enhance accessibility for persons with disabilities.

Accessible routes

A route on which a guiding system for the visually impaired is in place from start to finish

Pedestrian crossing

Buttons for the visually impaired

Bus and bus shelters

Tactile paving
Kassel-bus boarding kerbs
Bus kneeling system

Luxembourg-Grand Duchy of Luxembourg

Federal Ministry for Digital and Transport

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Empowering European tourism:
Integrating data-driven strategies with smart technology and sustainability

estrella.diaz@uclm.es

estre_disa

Estrella Diaz

EstrellaUclm

MoVeToLausitz

Mobility support through data-driven traffic management and alternative options for tourist mobility in the Lausitz region

01.07.2022 – 30.06.2025

www.movetolausitz.de

Gefördert durch:

Bundesministerium für Digitales und Verkehr

aufgrund eines Beschlusses des Deutschen Bundestages

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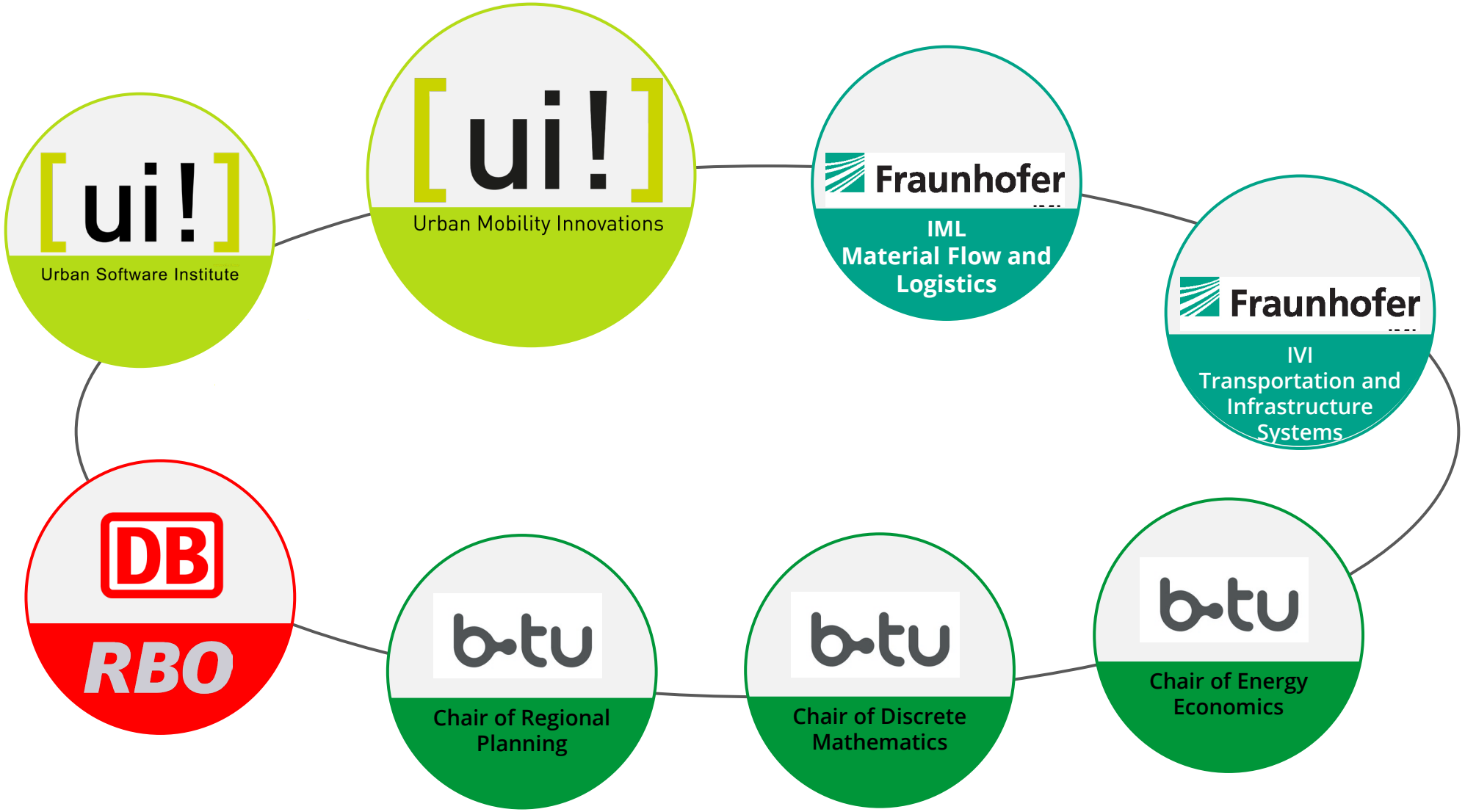
Project partners



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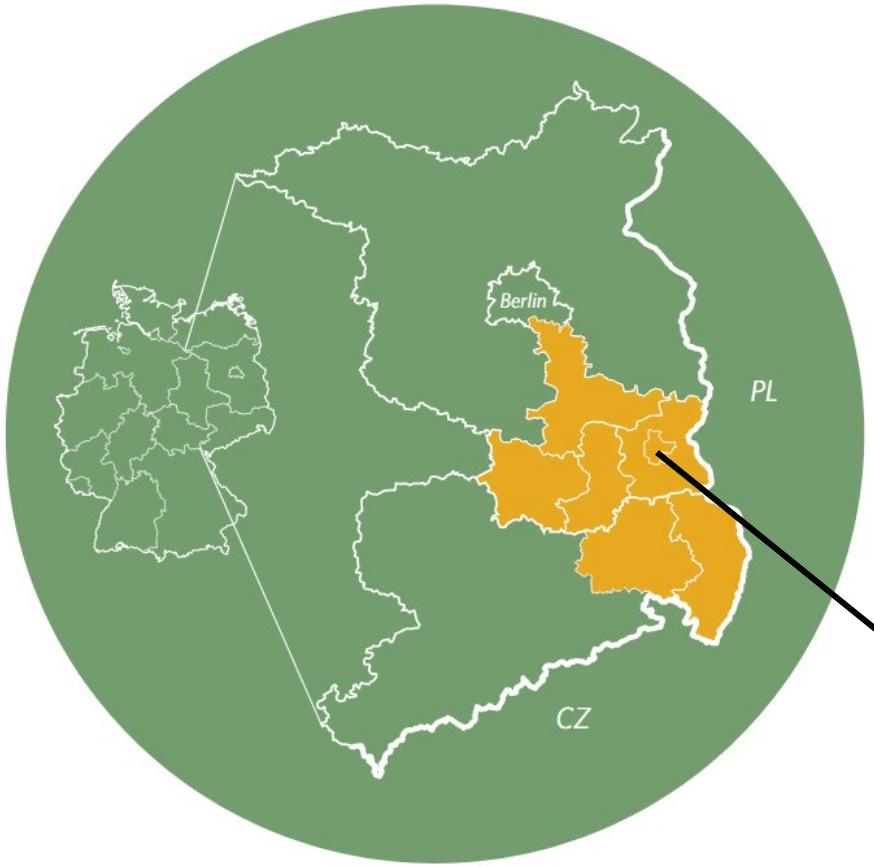
Project region

Where and what is Lusatia?

Multi-regional spatial understanding of Lusatia:



Rural tourism region:

Spreewald

Lusatian Lakeland

\+ Energy region

Lusatia as a lignite minging area

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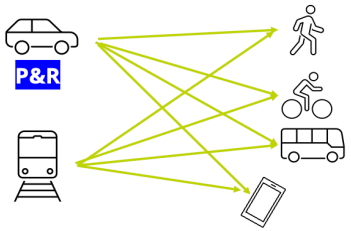
What are the main questions/work areas in the project?

Overview of most important work areas

- The mobility patterns and requirements of both tourists and residents.
- The role of digital, data-driven traffic management in fostering sustainable regional growth.
- The accessibility and incorporation of mobility information and analytical tools for tourist travel.
- The creation of algorithmic strategies for managing on-demand transportation in rural regions.
- Essential transport services to support sustainable tourism and provide alternatives to private car use.
- The incorporation of emerging mobility solutions with current infrastructure and traffic management systems.



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What is innovative in the project?

Overview of innovative mobility solutions for Lusatia

- **Data-Driven Traffic & Parking Management**

Smarter, real-time parking optimization

Efficient traffic flow based on data insights

- **Integrated Data Platforms**

Serving both **locals & tourists** with personalized mobility solutions

- **Smart & Sustainable Mobility**

Alternative transport options reduce reliance on private cars

Seamless intermodal travel experiences

Transforming Data into Actionable Services:

- SMART PARKING
- ON DEMAND TRAFFIC CONCEPT
- AUTOMATED TRAFFIC
- TRAFFIC MONITORING IN REAL TIME
- VISITOR MONITORING
- SCIENTIFIC FOUNDATION FOR NEEDS, ACCEPTANCE AND WILLINGNESS TO PAY

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What is the role of data for the project approach?

Selection of data used in the project

- Floating Car Data (FCD, real-time traffic information collected from moving vehicles using GPS or cellular networks): source and destination traffic in Burg and Senftenberg
- Sensor based parking data
- Sensor based traffic data
- Data collected from surveys
- Simulation-generated data
- Quantitative data from laboratory experiment (in progress)
- Data collected from face-to-face interviews with tourists
- Qualitative data gathered from expert interviews
- Quantitative data bases on hotel- and house prices & public transport station development

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What are the main findings/results of the project?

Status I

- The creation of data products and services is currently in progress.

As part of the **MoVeToLausitz** project, cameras for traffic and parking space monitoring have been installed in the municipalities of **Burg** in the Spreewald and **Senftenberg** in the Lusatian Lakeland.

The data from these monitoring points is displayed in the MoVeToLausitz **cockpit**.

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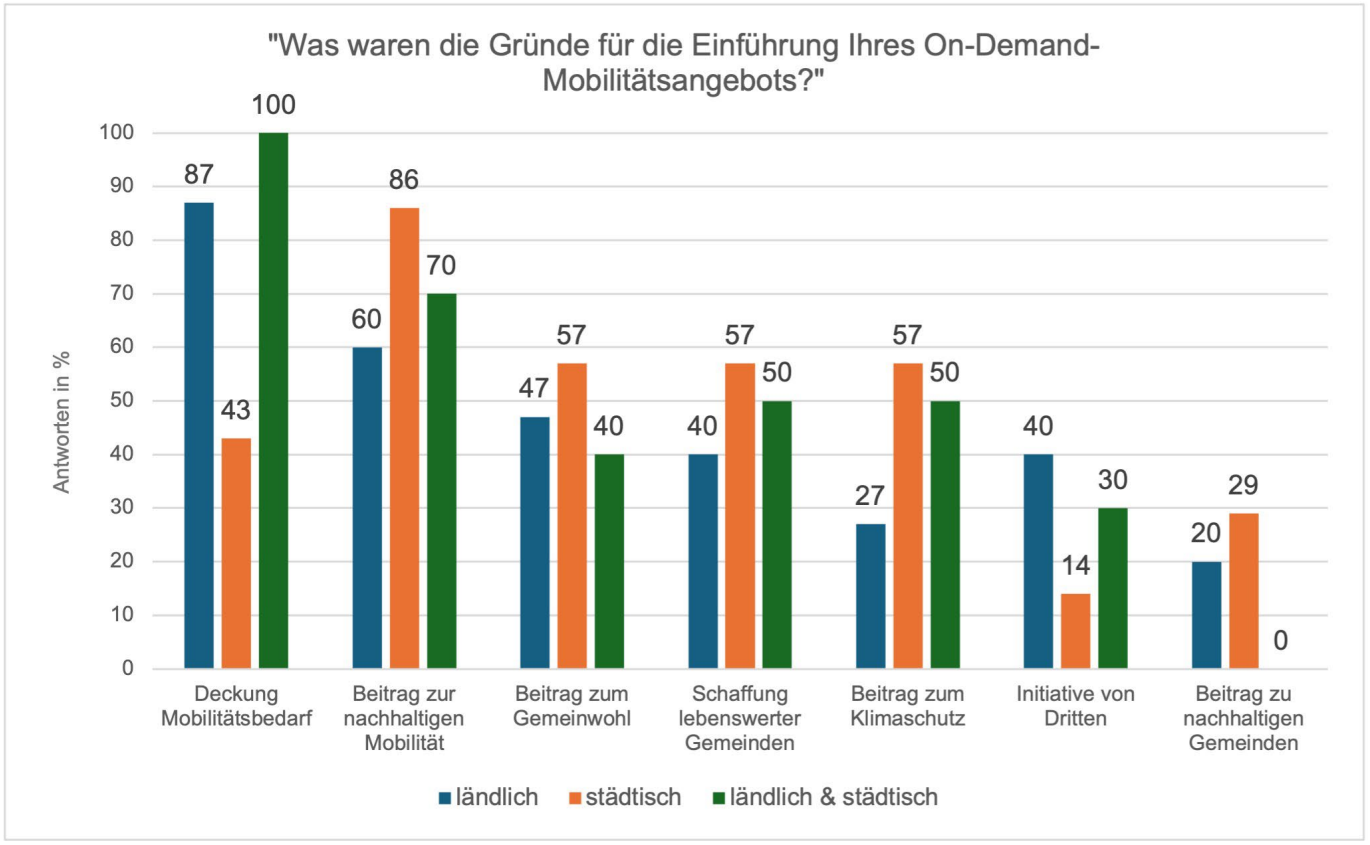
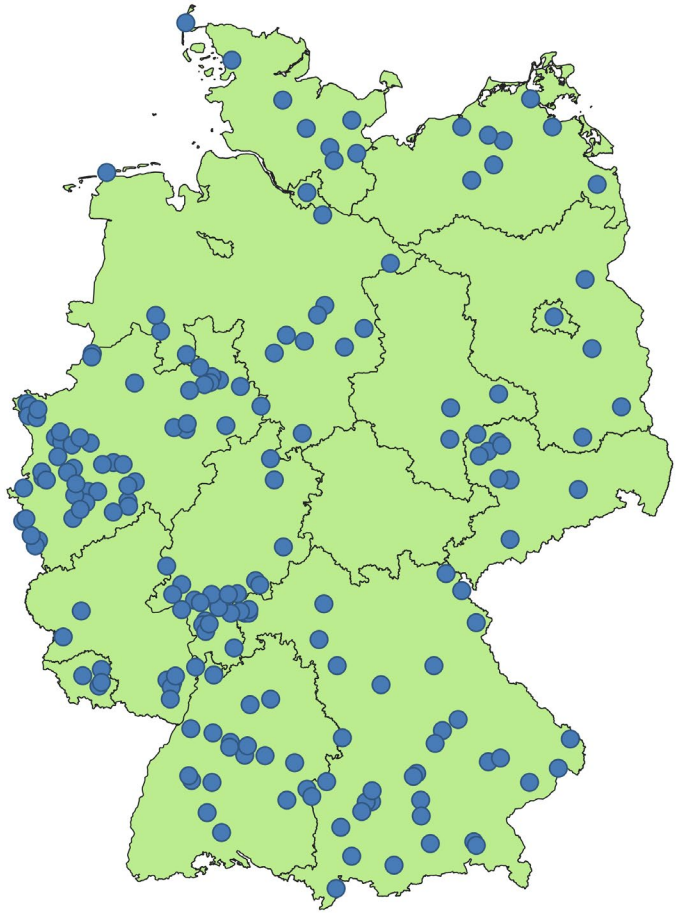
What are the main findings/results of the project?

Status II

Various business models have been recorded for transportation companies, data product developers, and service providers.





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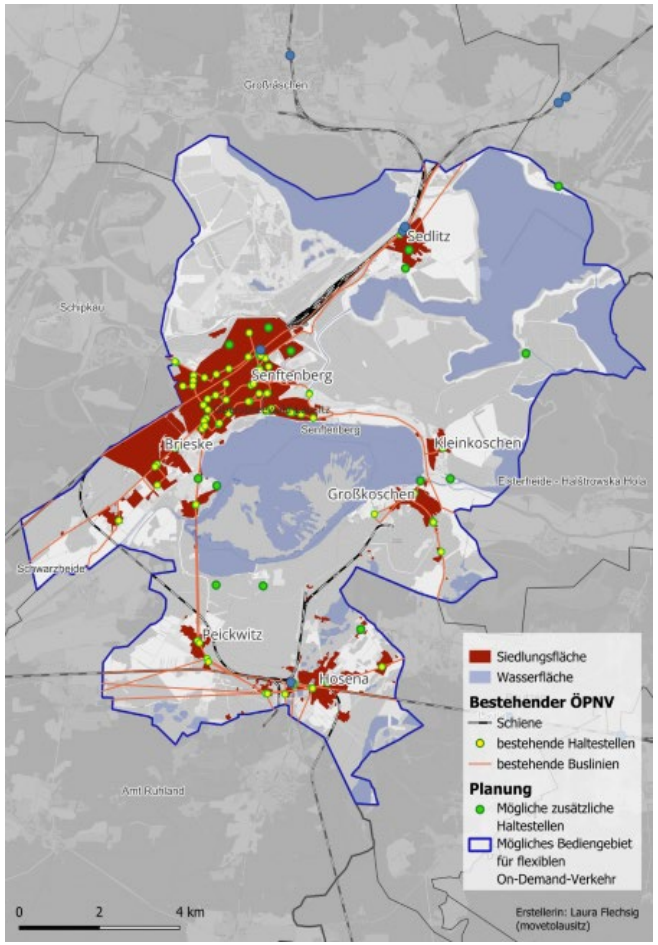
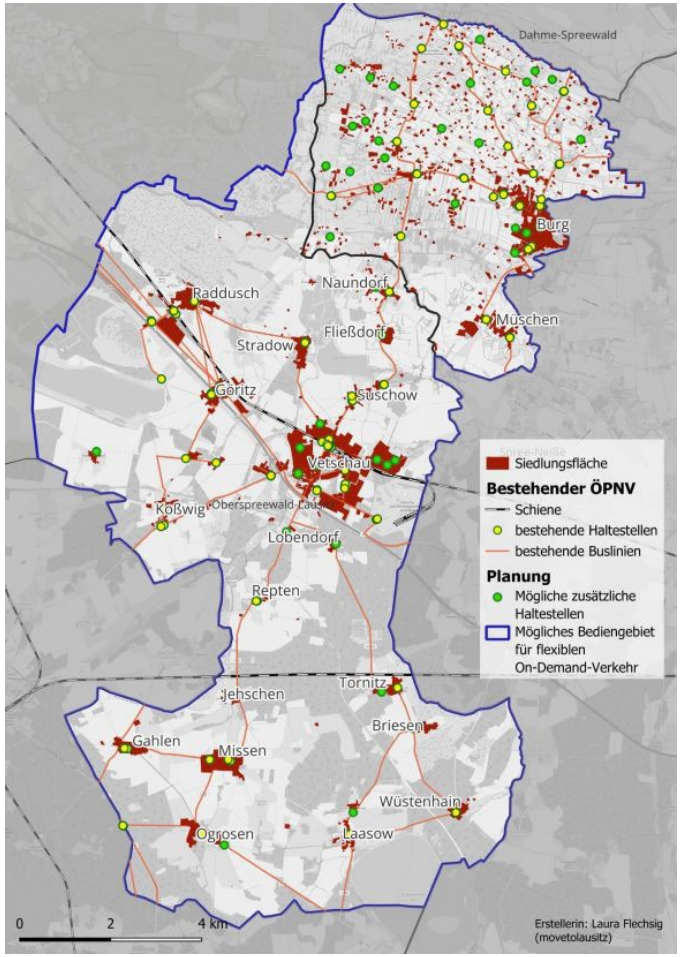
What are the main findings/results of the project?

Status III

Specific service areas and routes have been identified for connected and automated solutions.



As part of the project, the train stations **Sedlitz Ost**(left) and **Vetschau** (right) were examined as potential mobility hubs, with **Sedlitz Ost** aiming to provide sustainable access to tourist destinations through bike-sharing and shuttle services, while a hub in **Vetschau** could primarily improve transportation connections to the surrounding region, especially to Burg.



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What are the main findings/results of the project?

Next steps

- Assessing development of hotel prices and house prices depending on the introduction of new mobility stations to study the economic impact of sustainable transportation
- Evaluate data from n = 1.600 surveys on daily travel
- Setting up a laboratory experiment on the role of traveling solo in public transport and willingness to pay using VR scenery and experimental economics methods
- mathematical optimization approaches are being developed to adapt the routes of on-demand vehicles to daily mobility needs, using intelligent methods such as network flow optimization and simulations with floating car data
- Finishing an On-Demand guide
- Conceptualizing a Rural touristic mobility guide

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For further information and Updates

https://movetolausitz.de/

Visit our website for Updates and upcoming project results!

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Thank you for your attention.

Smart Tourism Office Sevilla

The Tool to Overcome Challenges

NO8DO
Ayuntamiento de Sevilla

Sevilla Feeling LAND

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Tourism today

Smarter tourism

OUR GOAL

Working on the impact of tourism through **enhancing the visitor experience**, **improving the quality of life of the resident** and the **competitiveness** of businesses

OVERCOMING CHALLENGES

Tourism Flows. Tourist housing. Construction of indicators.

KNOWLEDGE

Tourism Intelligence System. Studies with the University. Information.

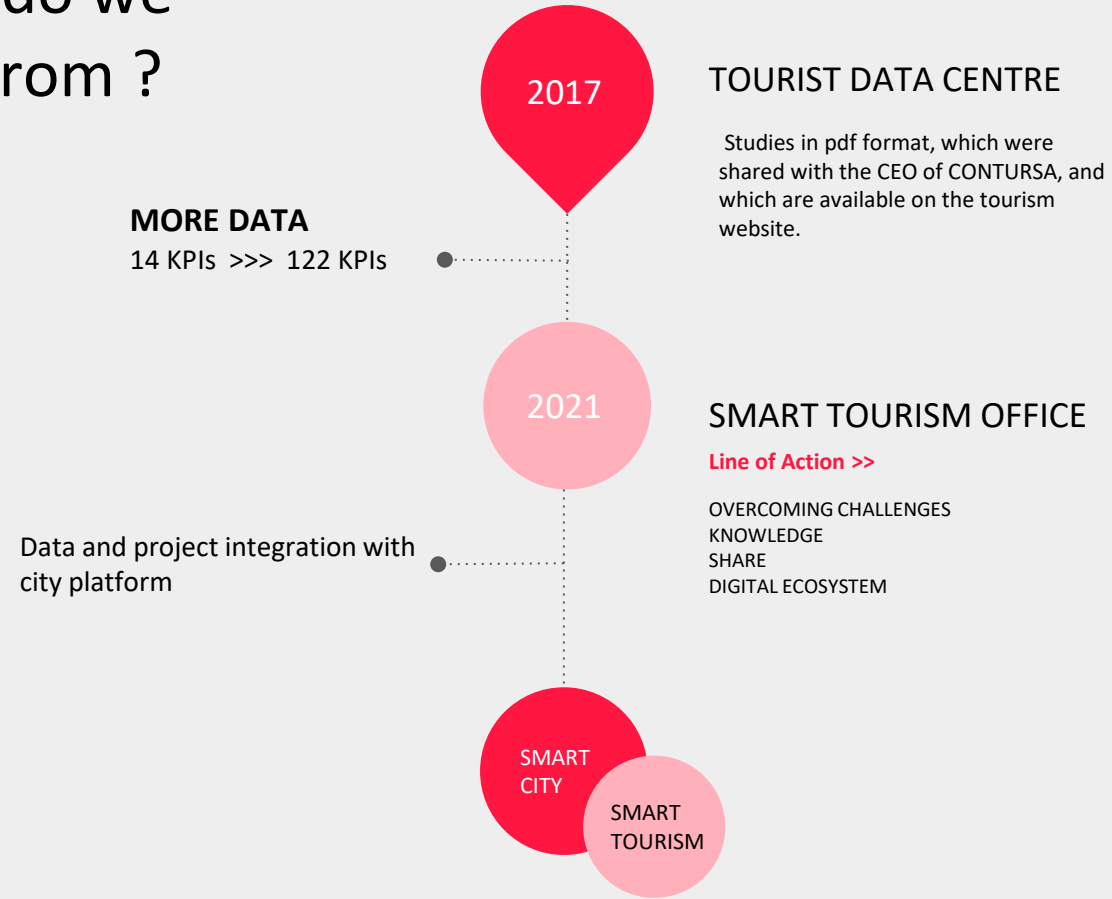
SHARE

Training for the sector. Transfer events. Participation in projects with other organisations.

DIGITAL ECOSYSTEM

Design of the Digital Ecosystem. Emergence of new applied technologies. Internal processes.

where do we come from ?



where are we located?

LOCAL GOVERNMENT ADMINISTRATION

Area of Finance, Tourism, Citizen Participation & Digital Transformation

Tourism

Public Limited Company

We are governed by public procurement regulations.

CONTURSA

FIBES

Tourism Promotion and MICE

...

SMART TOURISM

What will we talk about?

01

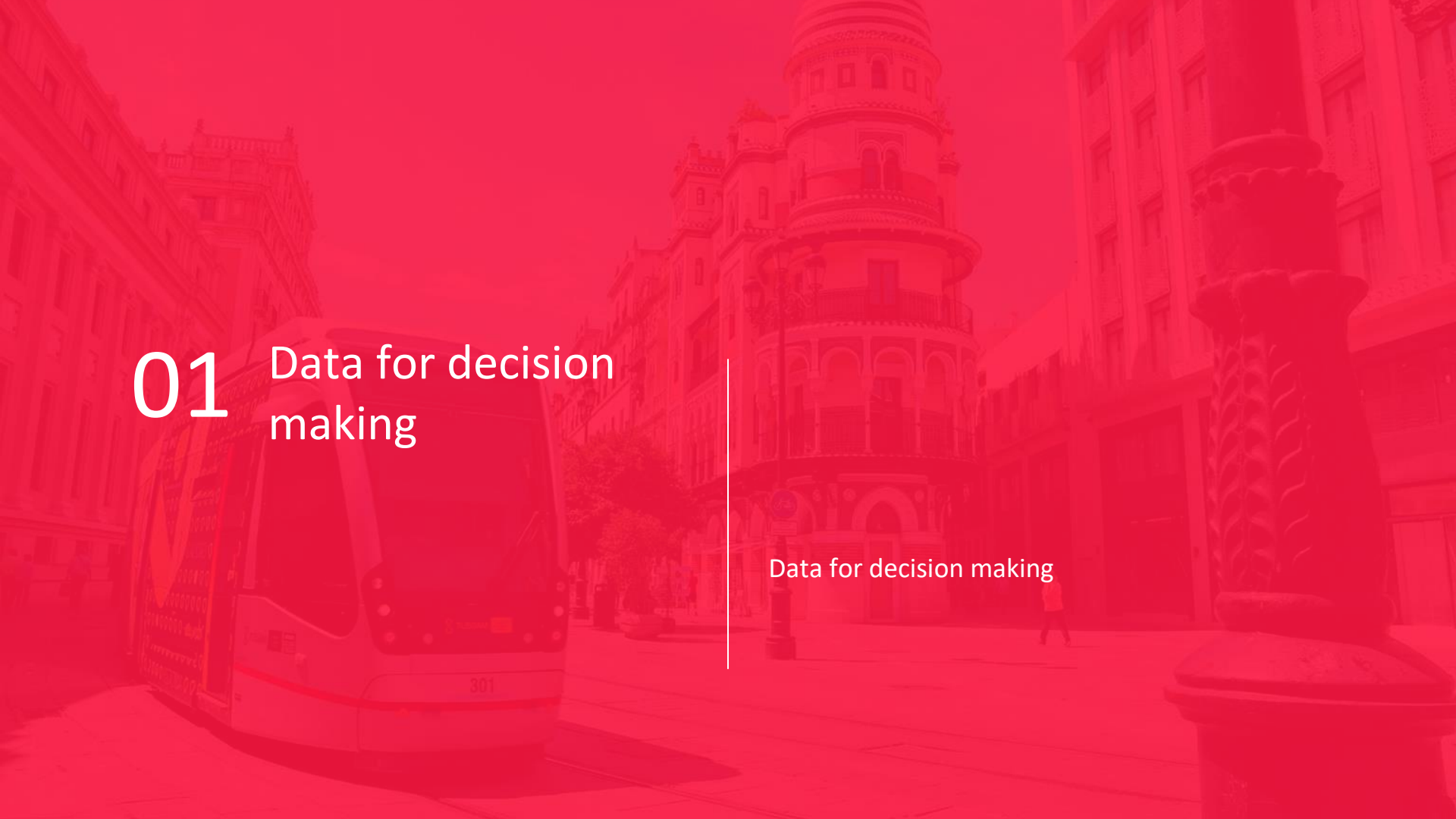
Data for decision making

02

Explaining Reality

03

City Challenges



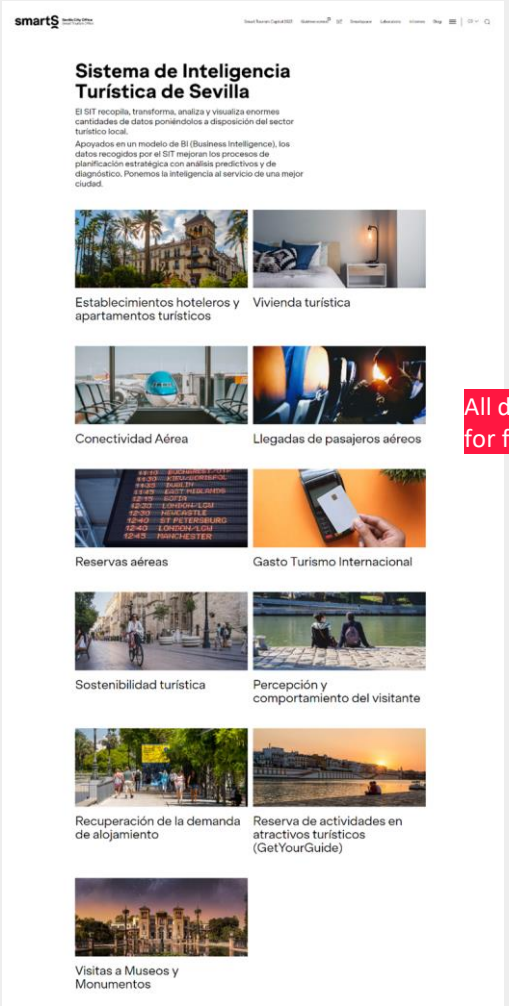
01 Data for decision making

Data for decision making

Data for decision making

Its mission is to improve strategic planning processes with predictive and diagnostic analytics.

Hotel Establishments and Tourist Apartments
Tourist Housing
Air Connectivity
Air Passenger Arrivals
Air Reservations
International Tourism Expenditure
Tourism Sustainability
Visitor Perception and Behavior
Booking Activities at Tourist Attractions (GetYourGuide)
Recovery of Accommodation Demand
Visits to Museums and Monuments

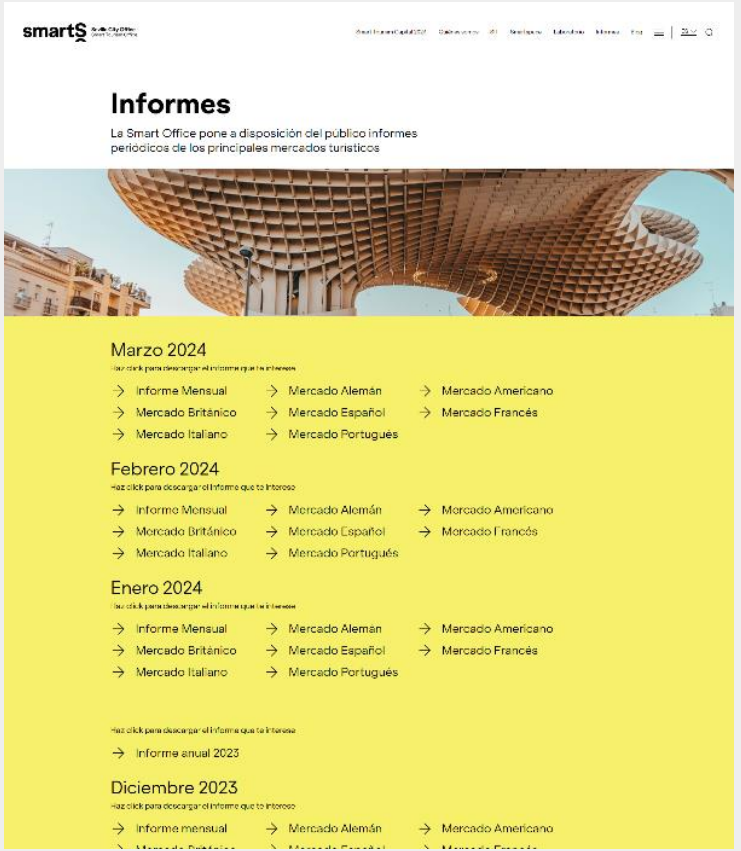


All dashboards are published and available for free on our website.

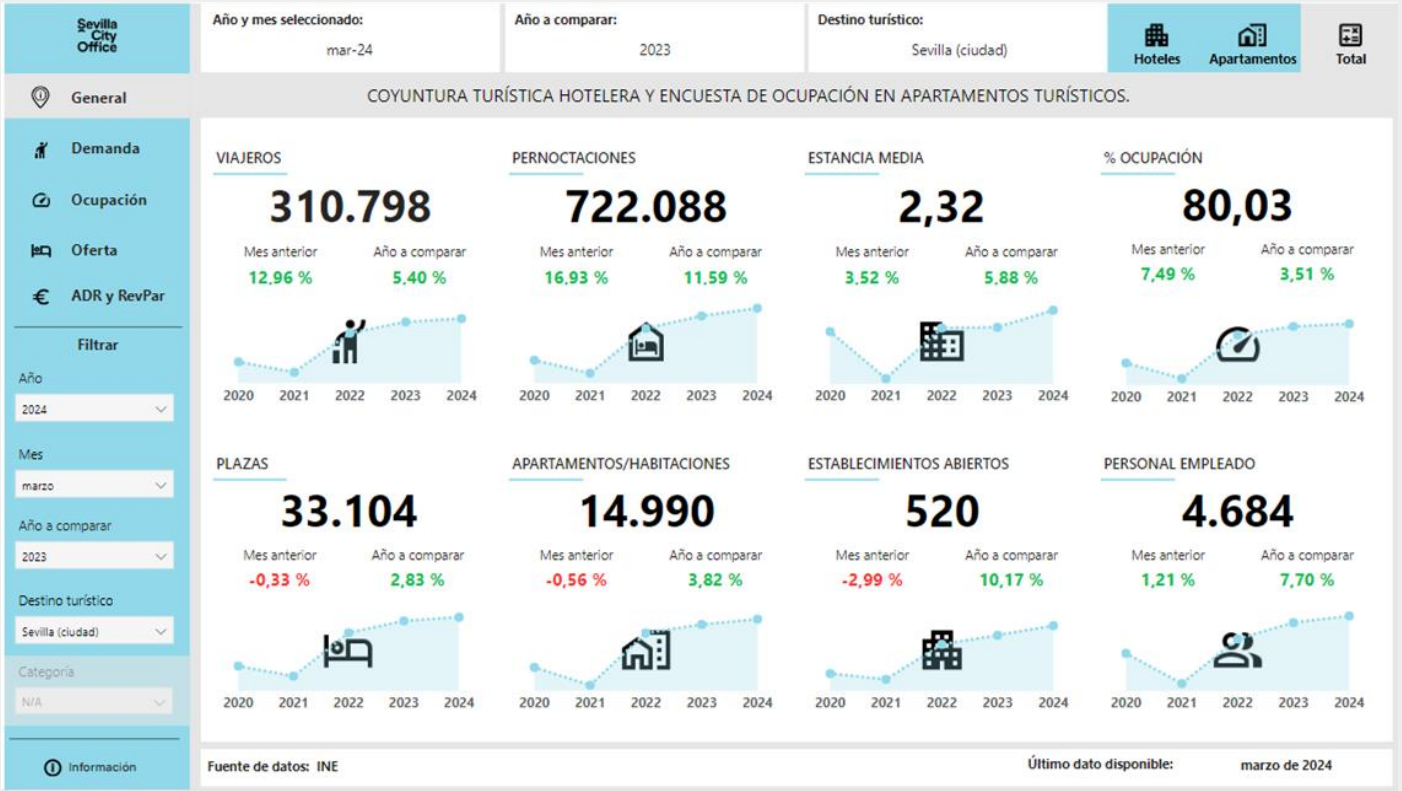
SCAN ME

Data for decision making

Monthly reports on the markets and on the current situation as a whole are published.

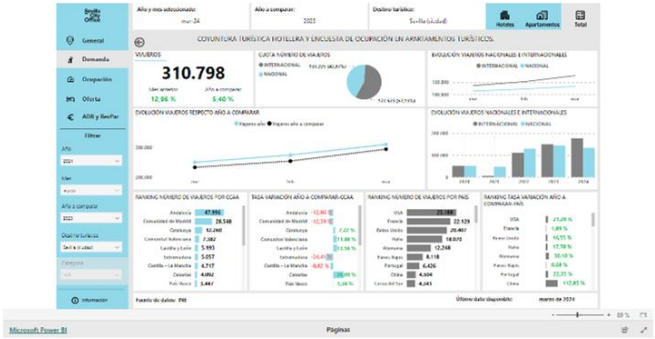


01.1 Data for decision making



01.1 Data for decision making

Each dashboard is accompanied by information on its interpretation and indicates:
Data source
Data provider
Data periodicity
Update frequency.



En este informe se presentan los resultados difundidos por el Instituto Nacional de Estadística correspondientes a las Encuestas de Ocupación Hotelera, Índices de precios hoteleros y los indicadores de rentabilidad del sector hotelero. Incluye también información sobre la oferta y la demanda de los apartamentos turísticos.

Los datos correspondientes al segundo trimestre de 2020 no están disponibles debido a que no se ha alcanzado el respaldo muestral necesario como consecuencia de las restricciones impuestas por el estado de alarma a causa de la COVID-19. La fecha de publicación aproximada de la Encuesta de Ocupación Hotelera, Índice de precios e indicadores de rentabilidad del sector hotelero es la tercera semana de cada mes.

La fecha de publicación de los datos relativos a Apartamentos Turísticos es aproximadamente una semana después. Durante el periodo comprendido entre la publicación de los datos de Establecimientos Hoteleros y la publicación de los datos de Apartamentos Turísticos, para consultar las visualizaciones relativas a ese mes, solo estarán disponibles los datos de Establecimientos Hoteleros.

Fuente: Instituto Nacional de Estadística
Fuente oficial: Si
Periodicidad: Mensual
Frecuencia de actualización: Mensual
Nivel de desagregación: Municipal (punto turístico)

¿Alguna consulta?

Si quieres consultarnos algo, por favor, contacta con nosotros a través del siguiente formulario.

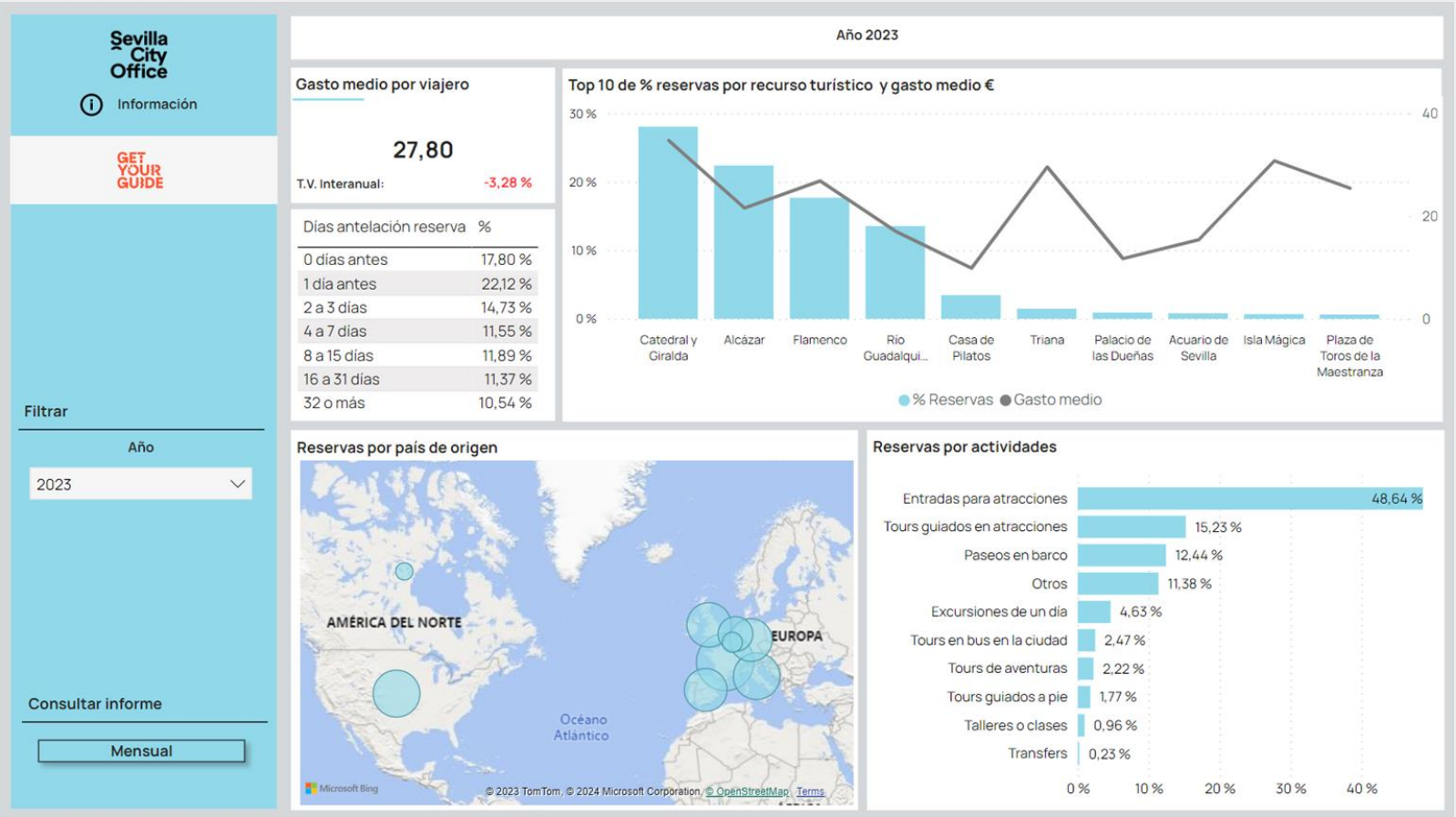
Nombre

Mail

NO8DO
Ayuntamiento de Sevilla

Sevilla Feeling LAND

01.1 Data for decision making



01.1 Data for decision making

Sevilla City Office

Información (*)

Temporada

Verano 2024

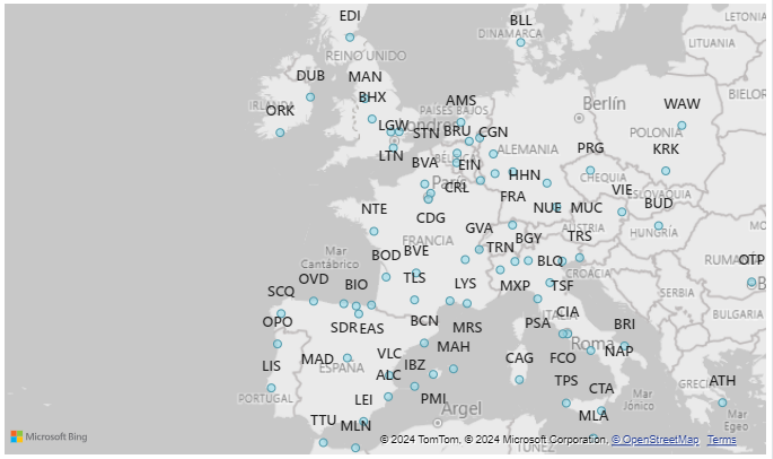
País

- [x] Seleccionar todo
- [x] Alemania
- [x] Austria
- [x] Bélgica
- [x] Dinamarca
- [x] España
- [x] Francia

(*) Para selección múltiple de filtros, mantén pulsado CONTROL mientras haces 'click' sobre los gráficos.

Mapa de rutas

País seleccionado	Aeropuerto seleccionado	Aerolínea seleccionada
-	-	-



Temporada

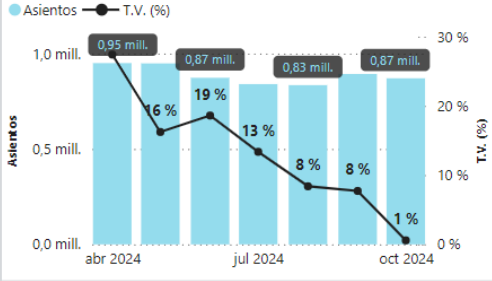
Verano 2024 (Abril 2024 - Octubre 2024)

6.209.736 Asientos	21 Mercados	82 Aeropuertos	23 Aerolíneas
34.990 Vuelos			

Detalle por aeropuerto

Aeropuerto	Ciudad	Asientos	T.V. (%)
BCN	BARCELONA	734.642	16,5 %
PMI	PALMA MALLORCA	378.452	11,1 %
LGW	LONDON	271.652	5,9 %
MAD	MADRID	266.736	-4,4 %
BIO	BILBAO	238.056	-16,4 %
VLC	VALENCIA	234.008	20,9 %
TFN	TENERIFE	232.624	7,1 %
ORY	PARIS	209.646	23,6 %
SCQ	SANTIAGO DE COMPOSTELA	199.484	16,9 %
CDG	PARIS	181.780	46,6 %
LPA	LAS PALMAS	180.054	-1,8 %
LIS	LISBON	172.350	10,1 %
AMS	AMSTERDAM	117.996	13,9 %
Total		**6.209.736**	**12,8 %**

Evolución capacidad



Aerolíneas

Operativa semanal por ruta

Ruta	Aerolínea	Oper. semanal
SEVILLA (SVQ) - ALICANTE (ALC)	Ryanair	------D
SEVILLA (SVQ) - ALICANTE (ALC)	Ryanair	---J---
SEVILLA (SVQ) - ALICANTE (ALC)	Ryanair	L------
SEVILLA (SVQ) - ALICANTE (ALC)	Ryanair	-M-----
SEVILLA (SVQ) - ALICANTE (ALC)	Ryanair	-----S-
SEVILLA (SVQ) - ALICANTE (ALC)	Ryanair	----V--
SEVILLA (SVQ) - ALMERIA (LEI)	Iberia	LM-JV--
SEVILLA (SVQ) - ALMERIA (LEI)	Iberia	LMXJ---
SEVILLA (SVQ) - ALMERIA (LEI)	Iberia	LMXJ--D
SEVILLA (SVQ) - ALMERIA (LEI)	Iberia	LMXJV--
SEVILLA (SVQ) - ALMERIA (LEI)	Iberia	LMXJV-D

01.1 Data for decision making

Next Steps

Work on obtaining the city's data within the city, and not purchasing it from external companies

Cohesion

Training

Digitalization

02 Explaining reality

Tourism Sustainability Index

Tourism activity index

Economic impact index

Explaining reality

Build indicators of tourist activity to understand behavior.

Tourism Sustainability Index

Tourism activity index

Economic impact index

Tourism Sustainability Index

The composition and weighting of these KPIs follows the generic criteria set by the SDGs and the European System of Tourism Indicators.

65,24

16,16% (2023)

Global Index of Sustainable Tourism (GIST)

Distribution of Tourist Income
Concentration of Tourism Supply
Carbon Footprint
Perception of Tourism Sustainability
Motivational Diversification
Dependence on Origins
Seasonality

02.1
Tourism Sustainability Index

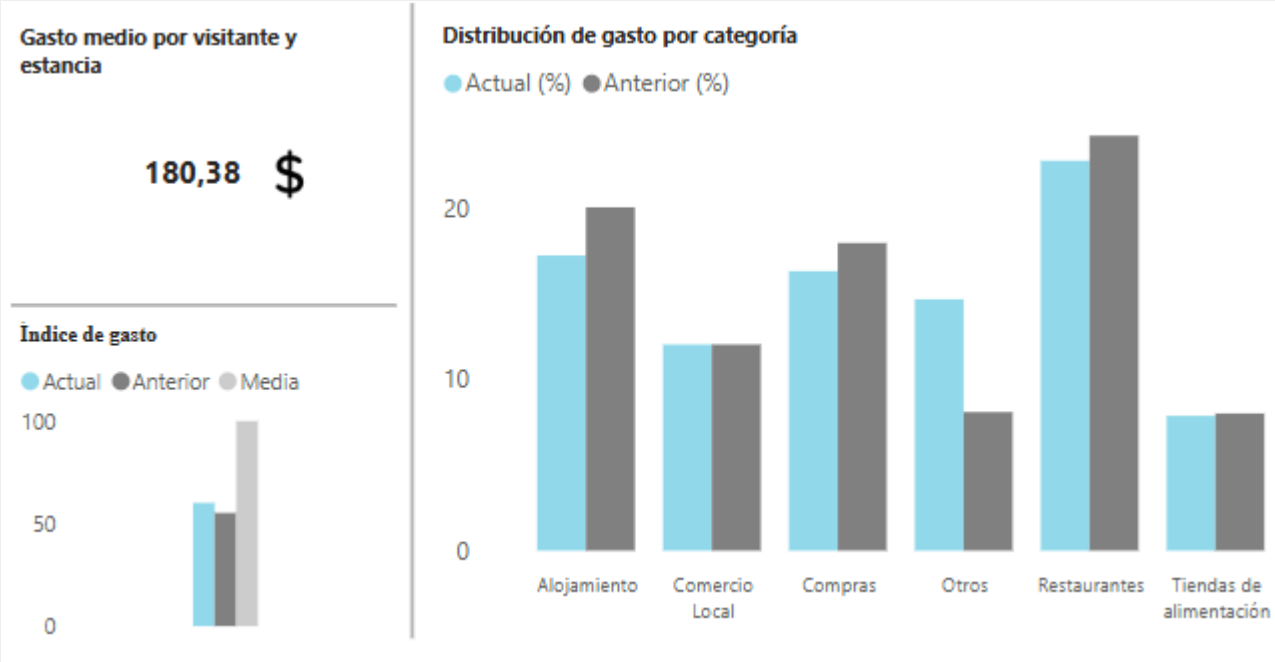
Tourism Income Distribution Index

63,26

16,16% (2023)

It is obtained through the cross analysis of the expenditure per visitor and its distribution by different categories of establishments (restaurants, accommodation, supermarkets, etc.).

100 // Indicates a destination with high per visitor spending and a fully diversified distribution of tourism revenues, positively impacting local businesses and economies.



02.1
Tourism Sustainability Index

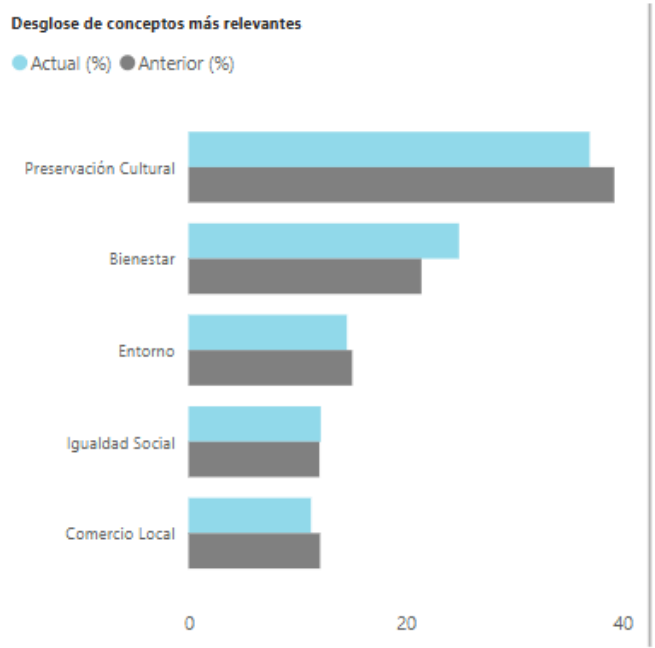
Tourism sustainability perception index

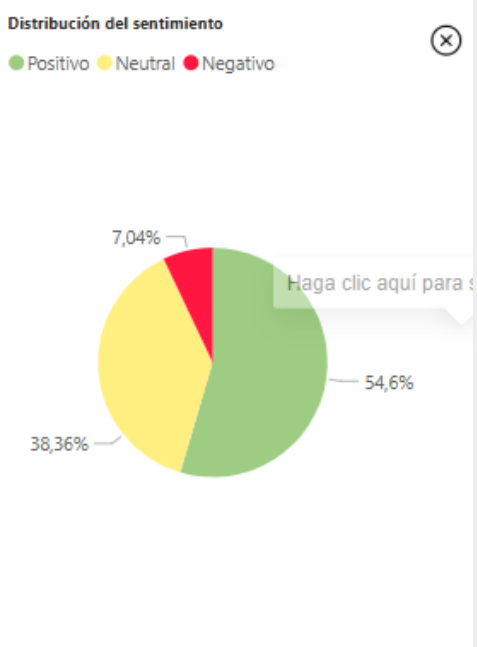
66,29

+4,23% (2023)

The Tourism Sustainability Perception Index is obtained by identifying spontaneous mentions of tourists on social networks in which they talk about the destination and aspects related to sustainability.

The distribution of sentiment is visualized by categorizing mentions as positive, negative, or neutral.



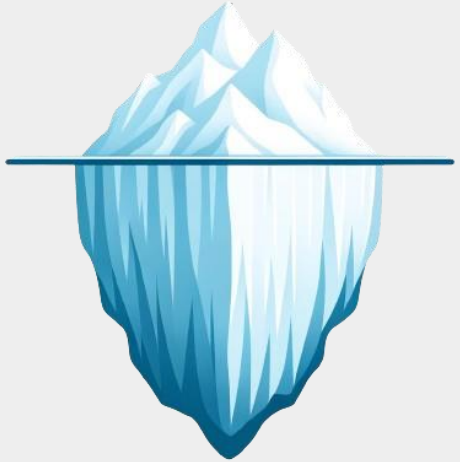


Tourism activity index

The proposal introduces a comprehensive synthetic indicator for Seville's tourism sector, utilizing a scientifically valid system of indicators to broaden data collection beyond traditional focus areas like hotel establishments. The methodology for aggregating information is designed to be simple and user-friendly, facilitating its application in sector decision-making. This approach aims to improve the monitoring and assessment of tourism activity, supporting sustainable development in the city.

Explained Reality

Hotel Establishments
Air Connectivity
Visits to Museums and Monuments



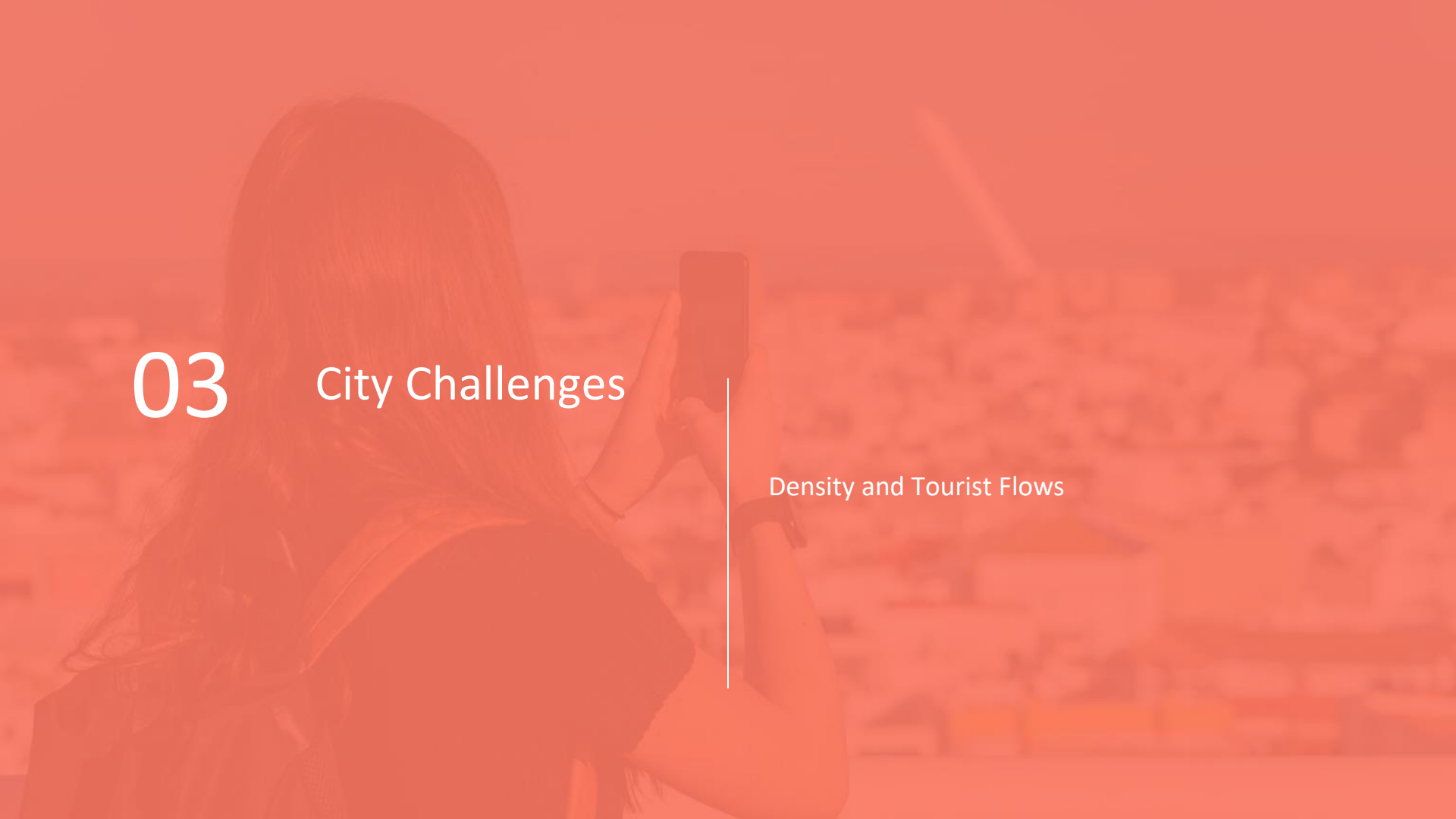
Unexplained Reality

Tourism and Leisure Experience Companies

Impact Control for Sustainable Development

Local Economic Impact Measurement of Tourism

Seville, in collaboration with the University of Seville, has been working since 2022 on an advanced methodological proposal to analyze the economic impact of tourism in smart tourist destinations. This methodology focuses on fundamental economic indicators, such as Gross Domestic Product (GDP) and job creation, and incorporates data analysis from both official statistics and field research. The goal is to quantify tourism's contribution to the local economy, assessing the direct, indirect, and induced effects of tourism using techniques like the adaptation of the Input-Output Table and studying the interdependencies between tourism and other economic sectors.



03 City Challenges

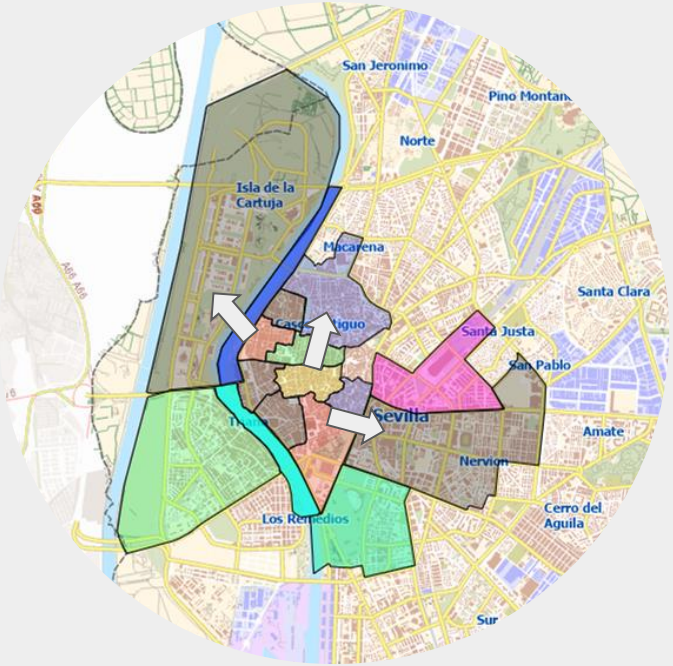
Density and Tourist Flows

OUR GOAL

Relieve congestion in the Santa Cruz neighborhood and redirect flows to other areas of the city.

Boosting other tourist hubs in the city (northern area, Nervión, Triana, Macarena, etc.).

Improvement of the quality of the visit experience and the quality of life for residents.



03

We are not the smartest, but we surround ourselves with those who know best.

NO8DO
Ayuntamiento de Sevilla

Sevilla.
Passion for You

DATA APPEAL
ALMAWAVE GROUP

turbosuite®

Cámara Sevilla

BOSCH

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Andalucía

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ASET
turismosvq.com

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03 Density and Tourist Flows

3 Steps

Analyze the reality:
How many tourists go? How long do they stay? Where do they move? What is their experience?

1º Step

Prototype solutions:
Prototype solutions with companies, the university, and the city council's interdepartmental commission.

2º Step

Analyze the impact:
Analyze the impact of measures through the indicator system

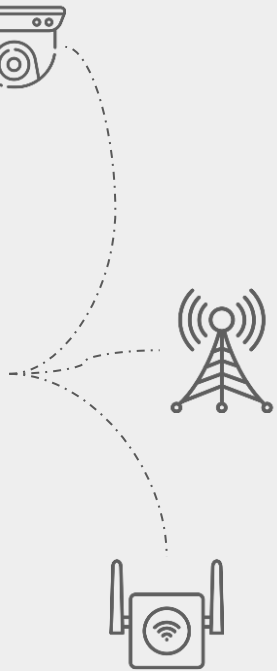
3º Step

What's Happening?

Analyze the reality

We combine technologies to analyze how they can help us achieve our objectives (mobile network operators, Wi-Fi tracking, sensor cameras).Experimental project in which companies and universities collaborate.

Our objective is to manage the destination to improve the quality of life of residents and the user experience.



Which is the reality?

Why we use three technologies?

Optical Sensor
People Counter within its angle of Vision

Wifi Tracking
Count devices, not people.

Mobile Operator
The only entity capable of identifying whether individuals within view are residents or visitors.

Density and tourist flows

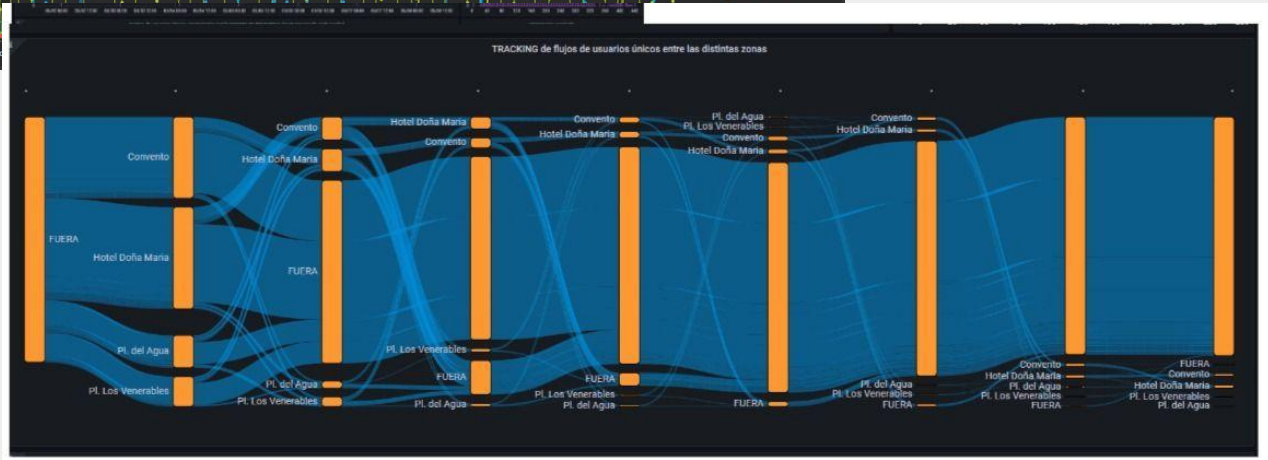
Wifi Tracking
hey can see whether or not someone passes through the various access points (APs).

Mobile Operator
The operator cannot track movement between streets; it analyzes large areas.

Wifi Tracking Location and Presence Analytics

It takes advantage of the signals emitted by smartphones, tablets, and laptops when they are not connected to a network. These signals are called "Probe Requests," and devices emit them when searching for nearby networks.

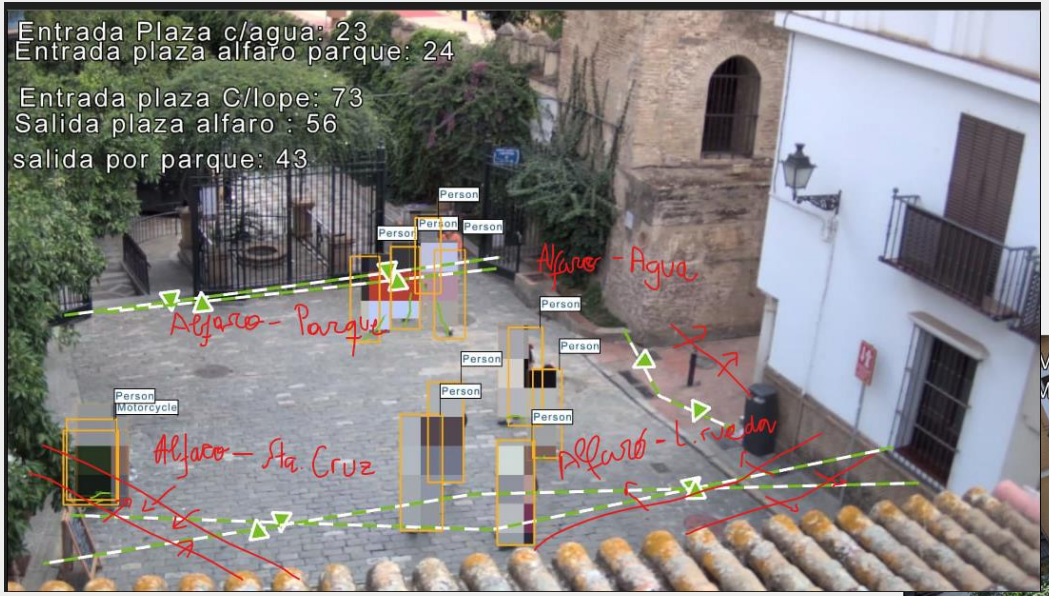
03 Density and Tourist Flows

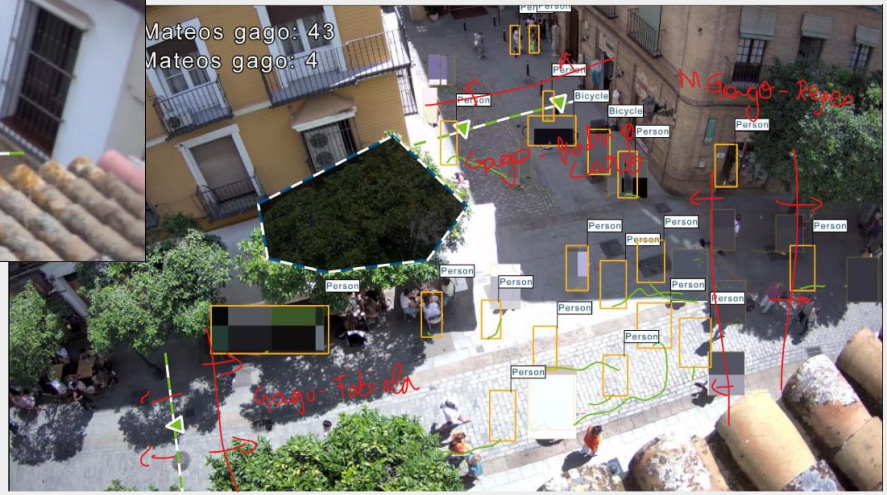


OPTICAL SENSOR

Data capture, no video, is displayed. The camera identifies learned patterns. The development of sensor technology is constantly evolving to respond to future analysis.

03 Density and Tourist Flows





What's Happening?

Relevant aspects to consider in terms of data protection

Prepare a thorough impact analysis before deployment.

Work with highly secure and trustworthy providers.

It is mandatory to set a start and end time for daily analysis.

Demonstrate legitimacy for the common good.

Mark the area with signs that communicate the project.

NEXT STEPS

Field work to identify device errors depending on installation height, lighting conditions, etc.

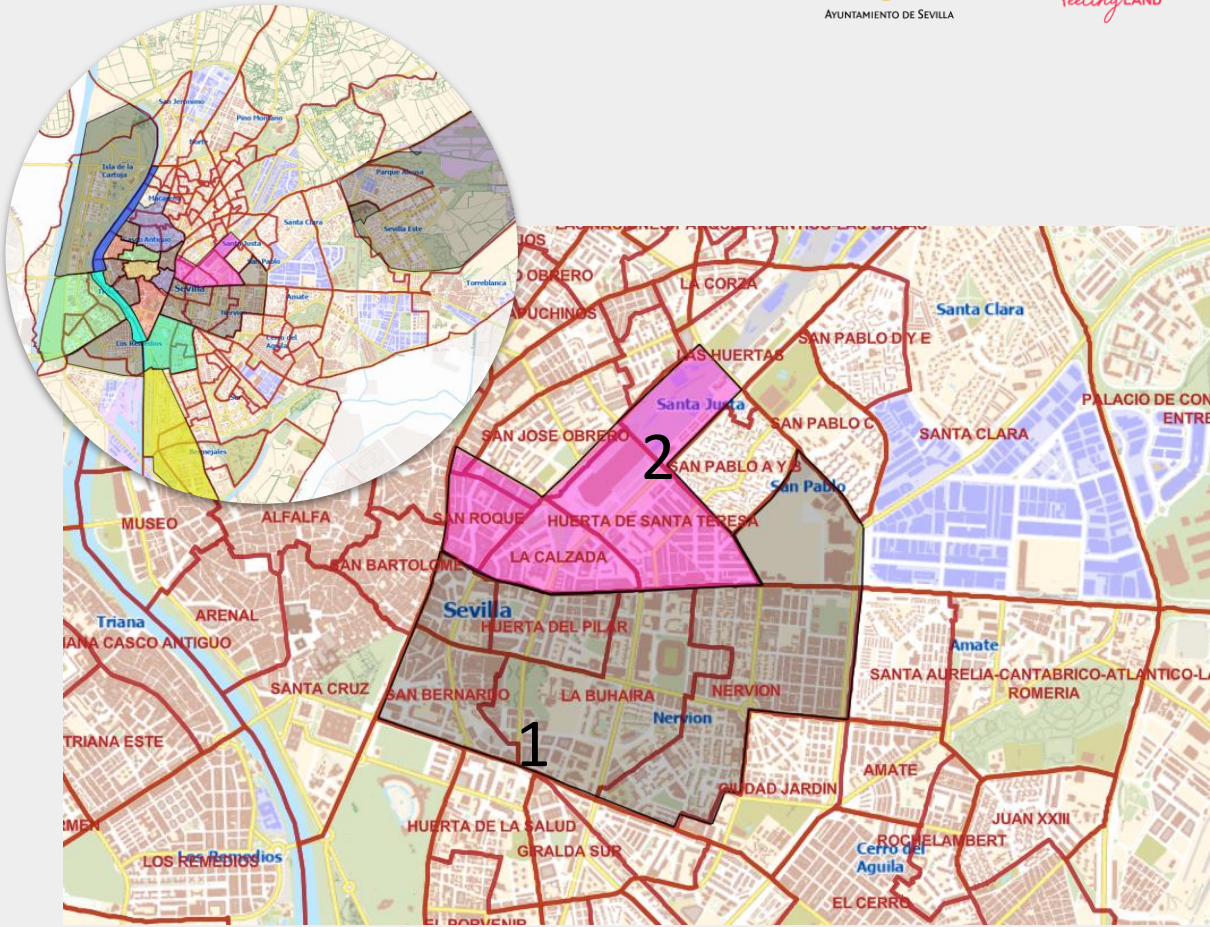
Identify the flow analysis performed on individuals.

Work on a formula that determines how many people are present when including these three data points.

Include all the data in a digital twin to work with it.

Gather the commission to discuss possible solutions.

Delimitation of the Nervión Tourist Zone



Analysis of Nervión

Phases

Neighborhood Diagnosis

Situational analysis to identify existing resources, both tangible (monuments, architecture, parks, etc.) and intangible (traditions, culture, local gastronomy)

Tourism Market Segmentation

Identify the profile of the tourist you want to attract.

Sustainability Plan

Ensure that tourism development does not compromise the quality of life of residents or damage the environment

Design of the Tourist Offer

Define a clear and coherent offer that can attract visitors on a sustained basis

Marketing and Promotion Plan

Develop a marketing strategy that positions the neighborhood as an attractive tourist destination

Measurement and Analysis of Results

Define clear metrics to evaluate the success of the transformation

886.4k Mentions
//
Sentiment

Food & Beverage

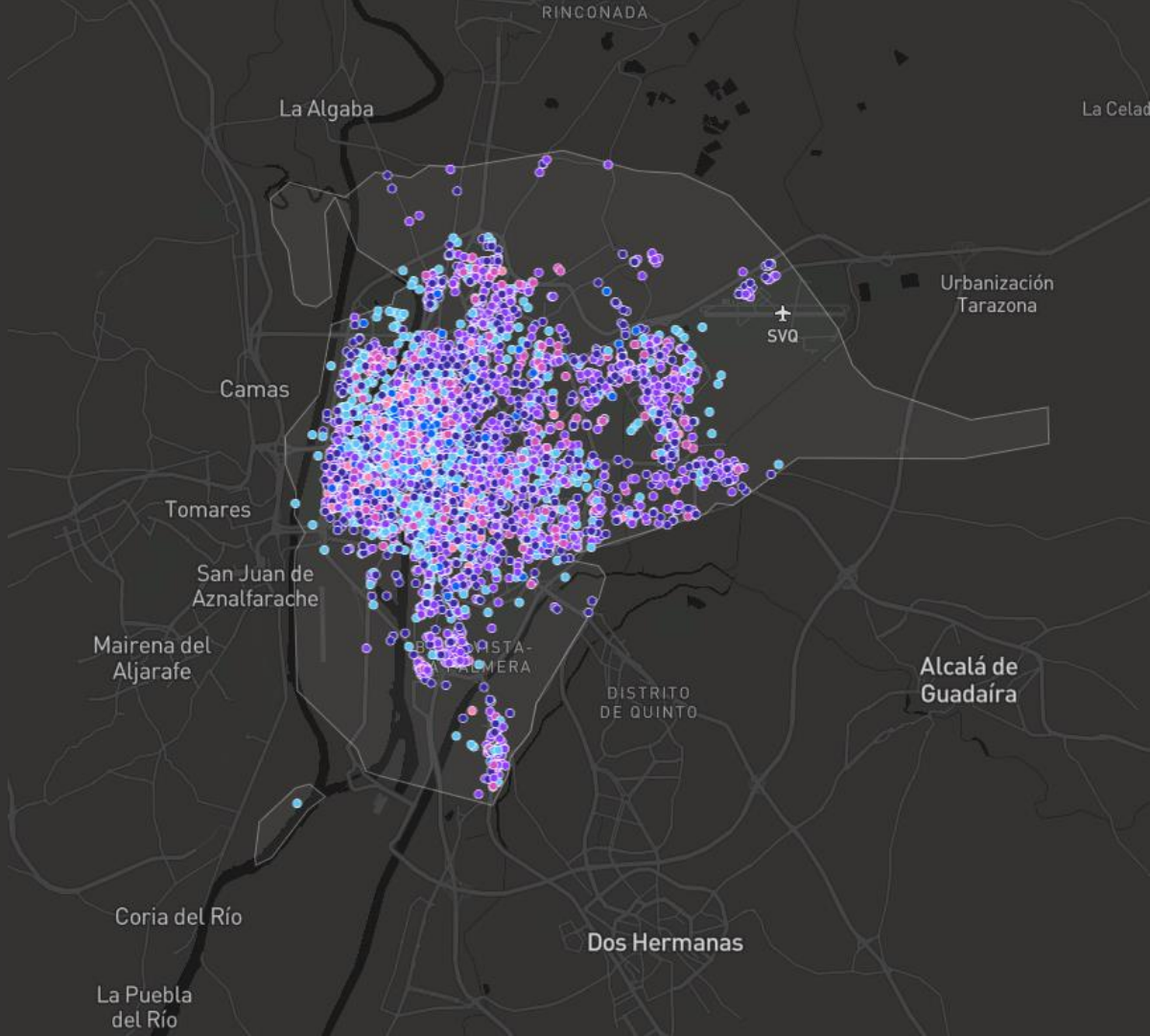
Hospitality

Attractions

Short Term Rentals

Entertainment

Transportation



NERVIÓN

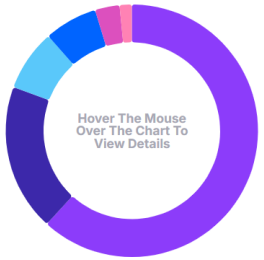
TOURIST AREA

POI volume

649

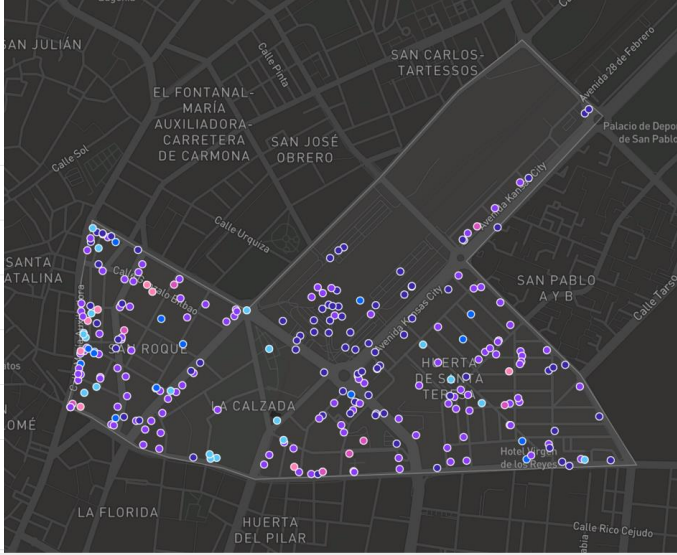
Restoration is the most predominant aspect in **Nervión**. It is more accentuated in section 1 than in section 2.

Total POI volume **191**

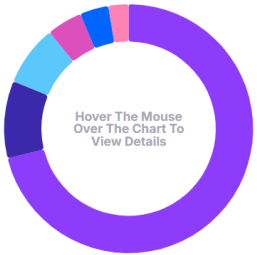


Food & Beverage · Transportation · Attractions · Hospitality · Entertainment · Short Term Rentals

	POI distribution	POI volume
Food & Beverage	61.8%	118
Transportation	18.8%	36
Attractions	7.9%	15
Hospitality	6.8%	13
Entertainment	3.1%	6
Short Term Rentals	1.6%	3

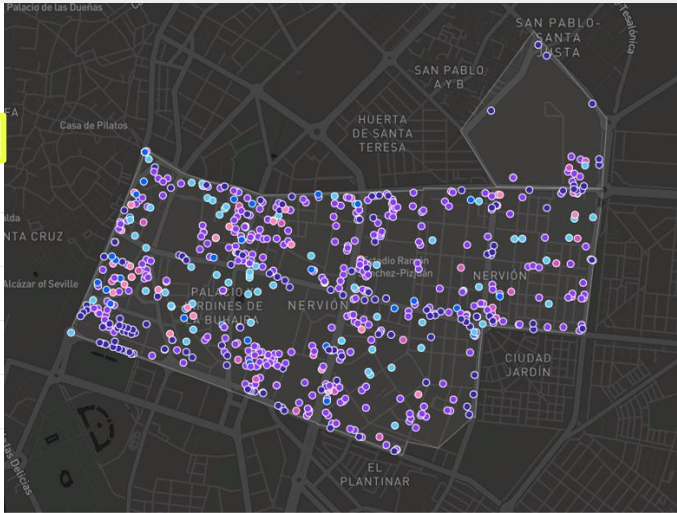


Total POI volume **458**



Food & Beverage · Transportation · Attractions · Entertainment · Hospitality · Short Term Rentals

	POI distribution	POI volume
Food & Beverage	71.2%	326
Transportation	10.0%	46
Attractions	7.9%	36
Entertainment	4.6%	21
Hospitality	3.7%	17
Short Term Rentals	2.6%	12



NERVIÓN

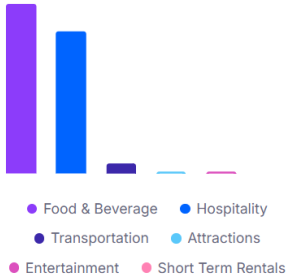
TOURIST AREA

Digital traces

74.400

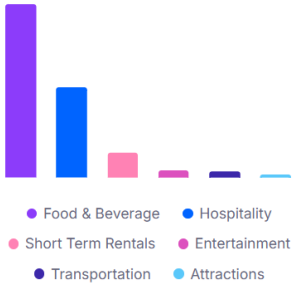
Most of the traces are concentrated in catering and accommodation.

Total digital traces volume **16.3k**



	Digital traces distribution	Digital traces volume
Food & Beverage	51.9%	8.4k
Hospitality	43.6%	7.1k
Transportation	3.2%	527
Attractions	0.7%	106
Entertainment	0.5%	81
Short Term Rentals	0.1%	18

Total digital traces volume **61.1k**



	Digital traces distribution	Digital traces volume
Food & Beverage	56.9%	34.8k
Hospitality	29.7%	18.1k
Short Term Rentals	8.1%	5.0k
Entertainment	2.5%	1.5k
Transportation	1.9%	1.2k
Attractions	0.9%	529

NERVIÓN

TOURIST AREA

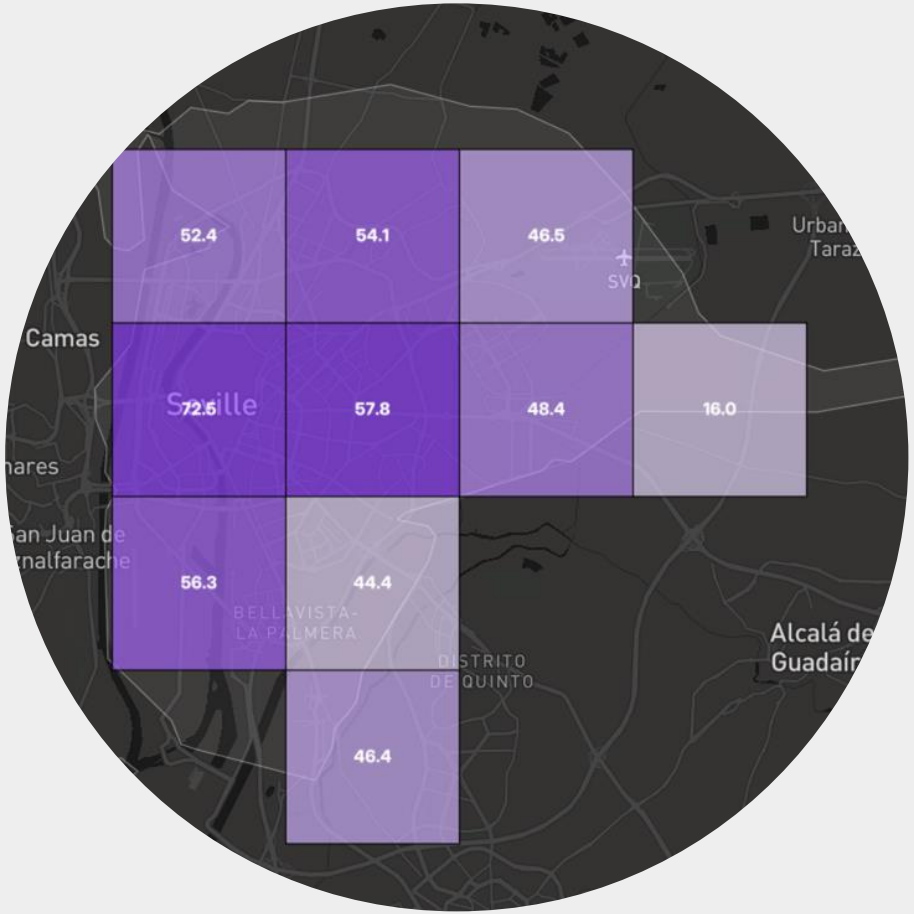
This ranking estimates the popularity of each territory by comparing the number of POIs and their digital footprints and Sentiment.

Popularity of the area

57,8

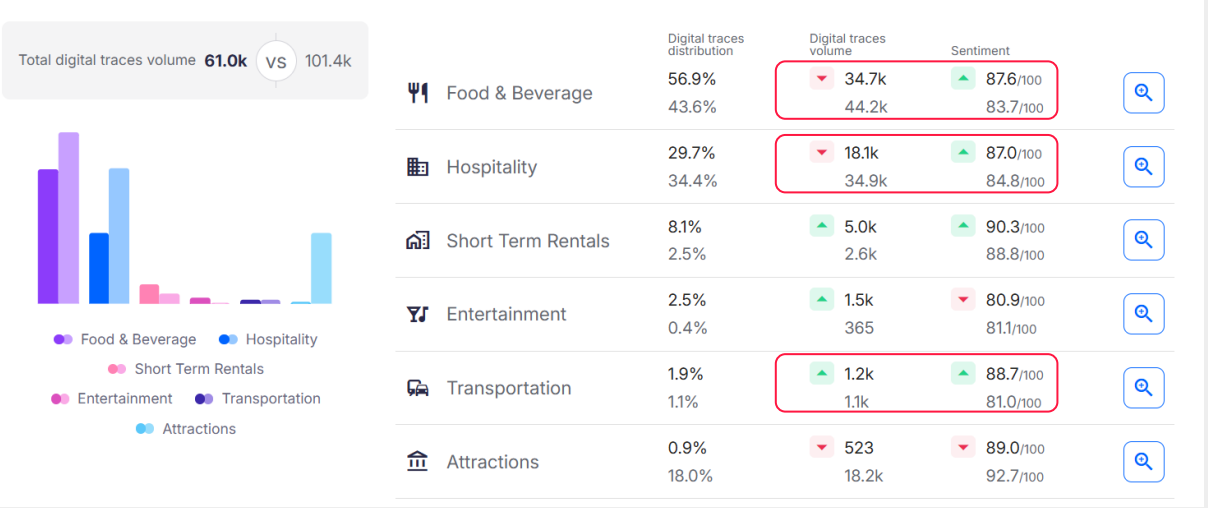
Seville Center

72,5



03 Density and Tourist Flows

Regarding the Santa Cruz neighborhood, gastronomy and accommodation are slightly better rated.



NERVIÓN

TOURIST AREA

SPANISH TRACES
COUPLE // FAMILY
RESTAURATION
ACCOMMODATION

	Digital traces distribution	Sentiment
Spain	38.1% 34.5%	86.2/100 86.1/100
France	9.4% 8.5%	85.2/100 86.9/100
United Kingdom	8.2% 7.0%	86.9/100 88.5/100
Italy	7.5% 8.0%	86.2/100 87.0/100
Germany	4.2% 4.8%	83.3/100 86.3/100

	Digital traces distribution	Sentiment
Couples	57.2% 53.0%	86.1/100 87.5/100
Families	17.8% 26.6%	85.8/100 87.3/100
Single	12.5% 8.1%	86.4/100 84.6/100
Group	11.9% 11.6%	87.3/100 86.7/100
Business	0.5% 0.6%	89.3/100 84.3/100

ATTRACTIONS

This analysis shows that the reviews fall mainly on HERITAGE and RELIGIOUS resources

Punto de interés	Tipología
Jardines de la Buhaira	Jardines
Puente de San Bernardo	Patrimonio
Caños de Carmona	Patrimonio
Parroquia de San Bernardo	Religioso
Parroquia de la Concepción Inmaculada	Religioso
Parque Federico García Lorca	Jardines
Parque Blanco White	Jardines
Parque la Ranilla	Jardines
Real Fábrica de Artillería	Patrimonio
Parroquia del Santísimo Redentor	Religioso
Peña Cultural Sevillista San Bernardo	Deporte
Sevilla FC Immersive Experience	Deporte
Iglesia Portaceli	Religioso
Centro Cívico Buhaira (Palacio Neomudéjar con restos almohades)	Patrimonio
Glorieta Gran Plaza	Calle/Plaza
Resto Plaza de Toros Monumental	Patrimonio
Huerta del Rey	Jardines
Hermandad Sacramental De La Milagrosa	Religioso
Parque de Santo Domingo	Jardines
Exposición de Arte en Parque de la Buhaira.Asociación Buhaira Arte	Cultural

HOSPITALITY

With a few exceptions, most restaurants are aimed at a young public and have recently opened in the last 5 years. There are also many hamburger, Italian and fast food establishments.

Punto de Interés	Nº de reseñas	Sentimiento	Popularidad
Restaurante L. San	2.340	95.56	109.9
Goiko	1.803	93.98	106.16
La Bernarda	1.674	90.3	104.8
Foster's Hollywood	1.124	96.32	99.86
Mareaviva	947	94.31	97.31
Alimentari	684	91.04	92.53
Manolo Bakes	585	97.23	90.94
Burger King	566	95.78	90.35
La Comilona	546	90.28	89.36
Sushimi	498	84.94	87.61
VIPS	448	88.41	86.47

The analysis shows that most of the reviews are in Spanish, **86.5%** of the total. They are followed by reviews in English, French, Italian, Portuguese and in 6th position in Korean.

The summer months are the ones that generate the fewest mentions, increasing significantly from September onwards and peaking in December.

Finally, it should be noted that most reviews are made on Google, followed by TripAdvisor and The Fork (formerly El Tenedor).

ENTERTAINMENT

Low volume of activities.

Most Popular Industry Types

The most appreciated industry types based on digital traces volume and average Sentiment.

		POI distribution	POI volume	Digital traces distribution	Digital traces volume	Sentiment
1	Cinema	14.3%	3	55.9%	910	81.4/100
2	Music Venue	4.8%	1	10.9%	178	88.8/100
3	Dancing	9.5%	2	10.3%	168	73.7/100
4	Escape Room	19.0%	4	9.0%	147	91.8/100
5	Club	23.8%	5	7.7%	126	98.4/100

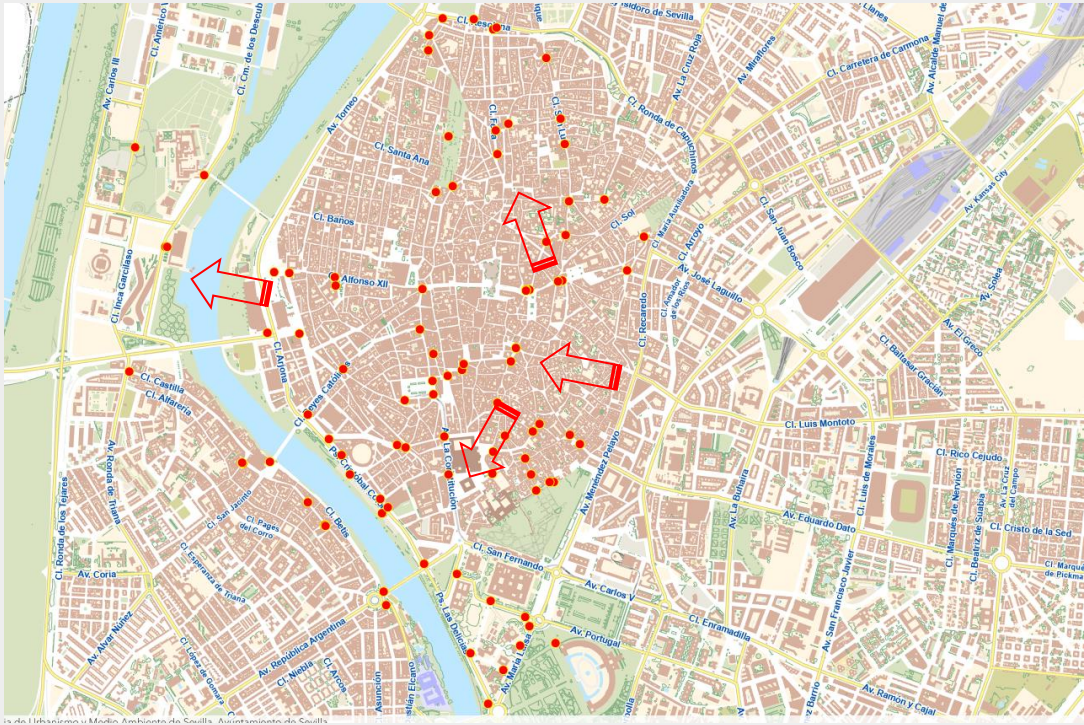
	City	Type	Digital traces volume
Mk2 Cinesur Nervión Plaza	Sevilla	Cinema	590
Multicines Los Arcos - Cines - UCC	Sevilla	Cinema	254
Long Rock Sevilla	Sevilla	Music venue	178
Sala Cosmos	Sevilla	Dancing	95
Asociación Green City (Private Weed Club)	Sevilla	Club	73

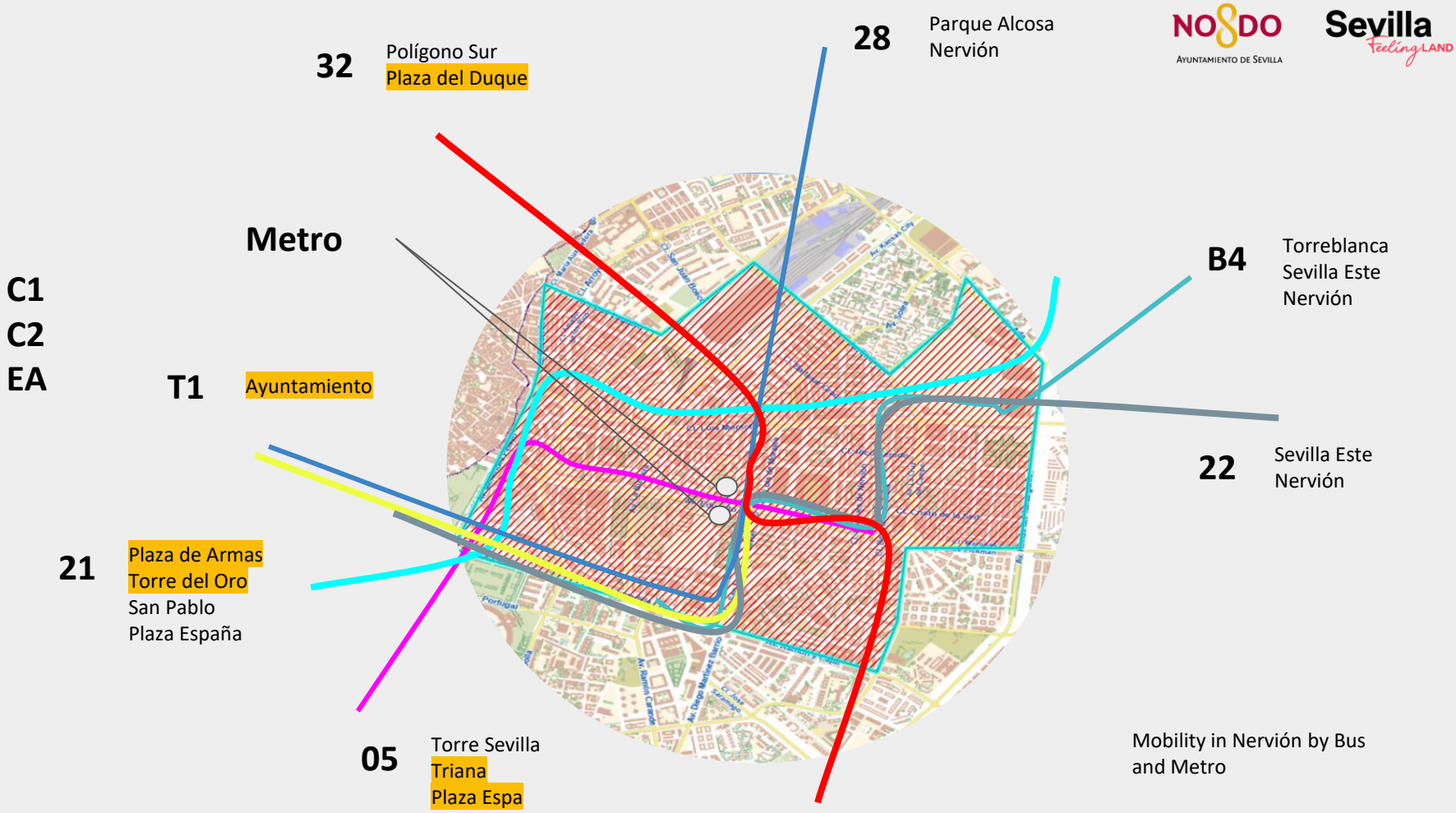
NO8DO Ayuntamiento de Sevilla

Sevilla Feeling LAND

Tourist Signage

The signage creates a strip at Menéndez and Pelayo // Recaredo and directs the flow towards Centro, Norte, Triana and Cartuja.

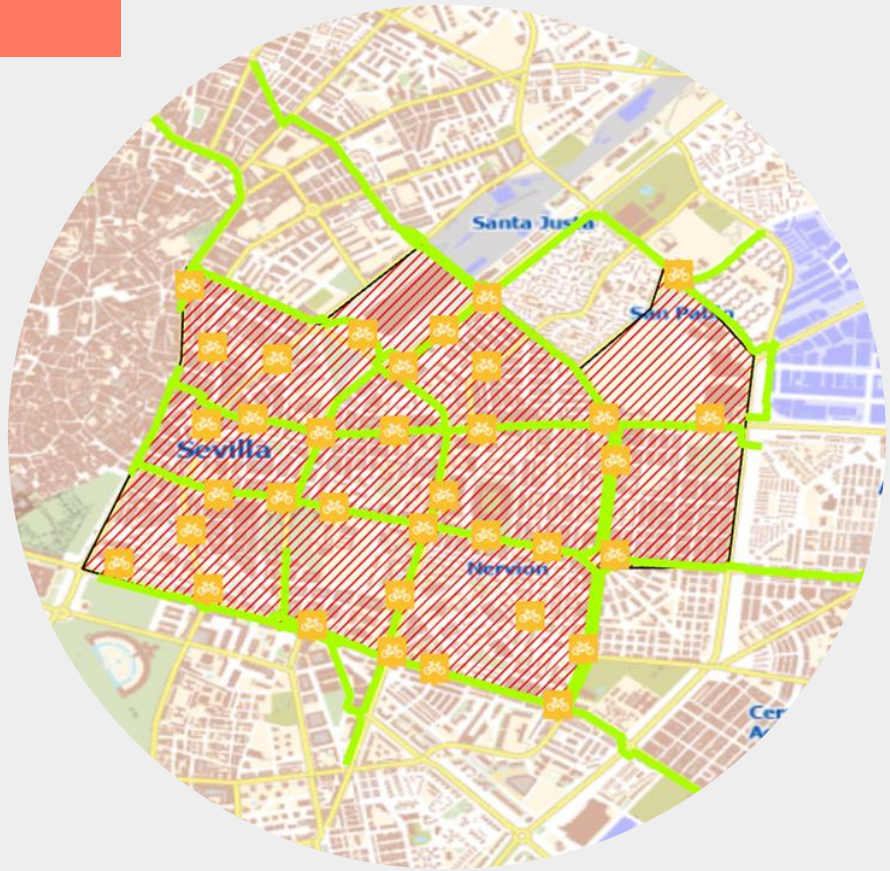



32
Polígono Sur
Plaza del Duque
28
Parque Alcosa
Nervión
Metro
C1
C2
EA
T1
Ayuntamiento
B4
Torreblanca
Sevilla Este
Nervión
22
Sevilla Este
Nervión
21
Plaza de Armas
Torre del Oro
San Pablo
Plaza España
05
Torre Sevilla
Triana
Plaza Espa
Mobility in Nervión by Bus and Metro

NERVIÓN

TOURIST AREA

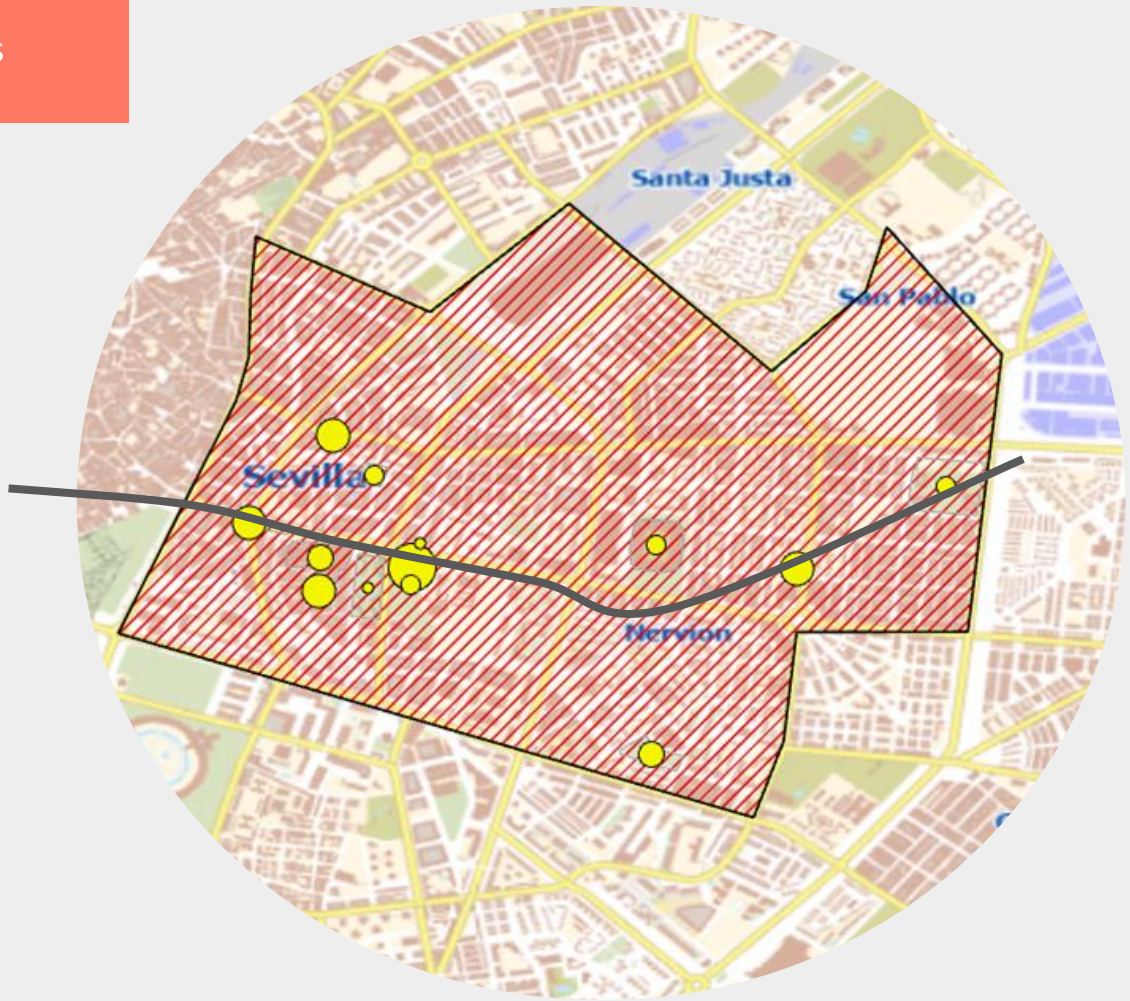
Mobility by Bicycle



NERVIÓN

TOURIST AREA

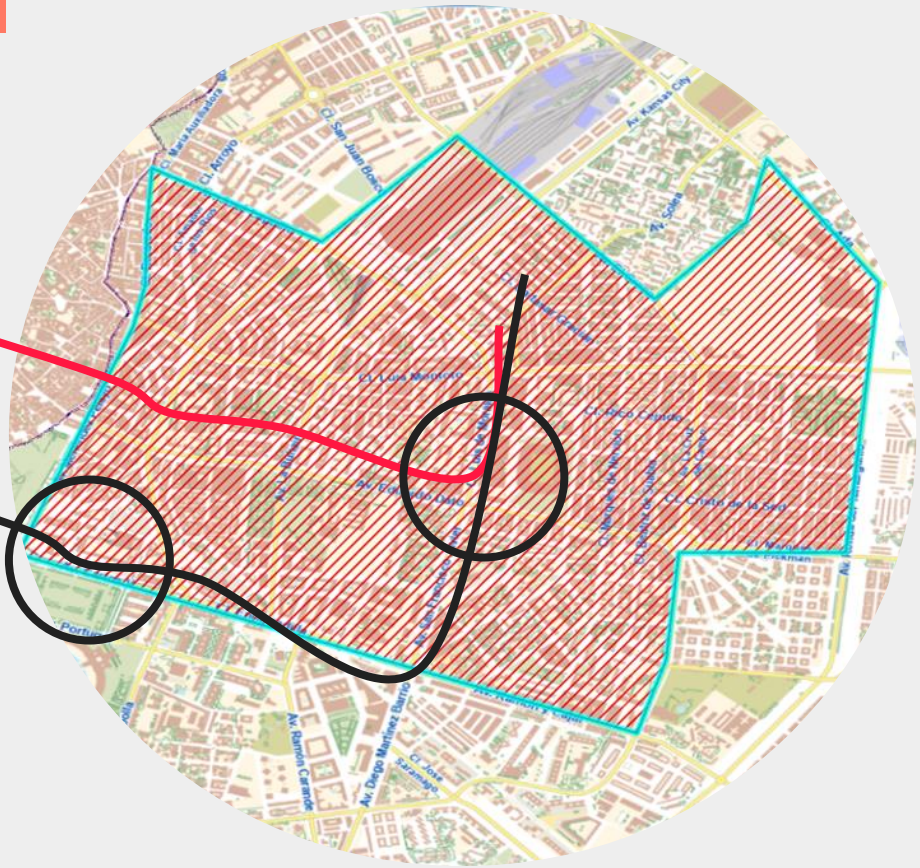
Most commented resource line



03 Density and Tourist Flows

Pedestrian mobility
Closest point to the centre. Improve signage

Mobility transport
Encouraging communication in connected areas



NERVIÓN

TOURIST AREA

Ideal for city events
Connected to peripheral neighborhoods

NEXT STEPS

Diagnosis of the Neighbourhood:
Situational analysis to identify existing resources, both tangible (monuments, architecture, parks, etc.) and intangible (traditions, culture, local gastronomy)

Situational analysis: Identify points of interest and heritage resources.

Infrastructure and accessibility: Evaluate the state of the infrastructure (transport, signage, accessibility) and its capacity to receive tourists**.**

Current Offer:
Analysis of accommodations, restaurants, shops and complementary services.

Vielen Dank !

#SharingIsSmart

NO8DO
Ayuntamiento de Sevilla

Sevilla.
Passion for You

EUROPEAN CAPITAL OF SMART TOURISM

SEVILLE 2023

Federal Ministry
for Digital
and Transport

mFUND
Funding Future Mobility

Workshop series

DRIVEN by DATA

The mFUND Workshops Series about Mobility in Europe

29.04.2025
12:30 – 14 h
(CET)

Workshop No. 15

On the Move - Trading and Sharing Data for Mobility Transformation

Registration: tuvrheinland.webex.com/weblink/register/re70df8f4ccc2f7abc9e11f65b8c1ff4c

Federal Ministry for Digital and Transport

Division DP 20

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