INCULTUM

Visiting the Margins.
INnovative **CUL**tural **ToU**ris**M** in European peripheries

Innovation factsheet
# Pilot 10: Escape into the archipelago landscape

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Context

A unique feature of Swedish tourism is that Sweden has more than 250,000 islands (far more than any other country) located along the coasts or in the ca. 100,000 lakes. This unique under-developed rural landscape offers a number of coastal areas for recreation and tourism. In this project, three destinations in Sweden have been selected as research areas: the island of Gotland, the Roslagen area with its close geographical proximity to the capital of Sweden, and the island of Torsö that is located in the largest lake of the EU, the Vänern. With different distances to larger urban attractions, these places, although different, all have a historical heritage related to waterways and shipping trade. The three different locations in this project are marked with red spots in the map below.
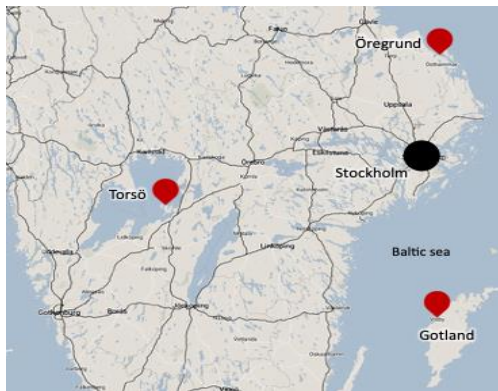
Figure 1 - Map illustrating the three destinations involved in the project
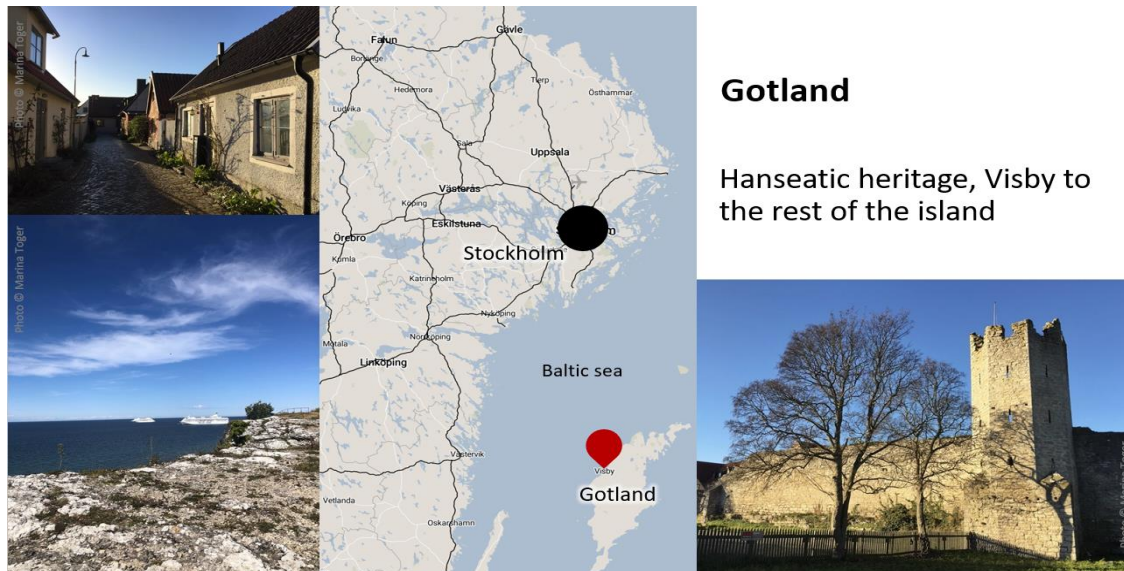
Gotland

Figure 2 -Photos and map illustrating Gotland

The island of Gotland is situated approximately 100 kilometres from the Swedish mainland, where the UNESCO world heritage site of Visby is located. It is Sweden's largest island and is the home to approximately 61,000 year-round inhabitants (https://gotland.com/). Located in the Baltic Sea the island has a long tradition of shipping trade dating back to the Vikings. With an area of 3 140 km², the island is also the home of 92 medieval churches, and all of them are in use for worship (https://www.campusgotland.uu.se/om/gotland/) and with a nature with sandy or rocky beaches and cliffs, where wind-blown pine trees grow, along with fishing villages often likened to Mediterranean counterparts. Another characteristic of Gotland is the proximity to rural agricultural areas characterised by ample Medieval remnants such as houses, castles, monastery ruins, graveyards and embarkations. Visby, the city within the walls, has been a world heritage site since 1995. It was named by UNESCO as the best-preserved walled trading city from the late 13th century. In Visby you find streets with medieval warehouses, alleys and ruins.

Roslagen

Öregrund

Öregrund, Östhammar and further on in Roslagen – Bathing resort heritage, Swedish coastal classic experience, Viking heritage

Figure 3 - Map showing the location of Öregrund

Roslagen is a coastal area belonging to the region of Uppland and is located in the eastern part of the region. The area consists of four municipalities Östhammar, Vaxholm, Österåker and Norrtälje, and has over 13,000 islands. The history of the area goes far back and is mentioned among others around the 13th century in the so-called Uppland laws that at that time was regulating the construction of warships for the king (http://sjuhundraleden.se). One of the small towns is Öregrund, chosen as point of focus in this project, that in the 15th century was granted town charter allowing it to construct ships and has been the harbour for both fishermen and shipping trades (https://www.roslagen.se/en/oregrund).

Figure 4 - Photos showing the harbour in Öregrund, 2022 (own picture)

Öregrund is a small and picturesque coastal town, with well-preserved wooden buildings that boast beautiful carpentry. Visitors can explore (see for example: https://trippa.se/tripp/oregrund-promenad/karta) lovely shops and relish local cuisine at cafes and restaurants, particularly during the bustling summer season that features events like the Boat Week bringing in tens of thousands of visitors (www.svt.se, August, 5th,

2019). In autumn, winter, and spring, the town offers quiet tranquillity with nature experiences, fishing, kayaking, and cycling tours. The harbour provides easy access to the archipelago by boat, and a car ferry is available to the nearby island of Gräsö.
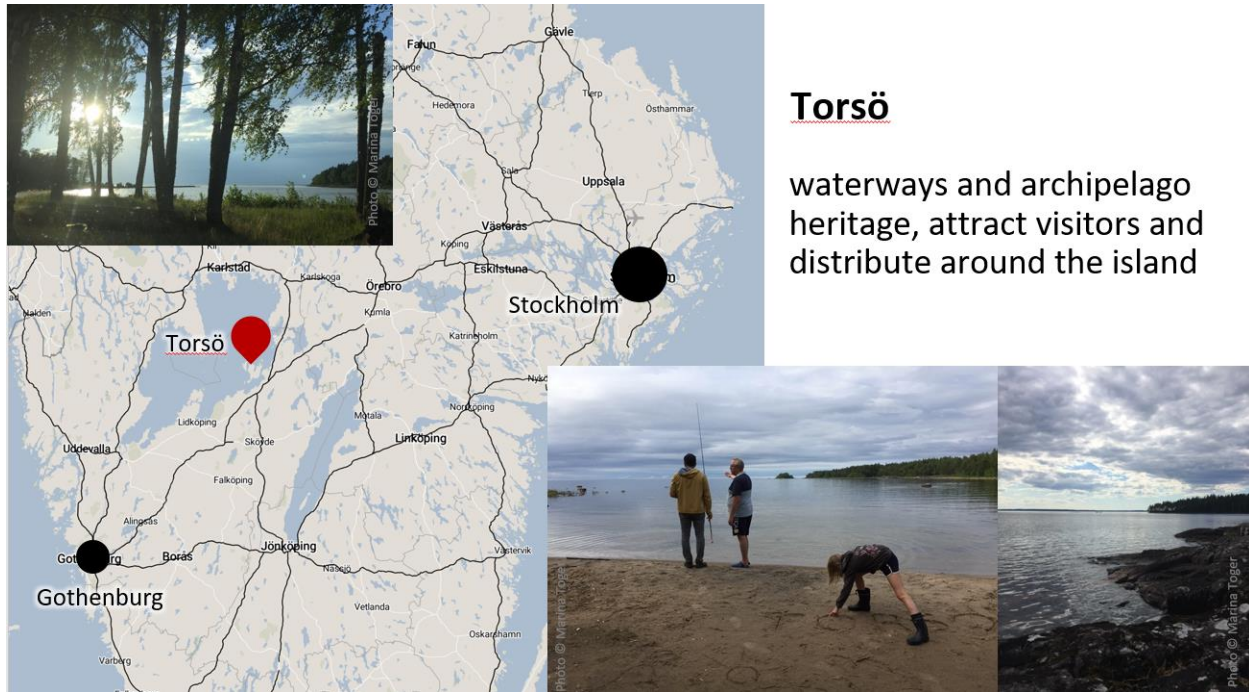
Torsö

Figure 5 - Map indicating the location of Torsö and photos of the island

Torsö is located near the town of Mariestad that is located on a highway between the two largest cities in Sweden, Stockholm and Gothenburg, about 3 hours of driving from each, and is one of about 22,000 islands in the European Union's largest inland sea, the lake Vänern. The lake with its archipelago is a Biosphere Reserve in UNESCO's EuroMAB Programme (https://en.unesco.org/biosphere/eu-na/lake-vanern), and has a rich fish and bird life. Lake Vänern is connected with canals to both the Baltic Sea and to the Kattegat (Gothenburg) by the 19th century Göta Canal, which made it important for the shipping industry. Torsö is the largest island in the archipelago, connected with a bridge to the mainland, with 600 full-time inhabitants. The island inhabitants come from families of skippers and agricultural farmers. During the Middle Ages, there was a large ship fleet based on Torsö (https://www.abc.se/~pa/publ/innanfar.htm).

Motivation/Contribution

In the pilot, Escape into the archipelago landscape, the focus is on innovative ways to understand visitors and their spatio-temporal behaviour as this can reveal both challenges and opportunities for the specific locations. With a more evenly distributed tourism between urban and rural areas, the coastal rural areas will be able to maintain and grow employment and attain a positive net population growth. A challenge in this is to balance the attracting of visitors to these areas while avoiding the negative impacts on the community and the cultural heritage. With an amplified understanding of tourists' interests and behaviour patterns, we can gain insight into how information and selection of activities can be designed during the tourists' stay and, in that way, enabling the destinations to meet their wishes, while also considering sustainability issues. Understanding how to attract tourism to the more remote areas is therefore also highly prioritised among politicians as well as the common citizens of Sweden.

A living countryside is the common feature of the three different destinations in the Swedish case, as this also represents a challenge that many places in Sweden, as well as rural and peri-urban areas in many countries, are experiencing. The question though is how to attain a living countryside and how to attract visitors. To gain insights into visitors' behaviours, what triggers their engagement, and their impact on a community, it is necessary to understand their spatio-temporal movements and the interactions that take place in the meeting between the visitors and the visited community's cultural heritage. Collecting data on spatio-temporal mobility can provide insights into consumption patterns and factors impacting their engagement, as well as the exposure of different areas. These methods can contribute to developing for example:

- Geocoded services to support marketing of tourism in depopulated areas;
- Development of new methods and tools for segmenting tourists based on revealed behaviours;
- Creation of a digital repository for GIS-data connected to the project;
- Co-creation of knowledge related to policy and strategy formulation and integration in collaboration with local destination managers and tourism development stakeholders

The project contributes to INCULTUM through a number of innovations, both in methods for measuring tourist's behaviour and engagement, and in how these insights are integrated into a variety of participatory models. A description of these innovations is presented below.

Understanding behaviours in a spatio-temporal context

By combining different data sets, common characteristics, needs, and behaviours among consumer groups are identified, contributing to insights on different consumption patterns that can facilitate destination management, planning of marketing activities, and distributing the flow of tourists within a destination. By combining four sets of data the UU team has developed a model for collecting mobility data among recreational visitors combined with background information and data on how individuals portray the destination; mobile phone data, GPS-loggers, questionnaires, and netnography. Through the mixed methods, different phases of the engagement process can be measured. This can be summarized into figure 6 below.
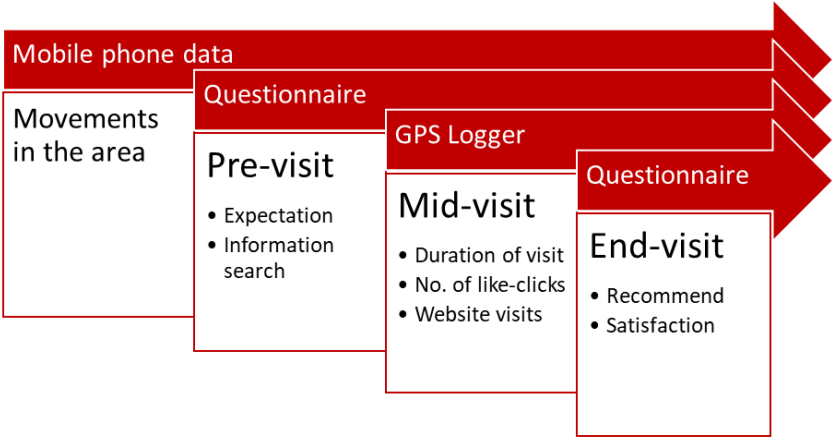

Figure 6. Operationalised analytical model of a visitor's engagement process

Mobile phone data enables aggregated analysis at a national or regional level, but requires high density of antennas in an area of interest to enable sufficient spatial accuracy for a local analysis. This type of data can be used to provide insights on the aggregated movements of visitors and offers information on how the density of individuals in different areas changes over time, such as indicating the difference in density between summer and winter time, or as with the pandemic outbreak to identify changes in movements. In this project, mobile phone data has been used to identify changes in modes of transportation during the pandemic, and as a tool to identify seasonal changes in density of individuals.
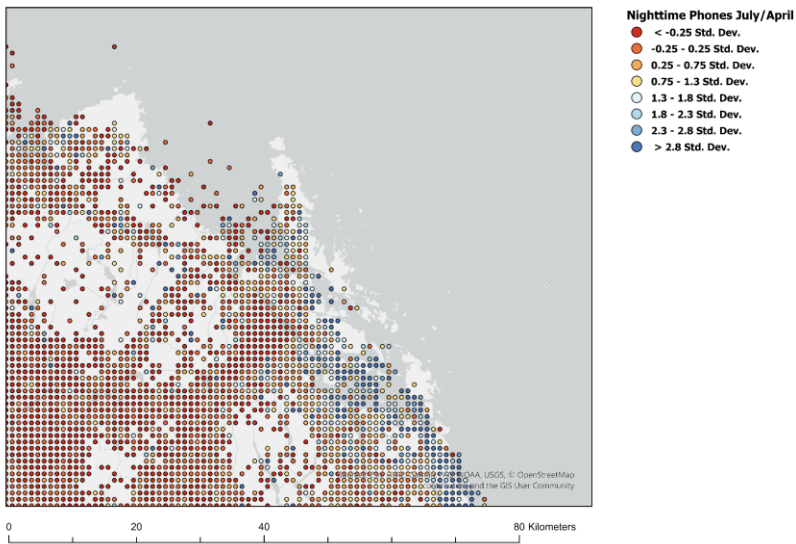
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Figure 7 - Image showing mobile phone density difference between April and July

Among the more important methods for this data collection is the use of GPS-loggers for improving our understanding of mobility behaviour at destinations. GPS-loggers use GPS-signals (satellites) to geolocate visitors' positions. This is a technology commonly integrated in modern equipment such as smartphones and/or mapping devices. Contrary to most other technologies, GPS-loggers provide a set of fine-tuned data – this because the GPS-signals have fewer obstructing features (larger or densely built buildings are blocking or reducing accuracy of signals, or remote mobile phone antennas), making rural use of GPS-loggers ideal.
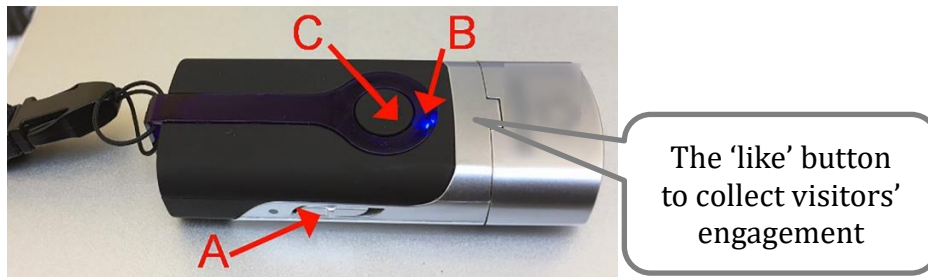

Figure 8 - GPS Logger used in the project. a) indicates power switch, b) Blue light showing that the device is turned on, c) 'Like' button

The method relies on finding a good gate point from where the visitors enter the area, and preferably where they pass on their way out. GPS-loggers are given out to the tourists together with an explanation about its function, including pointing out the button for interaction that they can click (indicated by c) in Figure 7 above) and the on/off function (indicated by a) in Figure 7, in case they want to not be tracked for some specific part of the

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time). Tourists are instructed to keep the GPS-loggers with them, and to click at any location they like or something they find interesting. While the tourists are exploring the destination, each tracker records their spatial locations and timestamps, which later can be mapped. Through this method, the visitors' movements in different areas that engage the
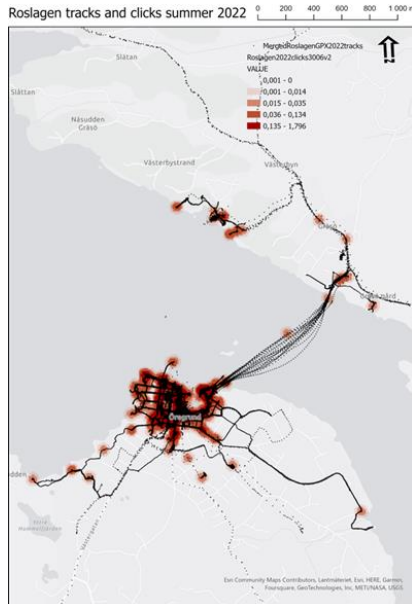

Figure 9 - Map showing a summary of GPS tracks and 'Like' clicks

visitor can be identified.

Questionnaires

The questionnaires are distributed to gain insights about the characteristics of the visitors and their perceptions of the destination. Questions included information related to:

- Demographic data
- Information seeking behaviour
- Activity preferences
- In group or alone (monads)
- Expectations
- Satisfaction
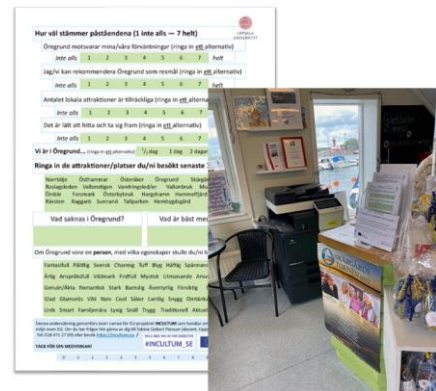- Willingness to recommend (WOM)

Figure 10 - Questionnaires

Netnography

To complement the understanding of the individuals' movements and characteristics, a netnography has been initiated. In this part, the researchers are performing a netnography

study for the destinations, collecting posts hashtagging the destination names from Instagram. The purpose is to examine what kind of discourse is taking place regarding the destinations on Instagram and what kind of actors that are involved in this discourse. The netnography thereby complements the GPS data, mobile data and surveys where it could help in the process of destination development for the actors of the destination.

Participatory design and involvement of community

To facilitate involvement of the community in an inclusive approach, a bottom-up process is developed building on the stakeholders' needs, challenges, and identification of opportunities.

A five-step model is used to derive the territorial touristic intelligence:

Part 1. Anchoring. Through interviews and conversations with different stakeholders of the respective destinations, the location-specific challenges and opportunities are identified. This is a continuous and iterative process based on dialogue with different stakeholders, such as the folklore societies, municipality/regional actors, hotels, and other actors. Based on the anchoring process, the data collection strategy is developed.

Part 2. Data collection - Existing movement patterns. Based in the dialogical communication, movement patterns through collected mobile data and GIS data along with surveys provide insights to identify the unexplored and potential places to develop, and the areas that run the risk of becoming congested if further exploited. The results are communicated continuously with the DMOs and other stakeholders. In these activities the different stakeholders at the destinations have the opportunity to take an active part in the data collection and the results from the study on the tourists' movement patterns.

Part 3 - Movement patterns and perceptions - in this part, the researchers analyse mobile data together with the surveys, GIS data, and netnographical data. This analysis has also been integrated into academic courses, where students take part in identifying research questions and analysing the material. Through this process, iterative learning takes place while also allowing for new perspectives on the material.
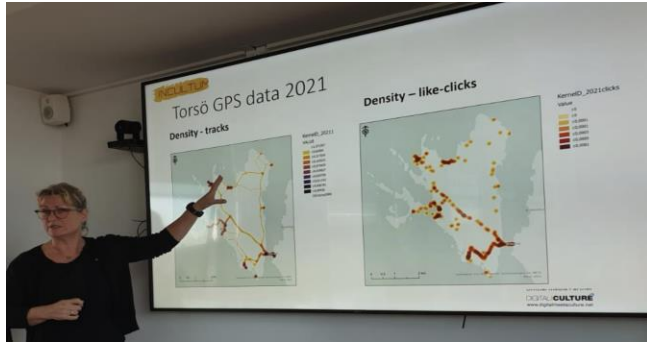
Figure 10 - Presentation from one of the workshops

Part 4 - Workshops. Based on the results derived from the data analysis, workshops are arranged with the different stakeholders in a specific destination, in which data is presented and discussed in-depth. Service development and innovation processes are discussed.

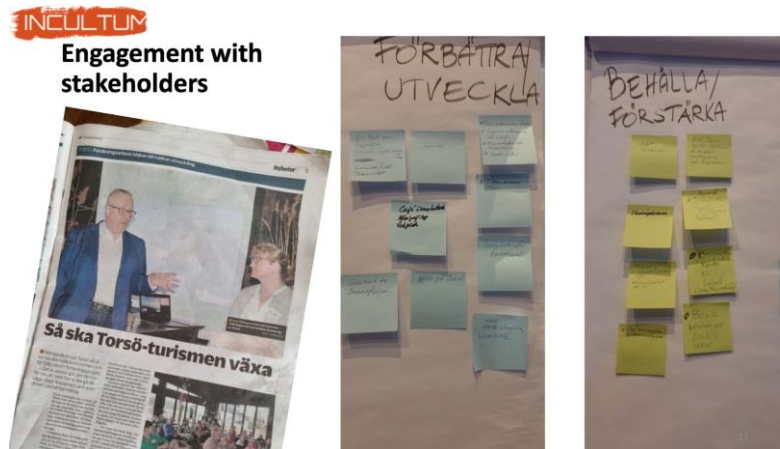*Figure 6 - Photos from one of the workshops in Torsö.*

Figure 7 - Media reporting about one of the workshops (to the right), and post-it notes used in one of the workshops

Stakeholder workshop, structure

Round 1

- what to keep,
- what to improve = grouped into information, attraction, availability

Round 2
Grouped by information, attraction, availability:

- define what we have,
- what needs to be developed,
- what could be added in the future,
- targets.

Round 3
Based on activities from round 2:

- which of these activities will you bring into your organisation to work with,
- who are the important others you need for this (new relationships).

Figure 8 - Image showing the structure of the stakeholder workshops

Through discussions, an idea generation process is initiated based on the stakeholders' needs and the potential of the destination.

In Part 5 the new ideas are turned into practice, such as in the form of products or processes.

The participatory approach is adapted to type of question being discussed. The approach is summarized in table 1 below.

Table 1. Participatory approaches and results

	1st year	2nd Year		3rd year	
Participatory approach	Co-designing data collection with stakeholders	Stakeholder workshops to discuss results from data collection	Hackaton and Teaching	Training session	Geo-design
Purpose	Identify common issues related to visitors and residents, design data collection	Present and discuss results to identify actions to take	Develop ideas and teaching method	To share experiences on the method developed in the project on how to gain insights into visitors' behaviours and the impact they have on a community.	Facilitate the process of developing trails through bottom-up processes
Format	Meetings	Researchers developed a three-step model, see image "Stakeholder workshop structure"	Course for Ph.D. students on the research method used by the project. The course included a Hackaton where 3rd year university students together with the Ph.D. students analysed the data collected by the Swedish research team.	Educating through a training session	Using printed maps showing heat maps of areas 'liked' and visited by many. Using transparent film, the participants were asked to draw a historic trail, a family trail, and a nature trail
Participants	Destination/place developers, tour operators, municipality, representatives, entrepreneurs, academia	Local community associations, the Swedish church, municipality officers, Leader project representative, conference center, fishing guides, shops selling handicrafts and other local actors.	Third year level students in cultural geography learning GIS and international Ph.D. students learning spatio-temporal methods in hospitality research.	Place developers, Destination Management Organisations, Interest organisations, GIS analysts at local municipalities from different parts of Uppsala county.	Local entrepreneurs such as hotel owners, shop owners, camping site entrepreneur (also representing residents), municipality representatives
Results		New collaborations, identifying areas to develop, and actions to take (developing websites, develop signs and trails)	Results were presented at a research workshop, resulting in an SI in Scandinavian Journal of Hospitality and Tourism. Two	Participants learned about the method and have shown interest in continuing working on it.	The suggestions for trails will be implemented

Promotional and visit tools

Based on the involvement of the community and stakeholders in participatory processes, a particular aspect that has been identified is that knowledge is missing on visitors using existing walking trails. As a way to develop more knowledge about these visitors, QR codes along the trails are used for not only sharing information to the visitors, but also for collecting data on numbers of visitors, visiting times, etc., as a complement to using GPS movement data.