



Smart Cultural Tourism as a Driver of
Sustainable Development of European Regions


DATA COLLECTION FOR SUSTAINABLE CULTURAL TOURISM

Experiences from SmartCulTour


Bart Neuts, KU Leuven (bart.neuts@kuleuven.be)
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**WHAT WE MEASURE
AFFECTS WHAT WE DO; AND
IF OUR MEASUREMENTS ARE
FLAWED, DECISIONS MAY BE
DISTORTED**



Stiglitz, Sen & Fitoussi
(2010)



Toerisme Vlaanderen en minister Demir over groeiend cruisetoeerisme: 'Slechts een fractie van inkomsten, wel veel vervuiling'



1



10 favoriete aandelen van Trends Beleggen voor de tweede jaarhelft

2



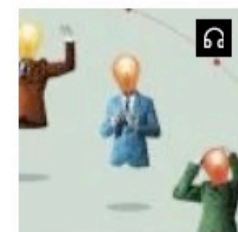
🔒 Het merk 'Average Rob': van online clown tot grootste internetfenomeen

3



OPINIE
'Zo blijft uw beleggingsportefeuille overeind in een berenmarkt'

4



🔒 Bankiers die tegen de stroom in roeien: 'Adviesbeheer is private banking pur sang'

5

01 DATA WITHIN SMARTCULTOUR PROJECT

WP1: Project management

WP2: Theoretical development

Output: New definitions, concepts and trend analysis with regards to CT

WP3: State-of-the-art of cultural tourism policies

Output: Best practices and innovative actions

WP4: Assessing the impacts of cultural tourism

Output: Indicators on CT and CT impacts

WP5: Smart solutions to support cultural development: the SmartCulTour DSS

Output: Decision-support system

WP6: Sustainable cultural tourism laboratories (SCTL)

The Rotterdam Metropolitan Region

The Scheldeland region in Flanders - Belgium

Utsjoki municipality in Lapland - Finland

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WP7: Stakeholder involvement, toolkit and strategic roadmap

Output: Development of toolkit and strategic roadmap for sustainable CT implementation

WP8: Dissemination, communication and project "afterlife" strategy



SmartCulTour *Living Labs*



Living Labs are real-life test and experimentation environments, where users and producers co-create innovations, in a trusted, open ecosystem that enables business and societal innovation. Living Labs enable the co-creation of user-driven and human-centric research, development and innovation of technologies, product and services focused on wellbeing of people.



Living Labs



Stakeholders involved



Tourism case studies

IDENTIFYING
INDICATORS:
CONCEPTUALIZATION



02 DIMENSIONS OF INDICATOR SELECTION



Indicators needed in order to (i) measure state and characteristics of the destination, and (ii) identify whether cultural tourism contributes to sustainability and resilience



03

PROPOSED INDICATORS: SUSTAINABILITY

ENVIRONMENTAL SUSTAINABILITY

Landscape and biodiversity protection, energy usage, water management, solid waste management, climate change, tourism development intensity, reducing transport impact, visitor perception, resident perception

SOCIAL SUSTAINABILITY

Perception of residents, tourism development intensity, inclusion/accessibility, community outlook (participation)

ECONOMIC SUSTAINABILITY

Tourism flow (volume and value) at destination, tourism enterprise(s) performance, sustainable tourism policy and planning, visitor perception

CULTURAL SUSTAINABILITY

Protecting and enhancing cultural heritage (assets), the intensity of cultural tourism development, perception of residents

No. of indicators: 46



03

PROPOSED INDICATORS: RESILIENCE

RESILIENCE TO WHAT?

Definition of disturbance or shock and the indicator for shock (environmental, economic, social, political)

RESILIENCE OF WHAT?

Definition of the unit of the analysis and indicator (country, region/NUTS level, destination/Living lab area, LAU)

RESILIENCE OVER WHAT PERIOD?

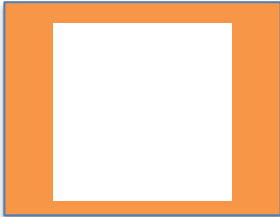
Time scale of the analysis (year, period, etc.)

No. of indicators: **14**



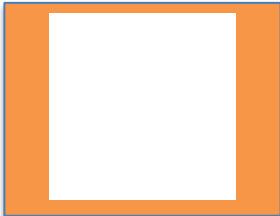
03

PROPOSED INDICATORS: CULTURAL TOURISM



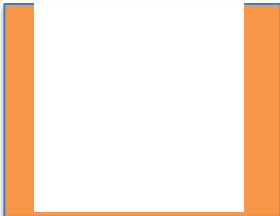
SPATIAL INDICATORS

Presence of cultural resources, availability of cultural infrastructure



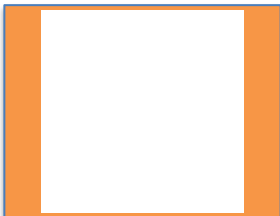
PROSPERITY AND LIVELIHOOD

Cultural (tourism) businesses, employment, cultural governance (institutional framework, policies and financial framework, tourism related governance)



KNOWLEDGE

Cultural education, education in tourism management



INCLUSION & PARTICIPATION

Visitors (cultural attractions, events and museums), participatory processes, social cohesion

No. of indicators: **45**



**COLLECTING
INDICATORS:
ACTIVATION**



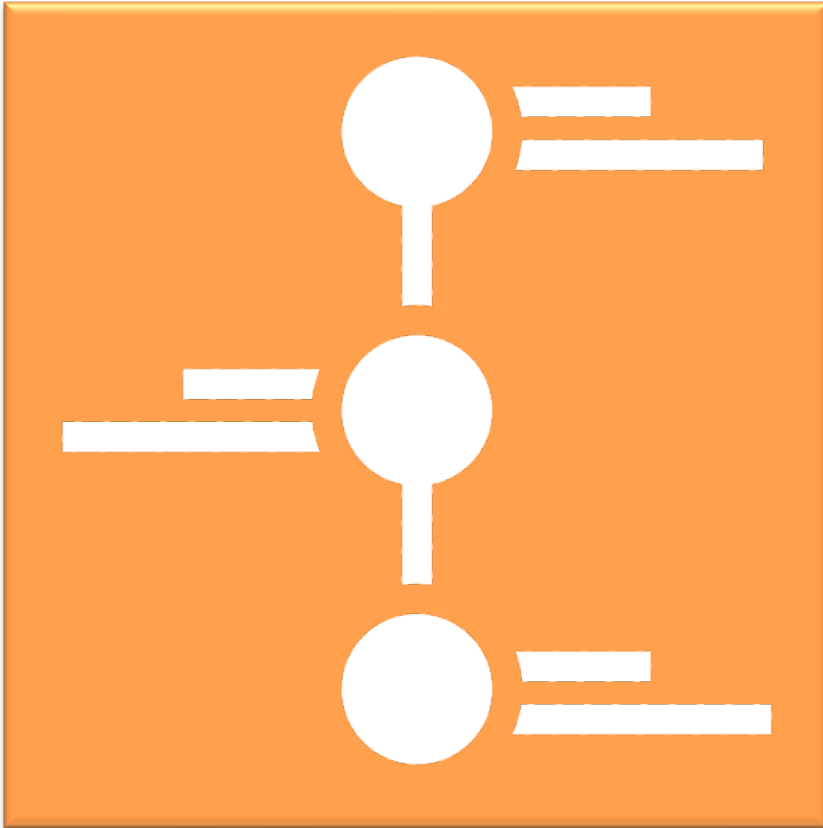
04 DATA COLLECTION PROCESS



- Quantitative and qualitative data obtained from the **official statistics** on LAU and NUTS-2 level
- The qualitative LAU-level data regarding policies and strategic documents required an **in-depth analysis by each partner**
- Data for several LL/LAU indicators have been obtained **via resident surveys and webscraping (TripAdvisor)**



04 DATA COLLECTION PROCESS



- Partners were expected to collect data for each **LAU between 2007 and 2019 (initially)**, except for resident and visitor data that refer to just **one baseline year**
- Since the last global economic/financial crisis started in 2007, this year was chosen as the starting point of the analysis (for the **resilience** analysis)
- Decision was made to omit the indicators with less than 60% of the observations → **from 105 to 49 indicators**

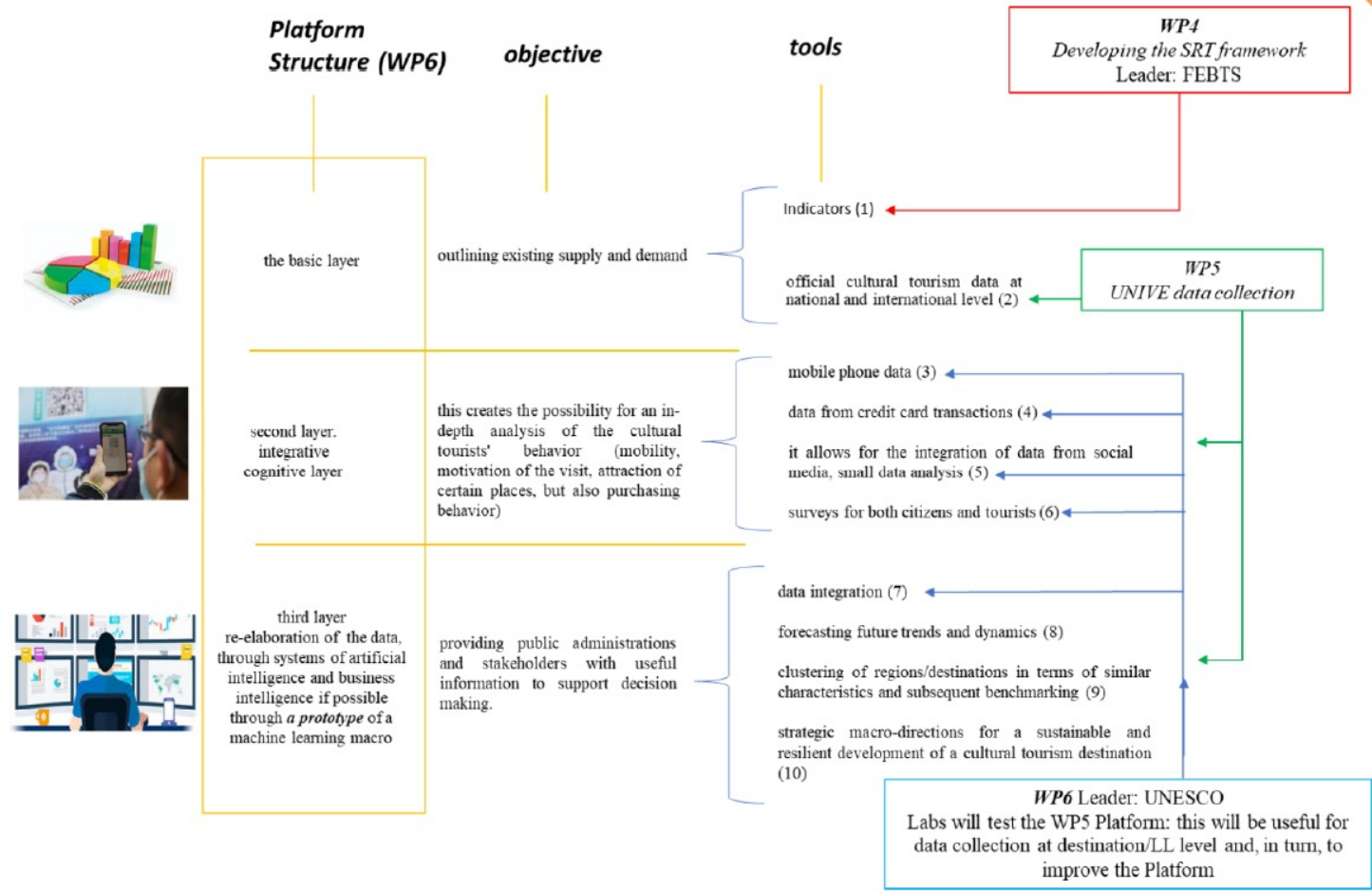




**VISUALIZING
INDICATORS:
DISSEMINATION**

05 GOALS OF SMARTCULTOUR DATA VISUALIZATION

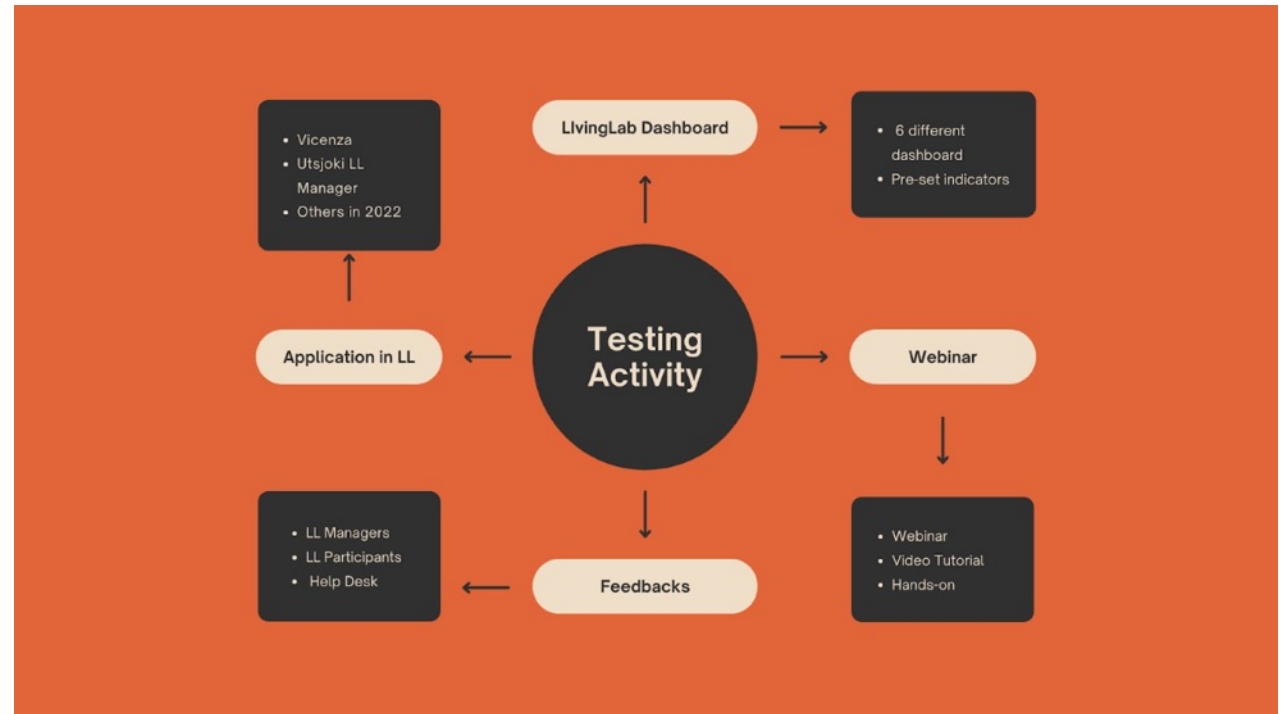
- Implementation of a DSS to allow a systematic exploitation of indicators as well as the use of **additional unofficial data sources and big data**
- Objective of the DSS (i.e. SmartCulTour Platform) was to create additional information to **support living lab innovations**



06 TESTING OF FIRST MOCK-UP DASHBOARD

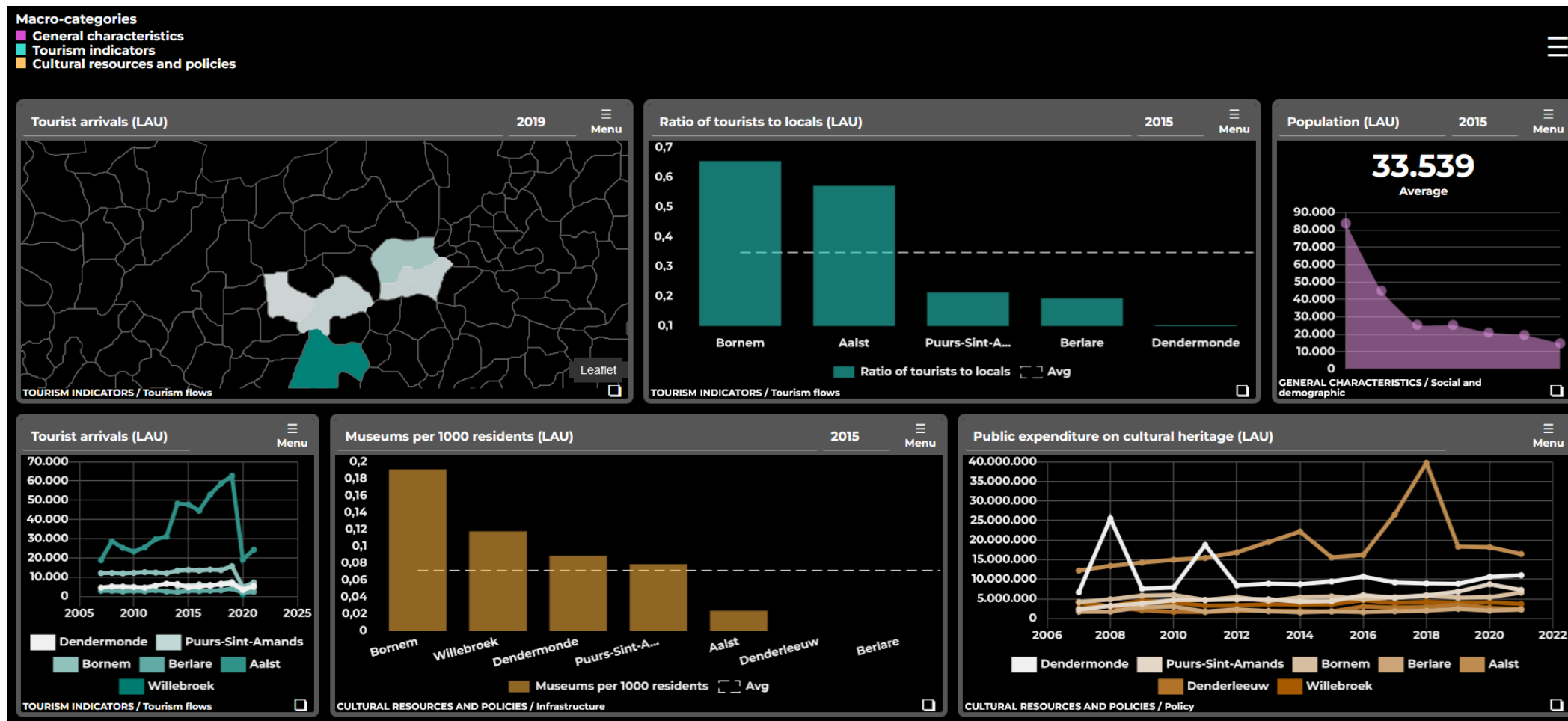
- First DSS version **tested with SmartCulTour LLS** via webinar, video tutorial, train the trainer, questionnaire
- From analysis of feedback → Creation of guidelines and implementation of suggested improvements
- Final DSS divided into **3 parts**:
 - i. Living Labs (Basic/Advanced)
 - ii. Regional/National Insights
 - iii. Living Labs (Premium)

<http://www.smartcultour.eu/smartcultour-platform/>



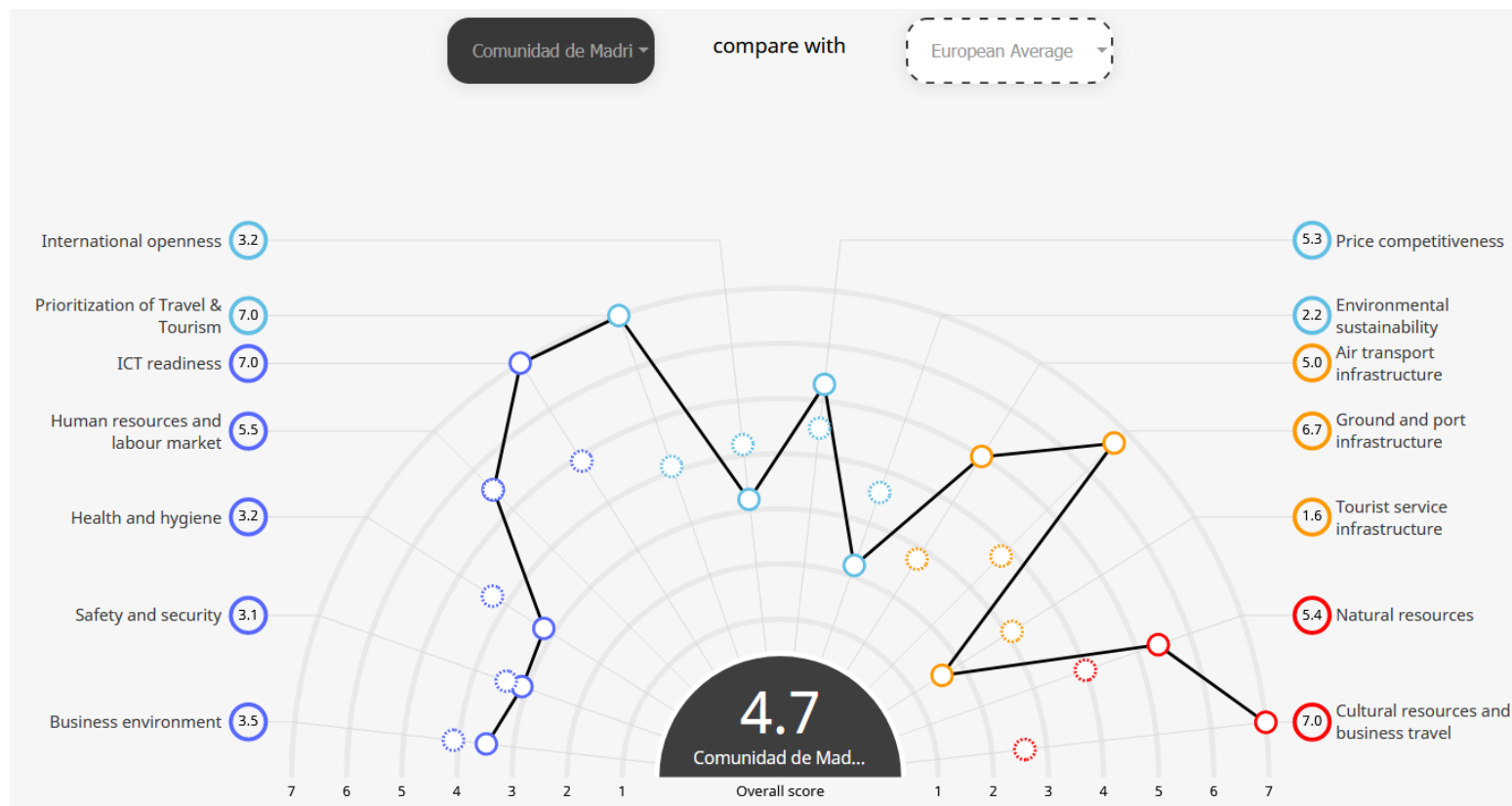
07

CONTENT: LIVING LABS (BASIC/ADVANCED)



07

CONTENT: REGIONAL/NATIONAL INSIGHTS



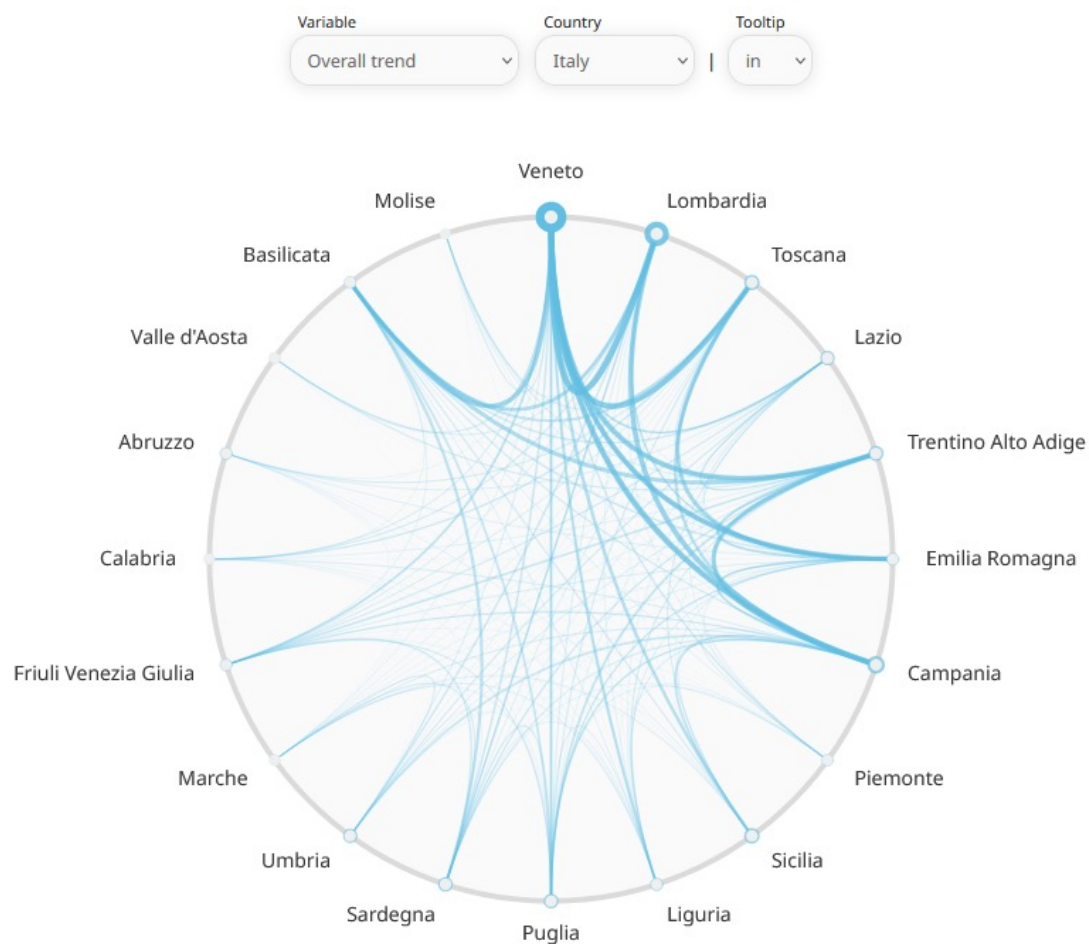
- Provides a regionalization for all EU NUTS-2 levels of the Travel & Tourism Competitiveness Index of the World Economic Forum
- EU regions can benchmark themselves with other regions or with the EU average



Horizon 2020
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07

CONTENT: REGIONAL/NATIONAL INSIGHTS

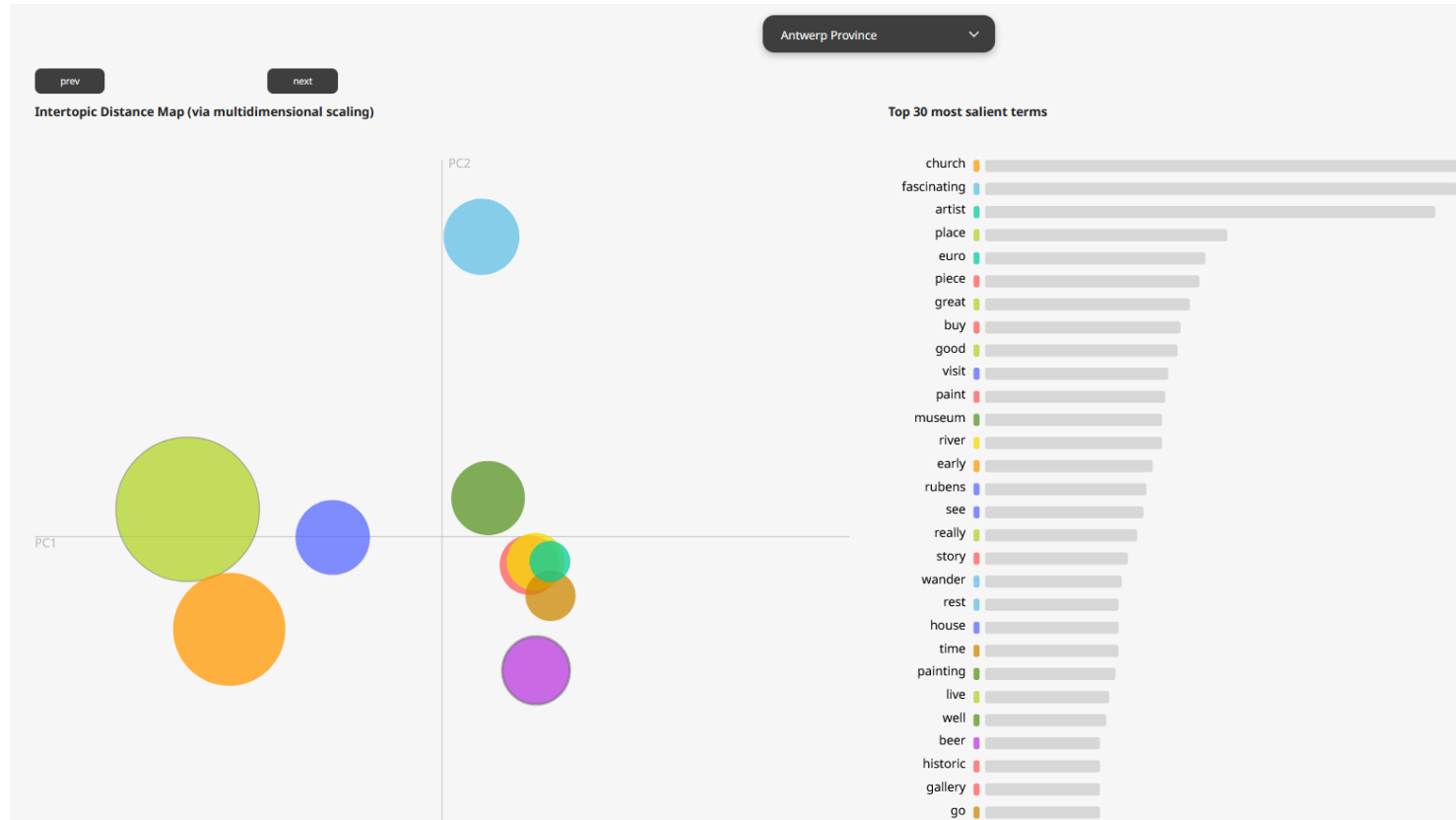


- A second regionalized visualization is the **Tourism Flow contagion**
- Analyses based on time series data and identifies the effects of regional tourism growth on other regions in a country
- Two trends analysed: overall trend in **arrivals and seasonality**



07

CONTENT: LIVING LABS (PREMIUM)



- **Intertopic clustering** links review topics together on destination level
- Based on 5-year scraped data on NUTS-2 level, reviewing museums, buildings, sights, natural attractions, guided tours, shopping, transportation, ...
- Output represents **clusters of words** that are used more often together

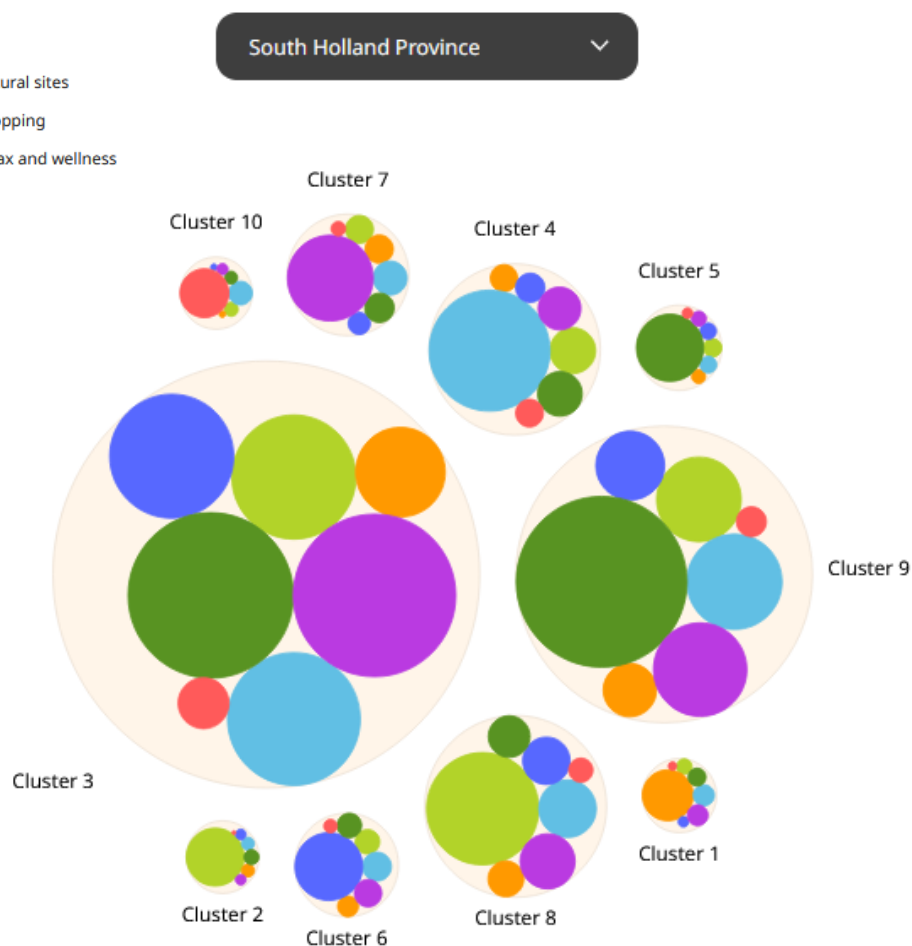


07

CONTENT: LIVING LABS (PREMIUM)

Macrosections

- Tour and activities
- Bar and clubs
- Entertainment and events
- Transports and services
- Natural sites
- Shopping
- Relax and wellness



- **Data clustering** links interests together on reviewer-level (i.e. looking across all reviewed attractions in the destination by a user)
- Based on scraped data on NUTS-2 level
- Identifies links in reviewed attractions (by subtopics) per reviewer to create **typologies of visitors**
- Size of cluster indicative of magnitude of groups in total



07 CONTENT: LIVING LABS (PREMIUM)

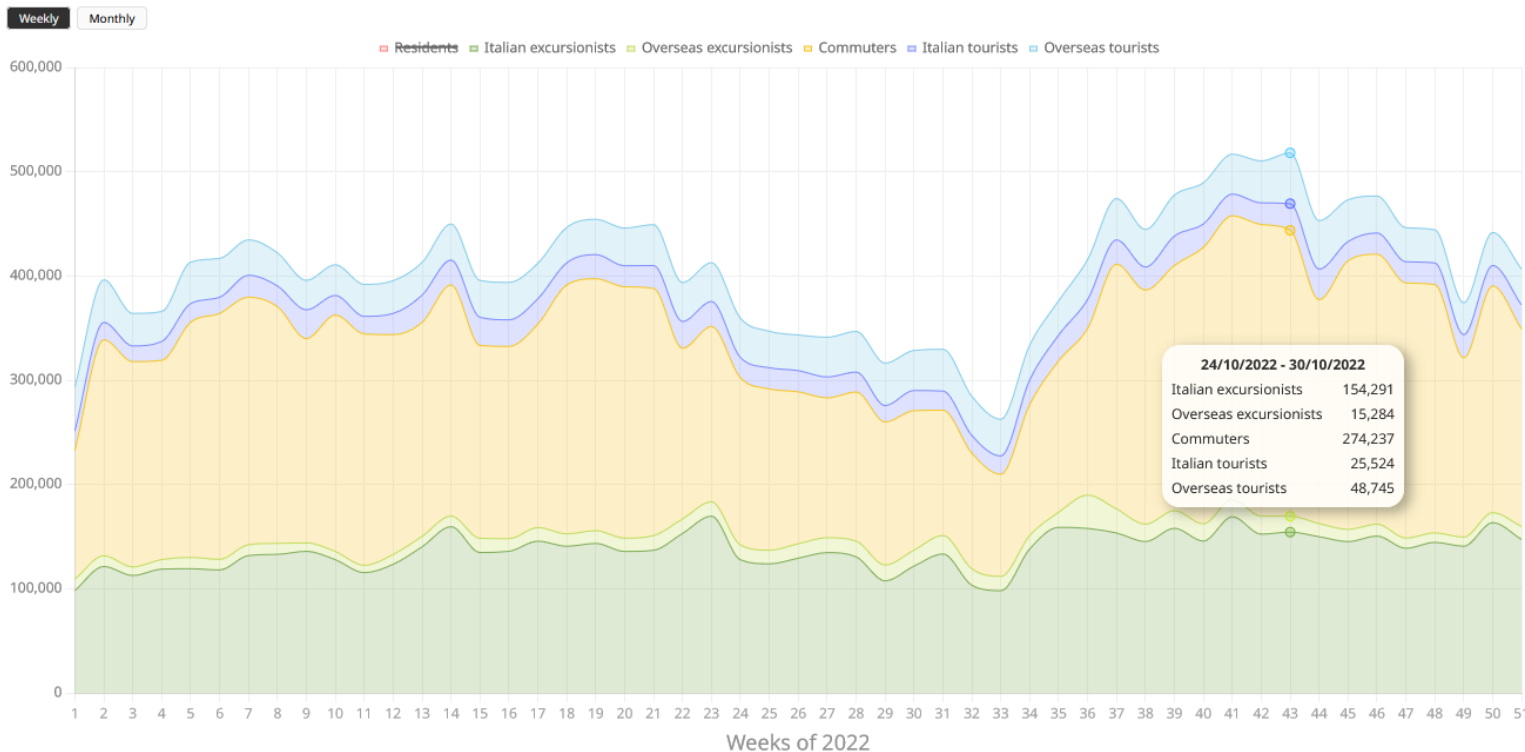
Tourist Presence

Length of Stay

Point of Origin

Accommodation Location

«Tourist presence» refers to the number of tourists visiting Vicenza in the given months of 2022. The data is organized and grouped into six distinct travellers/residents categories for analysis.



- **Telco Tourist Trends Visualizer** only adopted for Vicenza (as use case)
- Indications of relative size of overnight/day tourists, excursionists, and commuters
- Indicates origins of market (locally for excursionists, nationally for day tourists, and nationally + internationally for overnight tourists)



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KEY LEARNINGS


08 CONCLUSIONS ON DATA STRATEGIES

- Evident **lack of LAU level data** for many relevant indicators → these data are vital when studying sustainability and resilience at destination level
- Methodological **inconsistencies across countries and time periods** → need for common framework on indicators, definitions, concepts and units of measurement
- Need for clear **responsibilities on data collection**. And when integrating local stakeholders, how to keep quality assurances?
- Lack of long time-series data diminishes the ability to apply sophisticated data analysis
- **Data without interpretation has little effect** → need to actively engage with data together with stakeholders
- **Future outlook** (e.g. scenario analysis, cause-effect modeling, digital twins) potentially more important than historical data, yet data usually only available with significant lags





You're saying it's a
falsehood. And
they're giving —
Sean Spicer, our
press secretary,
gave alternative
facts to that



Kellyanne Conway (2017)

🕒 Donderdag 5 september 2019, 13:05 CEST

Bezoekerscijfers breken records: toerisme in Gent blijft stijgen



De zomermaanden juli en augustus hebben weer bijzonder veel bezoekers naar Gent gelokt. Het Gravensteen en de Sint-Baafskathedraal werden nooit eerder zo druk bezocht. De cijfers bevestigen de gekende trend: Gent staat steeds meer op de radar als citytrip-bestemming.

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PERSCONTACTEN



Persteam - Dienst Communicatie

Franklin Rooseveltlaan 1

9000 Gent

e: pers@stad.gent

t: 09 266 52 37

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Cultural Organization



Vlaanderen
is toerisme



LAPIN YLIOPISTO
UNIVERSITY OF LAPLAND



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