



TOURISM TREND RADAR

Digital Tourism - 2020 Edition





BALTIC SEA
TOURISM CENTER

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The development and production of this publication have been supported by the Interreg South Baltic Programme 2014-2020 (Project: Baltic Sea Tourism Center, Project # STHB.02.01.00-DE-0028/16) and the Stralsund University of Applied Sciences (HOST).



European
Regional
Development
Fund





Ferry
Cheapest ticket
74€



Double room
Number of free rooms
147€



Baltic Sea
Temperature
16°



Sauna
Distance
135m



Parking space
Utilization
34%



Cruise liner
Cheapest ticket
293€



Beach chair
Distance
72m

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Seeing what is next

Trends, megatrends, new developments and innovations, globalization, digitalization, personalization, and xyzlization are around us on a daily basis and we wonder how to make sense considering this ever-increasing **information overload**. To do at least “something”, once a year we put ourselves in the hands of (sometimes self-proclaimed) trend gurus to get the extra kick on what is driving our industry - but the latest on our return to the office we are caught in our daily routine. Until next years’ (expensive) trend seminar. At the BSTC Baltic Sea Tourism Center (BSTC) we believe this is an unsatisfactory situation. And we started to work on it.

As our BSTC Tourism Market Monitor (TMM) is based on a proprietary “facts & figures” database from which we produced the annual report on the “State of the Tourism Industry in the Baltic Sea Region” our **BSTC Tourism Trend Radar (TTR)** is based on a **proprietary trend platform** from which our newly launched report is sourced. Combining both tools allows tourism stakeholders in the / responsible for Baltic Sea Region (BSR) to take a quantitative (Tourism Market Monitor) and qualitative (Tourism Trend Radar) view on the developments in the BSR.

However, the BSTC Tourism Trend Radar enables the tourism stakeholders to take the cooperation one (serious) step further: Instead of the BSTC producing and/or collecting data and make it available once a year, the BSTC Tourism Trend Radar has been designed as a **collaborative web-based platform** which allows tourism stakeholders to

get actively involved in the collection and analysis of relevant signals, trends and megatrends shaping the future of the BSR tourism industry.



Photo by: Jaakko Tähti, Visit Finland

This first report, therefore, has two intentions: First the **BSTC Working Group on “Market Research”** would like to present the basic concept and functionality of the BSTC Tourism Trend Radar and second, we take a snapshot (and not more than that) on one subject we have identified as a relevant driver for the BSR tourism industry: **digitalization**. And again, we do not intend to produce a comprehensive report on digitalization in the tourism industry, but rather focus on three subjects which the BSTC tourism Trend Radar has identified as relevant: **AI, big data and platforms**.

So, read on - or even better: **Join us in this fascinating world** on the future of BSR tourism.



Photo by: Wanha Setama, Visit Finland

Digital Tourism in a Nutshell

Digital tourism is not necessarily a new trend, but one which is moving from mere concepts to the practical application providing a different type of tourism experience. While a variety of definitions exist, the common denominator is to provide **digital support to tourists before, during and after their travel**. The type of such support services is diverse, ranging from recommendations on accommodation, planning a whole journey or an app providing a digital tour guide. And it might even include products and services to help exploring and sharing the photos or videos after the journey has been finalized.

As mentioned, digital tourism is **not a new phenomenon**, but one that is increasingly put into practical application. Tourists are consulting the recommendations and/or reviews to be found on TripAdvisor or Expedia before booking accommodation. Other sites, such as Kayak help the tourist to manage their whole journey while platforms such as Priceline.com, booking.com or hotels.com offer price comparisons and - even more important - booking functionalities for accommodation and transport. Once the tourist returns home (or even during the journey), the best moments are shared on Picasa, Flickr, and Facebook.

As such, digital tourism adds a **technology-driven component** to planning as well as experiencing travel. To reap the fruits of this development, tourism stakeholders need to adapt to this development by investing in their digital presence and interaction capabilities. Merely “be on the web” is no longer sufficient in meeting the digital service experience required by travelers. Consequently, integrating digital tourism even more into business models becomes imperative.



Photo by: Kiki Kolenbet, Visit Finland



Photo by: Julia Kivela, Visit Finland

BSTC Market Research: Tourism Trend Radar

A quick view using one of the major search engines reveals the **dilemma**: a search for “tourism trends” produces more than 500,000 results, “tourism trend report” still nearly 7,000 entries and for those interested in the future of tourism close to 1,500 sources are available to provide information on “tourism foresight”. Considering this vast amount of data, **identifying relevant data becomes a game of luck**. In practice, there is simply too much data, not enough time and often a lack of tools and competencies to make sense of all these promising trends, trends reports, and virtual glass bowls.

Against this background, the aim of the BSTC Tourism Trend Radar (TTR) is to provide the Baltic Sea Region (BSR) stakeholders with **structured trend data to support an innovation roadmapping process**. To do so, the TTR uses secondary data identified and analyzed by the Baltic Sea Tourism Center (BSTC) together with jointly collected primary data to populate and maintain an industry-specific trend platform. Using the TTR platform data and AI technology, the data for the annual “BSTC Tourism Trend Radar” report is generated. Both the TTR platform as well as the report support BSR tourism stakeholders in making better-informed decisions - enhancing the industry competitiveness.

The BSTC Tourism Trend Radar Approach

To address the challenges outlined in the previous chapter, the TTR uses two main data sources: **secondary sources** (like trend reports, trend databases, trend blogs, showcases, scientific research, and general literature) are identified and analyzed by the BSTC in close cooperation with the scientific community. This is the **“centralized” aspect** of information gathering.

In addition, the TTR platform enables BSTC members to easily collect, share and assess **primary data** in a joint effort. This data could stem from fact-finding tours of BSTC members, observations and findings on exhibitions and seminars, ideas from peer discussions, own experiences of a tourism service - or even intuition. The post of a photo or a quick snap from the web using the integrated tool makes collaboration among BSTC members easy and hassle-free. This is the **“collaborative” aspect of collecting potentially relevant trend data**.

Both data from secondary sources as well as from primary sources are entered into the TTR platform to create the basis for an analysis of relevant developments shaping the BSR tourism industry.

The data entered into the TTR platform is broadly structured into signals, signal clusters, trends and megatrends with a potential impact on the industry. **Signals** are considered as “something” that might have an effect on the tourism business. It can be an observation or a market signal - or perhaps just a piece of intriguing news. All signals in the TTR platform are extensively tagged, their impact on business models and/or technology assessed, the potential geographic impact evaluated, and the time dimension added for further analysis. In addition, all signals can be traced back to their origin.

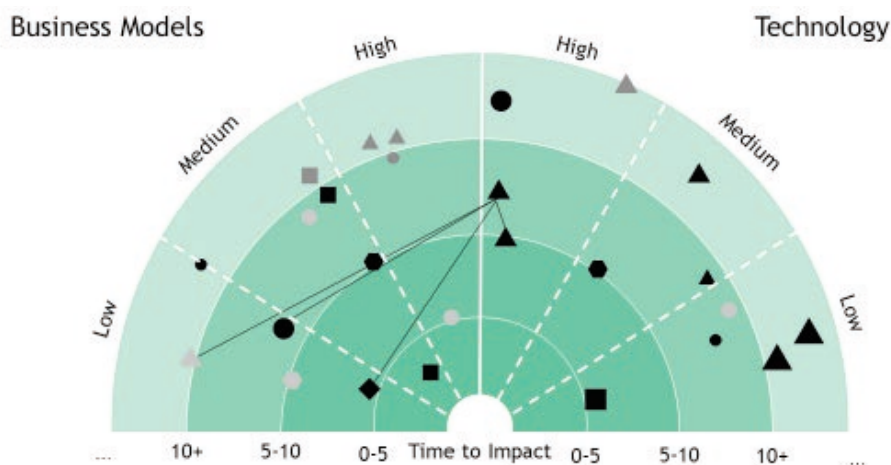
However, signals need sense-making work. **Signal clusters** are used to group signals together for signs of phenomena or emerging trends. **Trends** are more analyzed summaries. Automated suggestions based on text and tags will help to find the TTR platform (new) relations and ideas.

Currently, the TTR platform covers generic signals, signal clusters and trends (those which are of relevance for all industries) as well as signals, signal clusters, and trends for the tourism industry and - due to its close relations with the **tourism industry** - for the **food and gastronomy** sector.

Output

The TTR platform enables the analysis and presentation of signals, trends, and megatrends from different perspectives. Probably one of the most intriguing features is the automatic generation of a **trend radar** to move from “foresight to insight”:

The BSTC Tourism Trend Radar enables the impact analysis of trends from various perspectives (time, geography, business model vs technology impact) to produce a quick overview. For those interested in a more deep analysis, each trend can be further analyzed and integrated into an own **innovation roadmap** for the (national/regional) tourism industry.



Source: BSTC TMM, 2019 based on OECD



Photo by: Juho Kuva - Visit Finland

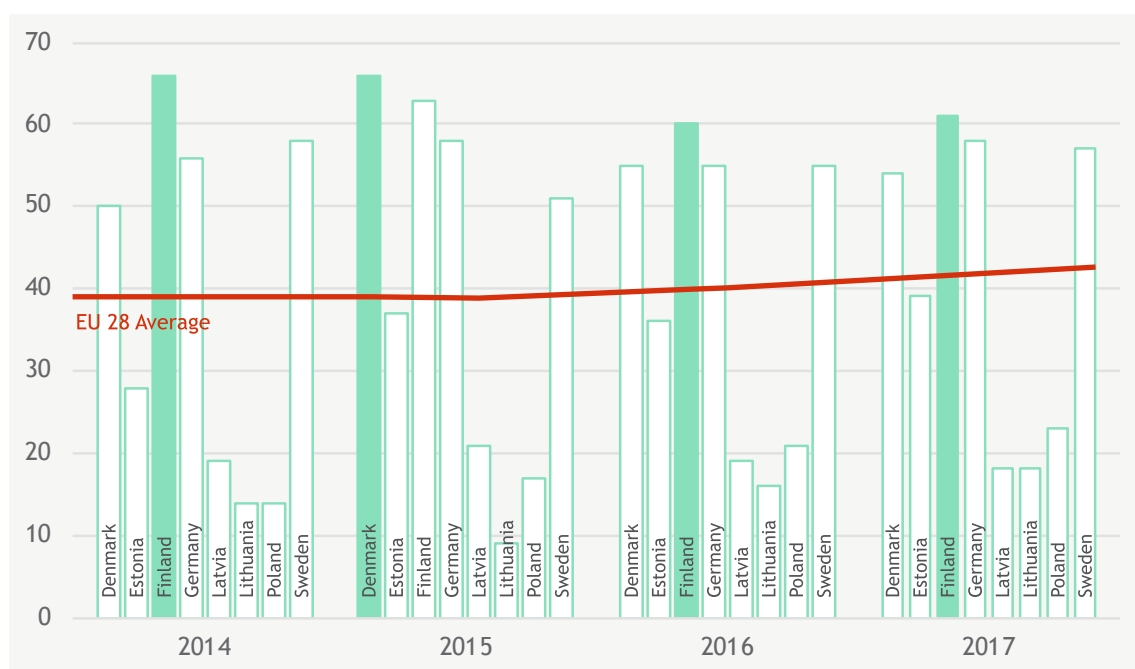
State of Digital Tourism in the Baltic Sea Region

The state of digital tourism in the Baltic Sea Region (BSR) can be established from **two perspectives**: the acceptance and application of digital services by travelers as well as the application and integration of digital services by the tourism service providers. This report will take a look at both perspectives by analyzing key facts and figures.



Photo by: Visit Finland

Share of BSR population using the internet for travel and accommodation services



Source: BSTC TMM, 2019 based on Eurostat

Tourists from the Baltic Sea Region are driving European digital tourism

While the share of individuals in the 28 European member states (EU 28) **using the internet for travel and accommodation services** has been on a constant rise from 35 percent (2009) to 42 percent (2017), these numbers are modest in comparison to most BSR tourism markets: the Finnish tourists, for example, have not only been on the top of the list since the year 2009 but also increased their usage of the internet for travel and accommodation services from 56 percent (2009) to 61 percent (2017).

Considering that a large number of online services are offered for free, it is of even more importance to establish the **business potential** offered by the internet. In this context, **online purchases by individuals for travel and holiday accommodation** products are of relevance. The share of customers in the BSR buying tourism products online is on the rise and has - namely the Nordic markets - outperformed the EU 28 markets. The most free-spending market is Denmark with 47 percent (2017) of the population making such online purchases, followed by Sweden with 40 percent (2017) and Finland with 36 percent (2017). The EU 28 average share stays at 25 percent (2017).



Photo by: Kai Kuusisto, Visit Finland

Tourism stakeholders from the Baltic Sea Region are “digital-ready”

Apart from tourism service providers being able to provide digital services to their customers, it is of relevance to establishing the actual utilization of the digital potential. To do so, the share of companies providing accommodation services **having received orders via a website or apps** (= web sales) can be analyzed. Considering this indicator, Estonia turns out to be at the top of the list with 78 percent (2017) of Estonia accommodation establishments having generated web sales, closely followed by Finnish accommodation providers (75 percent in 2017) and Swedish tourism establishments (70 percent in 2017). The EU 28 average stands at 65 percent in the year 2017.

Apart from generating **web sales**, the application of the ever-increasing **utilization of social media by accommodation service providers** in the BSR sheds light on the industry capability to integrate digital services into their business models. In this context, the use of (any) social media by accommodation providers has been analyzed. Basically, every Finnish hotel (98 percent in 2017) uses social media to interact with its customers, with 93 percent (2017) of Danish and Swedish accommodation providers using this as a means to interact with customers. The EU 28 average stands at 80 percent (2017) and once again underlines the lead of BSR tourism stakeholders in this field.

Summarizing the key performance indicators provides a picture of the **state of the digital tourism in the BSR** - with some markets being ahead and some markets catching up to the EU 28 average:



Photo by: Visit Finland

Big Data is behind many emerging trends and opportunities - either for service providers or consumers. This chapter sheds light on the concept, how it influences tourism markets and which opportunities open up for the future of the tourism sector.

The term Big Data stands for a set of **data which is remarkable** due to its variety, size, the speed of transformation and authenticity. To be more precise, it differentiates itself from the usual datasets in its **enormous size and complexity**. (Gartner IT Glossary, 2016)

The collection and storage of Big Data do not take place in a single location but use a wide range of instruments and spaces. Computer algorithms organize and collect the data. In this context, the term “data” may refer to almost **any recordable information** that might be useful for digital applications.

Nowadays, digital assistants and mobile devices are used to collect offline and online data - therefore, the Big Data set grows constantly. Almost everyone who uses the internet also leaves personal data behind. Big Data does not only record information such as age, gender or nationality but also **usage patterns**. This includes the duration a user spends on a website before actually booking a trip or how many hotels a customer compares on average before making the final purchase on a website.

This kind of customer data might bring competitive advantages to the ones who have access to them. For example, if a tour operator for cruise ships knows exactly on which websites its target group compares prices and experiences, the focus for **marketing activities** can be set more efficiently. Since many websites ask for the e-mail addresses of users, special offers may be sent at the right time.



Furthermore, personal habits and commonly used data sources are recorded and added to **profiles**. Businesses may use the data to automate processes and to provide enhanced services, such as personalized recommendations for restaurants, activities or sightseeing attractions. The personal data of millions of tourists may help businesses in their decision-making processes.

In the past, data storage and data management tools used to be inefficient and expensive. Therefore, unnecessary sets of data were deleted or sold, to utilize capacity for new projects. When the internet emerged and data storage became more affordable, Big Data emerged. Since Big Data collection became a major global trend, all industries are affected. Many trends of recent years such as e-commerce, e-marketing, and personal smart assistants are highly depending on the emergence of Big Data. (Gelter, 2017)



Photo by: Julia_Kivela, Visit Finland

Big Data and its Impact on the Tourism Industry

According to the Digital Tourism analysis by Gelter (2017), the usage of digital data is decisive for success in future market environments. Especially the tourism industry has witnessed a **strong influence of Big Data** in recent years. Large amounts of customer data, personal experiences, and platform-based business models have changed the market. Due to the Big Data hype, accommodation prices adapt automatically to the demand and season on online platforms. Guests may write their personal opinion about any product online and share experiences. Naturally, this development led to stronger competition and completely different marketing approaches for tourism businesses.

Big Data also provides many benefits to businesses in the tourism industry. One of the major advantages is the ability of **predictive analysis**. Every click a potential customer makes on the internet may be traced back and every product a customer buys is recorded in a certain data set. Companies that have access to the data set of their potential target group may predict future demand, purchasing power, and other details. Moreover, there are computer algorithms that use additional data such as weather, season and traffic to predict demand.

Naturally, this leads to more efficient preparation of products, services, and offers. The more a hotel knows about its guests, the better can it prepare for high and low demand seasons: Hotel managers do not want to let their employees work overtime but sometimes demand determines the schedule in the hospitality sector. If Big Data will be able to predict the exact number of guests and their consumption, **human resource planning** will be made more efficient. Furthermore, there will be Big Data tools that are provided by third party providers to identify precise demand and effective pricing strategies for hotels, restaurants and tour operators.



Photo by: Rob Smith, Visit Finland

Another feature of Big Data is the ability to **personalize the entire customer experience**, to achieve higher satisfaction and loyalty. Customers obtain tailored offers for activities, trips, and services. At the same time, annoying offers and unnecessary services are left aside to make sure, the customer does not feel an overload of offers. Especially in the tourism industry, it is important to make personal customer experiences as memorable and unique as possible.

To achieve a high degree of personalization, detailed information about customers and their preferences need to be collected and analyzed. The **consumer decision journey** represents the entire process from the moment of demand that results in the booking decision until the customer returns from the trip. To achieve the best possible consumer journey, businesses need information provided by Big Data sources. Research shows that the propensity to purchase rises with the degree of product-personalization in the tourism industry. Therefore, information about consumers' need to be recorded and compiled in the right way, in order to be able to place the right offer to the right people for the right price and at the right time.

Looking at the Big Data trend in all its facets, it is compelling to see why it has such a big impact on so many different sectors of the economy. Scientists, entrepreneurs, and politicians see Big Data as **both an opportunity and a threat** to the future of the industry.

Case Study - IBM Watson: A digital assistant in hotel rooms

Hotels all over the world want to offer their guests the best possible service. Sometimes it is the small wishes that are particularly valuable to a hotel guest. In the future, the small questions and wishes of guests will **no longer be the responsibility of human beings**, but of digital assistants who support hotel guests while they are in their rooms.

The American company IBM has developed a **digital hotel room assistant** that communicates with its guests via voice control applications in hotel rooms. As a pilot project, the digital assistant is being tested in various countries. The **AI-based system** collects information from various devices in the hotel room and can make adjustments in the room. The assistant can change the light in the room, control the TV and air conditioning or close the curtains at the guest's request. Of course, each hotel can provide the digital assistant scope for decision-making according to its technical capabilities.

Since the digital assistant is also connected to human beings working in the hotel, special requests from guests can also be accepted. The service personnel obtains information about the requests of their guests from the digital assistant. A linked computer application for employees helps to manage and plan different inquiries of the hotel



Photo by: Harri Tervainen, Visit Finland

guests. By using this system, hotels may easily organize, **monitor and integrate customer wishes in their workflow**. If a guest asks the digital assistant for a taxi to go to the airport, the employees will obtain a notification and can react immediately. The smart assistant then keeps the guest updated about the request. The same process can be used for restaurant reservations or any other service offered by the hotel.

But the digital assistant can also access external data to provide the hotel guest with the best possible service. The connection to the Internet provides the digital assistant with a variety of information about the weather, sightseeing and transfer possibilities on site. If a guest asks about the opening hours of a museum, the assistant may also offer a guided tour through the museum. In this way, **offers can be personalized and unnecessary advertising can be avoided**. Through the connection to other networks and institutions, the digital assistants can be informed about events at the guest's destination. The AI system decides based on personal preferences in which information is relevant and worth forwarding to the guests. Bookable destination content may be organized and shared with clients at the right moment.

Certainly, IBM Watson for hotel rooms brings various advantages to it. Hotels benefit from personal customer data that is gathered by the assistant to improve their service. Tourism boards, tour operators, and travel agencies benefit from a new channel to advertise their services. The customer of course benefits from the simplicity and user-friendly service provision of the assistant. However, it remains questionable if clients are willing to communicate and interact with AI systems in the future.



Photo by: Jutta Kivela, Visit Finland



Photo by: Visit Finland

Tourism and the Platform Economy

In today's world, there are numerous approaches to create **digital marketplaces** that aim at a higher degree of efficiency and simplified user experience. Lately, **decentralized business models** such as Uber, Airbnb, and Blablacar have challenged more traditional business models. To understand the successful concepts, it is crucial to first look at the basic principles of the digital market.

Platforms are digital marketplaces that offer interdependent parties a virtual, secure and public place to exchange goods or services for monetary units. Hereby, the platform creates an **entire ecosystem** that links all parties at the right time, places an order with a suitable counterpart. The core value is the establishment and coordination of an open network that involves all relevant parties.

The increasing digitalization and connectivity to the internet is the main driver for such platforms. They enable enterprises to shift their business from the offline to the online world. In recent years, platforms had been given different names such as **sharing economy**, **gig economy** or **peer economy** - all these names have a similar meaning and are summarized as **platform economy**.

The platform ecosystem consists of **three main groups**: Producers, consumers, and platform owners. Independent producers offer their products, no matter whether they are private persons, large corporations or small start-up

businesses. The consumers (users) are purchasing the products supplied by the producers. Maintenance for user interfaces, governance, payment structures, and updates are planned, organized and controlled by the owners of the platform.

An example of a platform-based business model is **Airbnb** arranging accommodation for private and commercial providers all over the world. The platform enables private people to rent out their accommodation and generate income. Consumers benefit from (potentially) competitive prices and transparent terms and conditions. The website itself is only playing an intermediary role between the producers and the consumers. Furthermore, the platform cares about the administrative and coordinative including price comparisons, secure payment, and communication infrastructure.

Low entry Barriers & Big Data

An illustration of the **low entry barriers** is the online taxi platform Uber. Users order private taxis driven by private people in their cars. The most important resources of Uber are the cars and drivers. Both of the resources are not owned nor bound to the platform on a contractual basis.

Another aspect of a platform business is the **measurement of satisfaction** and ability to improve or personalize businesses. The purchase of a product or service via a platform enables the consumer to voice their personal opinion. At this point, a strong connection to the megatrend “Big Data” can be seen, which processes tremendous amounts of information. Certainly, “Big Data” influences every sector. Disruptive platform businesses are the ones that can easily gather and use data due to the high degree of digitalization. In other words, **platforms are more likely to benefit from big data** than other business models.

The collection of **data about the consumer's experience** has numerous benefits. First of all, other potential customers have access to the opinion of thousands of previous users. This helps the consumer to decide which provider to choose from. Furthermore, any participating business may profit from a positive reputation or learn how to improve the product, in order to become more competitive. The platform owners may also improve their service (administration and coordination).

By providing detailed data analysis about e.g. consumer habits, networks can help their resellers to **improve their service**. Especially for more comprehensive service offers, it may be important to learn about the influence of certain factors. If, for example, a hotel may find out which of their services influenced the overall rating of the guests

the most, by using platform data. With the provided information about the target group, those in charge may optimize the service for their guests. Whereas in the past businesses had to buy expensive market research data, in the network economy, they have access to a larger dataset and thus have more ways to improve their models.

Personalization of services

Another feature of the platform economy is the **personalization of prices and accurate prediction of demand**. Uber has developed an algorithm to anticipate how much money customers are willing to pay for a given distance drive. As with the functions mentioned above, this depends largely on the collection of user data. Customers who usually travel to wealthy city districts are most likely willing to pay more for the service than others. Therefore, it is of importance for networks to gather personal data of their users, to predict user habits and purchasing power.



In the future, platforms will take even personal information into consideration to improve their business. It is even conceivable that simple device data, such as the state of charge of a smartphone's battery, can be used to personalize prices. If a user's battery is almost empty, he or she will spend more on his or her taxi trip to get home. Furthermore, other services like online wallets could share data about other purchases with Uber. For example, if Uber knew how many of the recent purchases of alcoholic beverages in a bar a user made, this could affect the price of his way home. In this way, Uber can take advantage of the fact that a customer does not pay much attention to the price of his journey home because of his alcohol consumption. In fact, the collection of personal data will help platforms to **predict the willingness to pay** of individual clients.

On the supply side of the platform, the accurate prediction of price and demand helps to **reduce cost and unnecessary production of waste**. For consumers, this may lead to a lack of privacy and the feeling not to decide over their consumption habits. The competition on a certain market may also change due to the more accurate prediction of demand and price, because service providers may start to compete more intensively. Customers can compare prices rapidly on network platforms such as Booking.com and find the cheapest deal within seconds. Service providers are now forced to undercut the prices of the competition to be on top of the platform lists.

For the tourism industry, there is a multitude of online platforms that offer diverse content. According to a study by the Gottlieb Duttweiler Institute (2019), **digital platforms and assistants will gain importance in the tourism industry**.

However, not every platform is trustworthy nor beneficial for both consumers and providers. Therefore, it is of importance for platform owners to build up a secure digital marketplace to become attractive for consumers and providers on the market. Suppliers in the tourism industry should naturally focus on platforms that are frequently used by their target groups. Due to the growing number of service platforms on the internet, consumers should compare conditions and of course prices to find the best suitable platform for their wishes.

Case Study - Triple A marketplace to share local activities with travelers

Travelers all around the globe want to **get off the beaten path** and away from tourist traps. Many travelers tell about their most beautiful moments in which they have had an **authentic experience** together with locals. However, the offers of the conventional tour operators do not provide the same experience as a **true experience with locals** in the respective travel country.

The Swedish start-up business Triple launched a website, that aims at delivering true and authentic experiences to tourists. By connecting travelers with locals that are willing to share their favorite spots, passion or just a chat about cultural differences, Triple leads people of the beaten tracks into authentic experiences.

The website is an example of digital tourism and platform economies since it provides a **typical ecosystem**. The principle is simple: People from all over the world may offer activities such as walking tours, workshops, presentations or other activities in their local environment. Travelers may learn about the offers and book them on the Triple website. Prices for the activities are set by the local guides. A yoga class in Stockholm for example costs around 35 €, a wine tasting in the historic center of the city costs 55 €.

Since every guide is a private person, who gives each activity a personal touch, the **activities are unique** and the offer is large. In Stockholm for instance, there are more than 40 different activities, from basic walking tours over woodworking workshops to bicycle tours. Travelers can choose the right activity, to spice up their holiday and get away from the crowds.

Just as in any other online marketplace, users can write their personal opinion about the activity they booked. Furthermore, the payment and communication are done via the website of Triple. These aspects result in a high degree of security and transparency for the customer and the tour guides. Of course, in the center of the ecosystem stands the moderation team of Triple, which can enforce rules and ban users that are not acting appropriately.

In the future, digital concepts like Triple may acquire many customers from traditional tour operators, which do not deliver enough diversity and flexibility to modern travelers. The application works already in twelve European cities and New York City. Nevertheless, it remains uncertain whether Triple will become as powerful on the tour operating market as Airbnb became on the accommodation market.



Photo by: Juho Kuva, Visit Finland



Smart Assistants in the Tourism Industry

Certainly, people do have an understanding of the term "assistant" when thinking about their own life and experience. Most people associate an assistant with a human character that helps them in certain situations to tackle problems, make decisions or simply get work done.

Today, the term assistant has a whole **new meaning**. The purpose stays the same, but the availability and the price for it have changed. Smart assistants and self-learning devices are the **new assistants in the digital world**.

As the world is moving further into a digitalized future, basically every part of people's everyday life is affected. However, people argue that computers are not able to **substitute human beings**. At this point, it is important to reflect on how far the development of artificial intelligence (AI) has come and to what extent it may substitute a human assistant in the future.

Smart Assistants

Smart assistants in the wider sense, are **virtual concepts** that help human beings to tackle problems, make decisions or simply get work done. The perspective of a computer may be seen as useless in everyday life since it cannot go and buy groceries or clean the house. But it can actually calculate how long the stock of food will last, order fresh food automatically and send out the vacuum

cleaning robot when people are not at home to clean the house. Now for those who say that this sounds too futuristic, it can be said that there are systems that can already do exactly this. Examples for this are Amazon's Alexa and Apple's Siri.

Google Maps, for example, is the most widely used navigation system worldwide. It presents precise information about traffic, toll prices, and construction work at any time of the day, anywhere in the world. Certainly, the algorithm behind Google Maps may be seen as a digital assistant as well.

Furthermore, there are various **algorithms** on websites that compare offers and prices for consumers. In the wider sense, an online platform such as Skyscanner, which recommends airport transfer, flights, hotels, and rental cars to tourists is a digital assistant as well. The existence and popularity of these digital concepts prove that the trend of AI and smart assistants are already taking place in people's lives.

What all digital assistants have in common is the strong **dependence on data collection**. An assistant will only help you if it knows about your habits and interests. Google Maps can only estimate the traffic on a certain route if it collects data about the people driving on it at any given time. In this context, the collection of mass data beco-

mes more important than ever before. The megatrend **Big Data** has emerged rapidly and data has become a valuable good. Generally, the trend has led to an ongoing process of gathering data from any possible source to improve the performance of digital smart assistants. In fact, the data of millions of tourists worldwide are recorded and put together. Even though single information units, such as the average time a visitor spends at the National Museum in Copenhagen, seem redundant, the entirety and variety of various information enable smart assistants to help humans. Future city trips to, for example, Copenhagen, will be planned, organized and scheduled by smart assistants.

Assistants in the Tourism Industry

Naturally, the tourism industry will be strongly affected by digital assistants and the **emergence of AI concepts**. According to the organization "EyeforTravel", tourism experts consider digital assistants and AI concepts as the **most relevant emerging technologies** in the future. Furthermore, **chatbots and natural language imitations** are seen as the second most promising innovations that will enter the future travel business.

To find out how digital assistants will change the tourism industry, one can take a look at the demand and the supply side in the industry. As mentioned before, data collection will play a key role in the future. Hotels, airlines, and museums are already collecting detailed data about their customers such as the preferred type of payment or whether someone travels in large groups or single. The customer uses different websites, platforms, and travel agencies to book a trip and write opinions about it when returning home. Thus, digital travel agencies and web browsers collect precise information about the demand and personal preferences of their customers.

In order to optimize the travel industry, digital assistants and AI need to **work in between supply and demand**. If smart assistants can act as an intermediary, that has access to the entire market data (of suppliers and consumers), it may take a large portion of work from the consumer. In other words, digital assistants will be able to filter all the available information about a journey and offer only the relevant to the consumer. For instance, traffic, weather, budget, and personal schedule will be taken into consideration, when planning a trip. Finally, the custo-

mer gets the most suitable information for the personal schedule delivered, to decide which option to take. This may work for business trips, private vacations or weekend trips. Since the digital assistant knows the schedule of every single transportation option to go from point A to B, the user will obtain condensed information and choose the best one without having to compare every available option. The digital assistant might even be able to do money transfers from the traveler's bank account in the future to book trips or order products online.



According to research, future smart assistants will not only respond to direct user requests but will also make inspiring suggestions for activities based on their schedule. Inspiration for holidays often stems from movies, documentaries or social media being consumed. Smart assistants will be aware of that media consumption and thus, be able to offer inspiring travel ideas and products that the consumer might like. Modern e-marketing tools already work on the same basis.

Now the entire idea of smart digital assistants might sound like a futuristic dictatorship of consumption and habits. Certainly, users will **give up a part of their decision-making power** and privacy. Even though the focus of smart assistants should be in helping the consumer or businesses to become more efficient in daily routines and decision making, users may be trapped within the patterns of their assistants. Therefore, the users of digital assistants and AI need to carefully choose what works best for them and to what degree they want the support of a computer algorithm.



Case Study - Lübecker Bucht Guide

A web application as a digital guide for tourists in Northern Germany

The web application "[Lübecker-Bucht.guide](#)" is an example of the opportunities that come along with digitalized tourism. Lübeck is an old Hanseatic city which has been a famous tourist destination for travelers from all over the world. Located right by the Baltic Sea, the city offers various activities. In recent years the small towns around the city, which are located on the beaches of the Baltic Sea have become more important in regional tourism.

The tourism agency Lübecker Bucht recently developed a digital application for smartphones, tablets, and computers to foster the [regional guidance of tourists](#) in the bay of Lübeck: Tourists who want to travel the Lübeck Bay with special and personalized insider tips can use the application for free. The digital interface allows customers to learn about upcoming events, regional gastronomy, accommodation, shopping facilities, and weather forecast.

Since the application works on any tablet or smartphone that is connected to the internet, tourists can use it from anywhere they want and even track their location to see what is around them. Hotels and restaurants, for example, may register their businesses, write about their service and provide contact details. The application is connected directly to Google Maps to navigate tourists to their destinations.

Furthermore, tourists can add events, places, or shops to their personal favorites list and thus plan their vacation on their smartphone. At this point, the visitor does not only use data but also gives information about his/her personal preferences to the platform providers. The developers may add various functions to learn more about the target group of the Baltic Sea Region.



Photo by: bstc.eu

Upcoming data may be used for [market research and analysis of habits](#), demand, and preferences. The aspect of the "Big Data" collection will gain importance. Certainly, those tourism regions that already have digital infrastructure will have competitive advantages on the market. However, the power will remain with those you have full access to the data and integrate it into their business plan.

Another interesting function of the app is the networking with the "Mercedes Benz me explore Lübeck". Mercedes Benz offers e-mobility services and rental of scooters, cars, and bicycles, but also experience and adventure events in the region. Users of the web-app may be directly transferred to the commercial website of "Mercedes Benz I explore" to book their trip. This may be seen as an example of a platform business process. Customers discover interesting offers on the website, mark them as a favorite and finally book them at the tour operator's website from their smartphone. This entire process generates customer data and of course revenues for the platform owners. In this case, the simple guidance app becomes an intermediary between tour operators and tourists.

In this way even in small regions tourism associations can achieve positive results through digital networks.

BSTC Baltic Sea Tourism Center

The countries bordering the Baltic Sea have much in common. In the field of tourism, we all want to assert ourselves in a demanding world with ever faster and new developments. It is time to **bundle our resources**, pool our expertise and grow together for increased innovation and prosperity!

The Baltic Sea Tourism Center offers you that sort of **platform**. It jointly improves competitiveness for sustainable tourism in the Baltic Sea region by focusing on its **core Competences Partnerships, Insights, and Skills**.

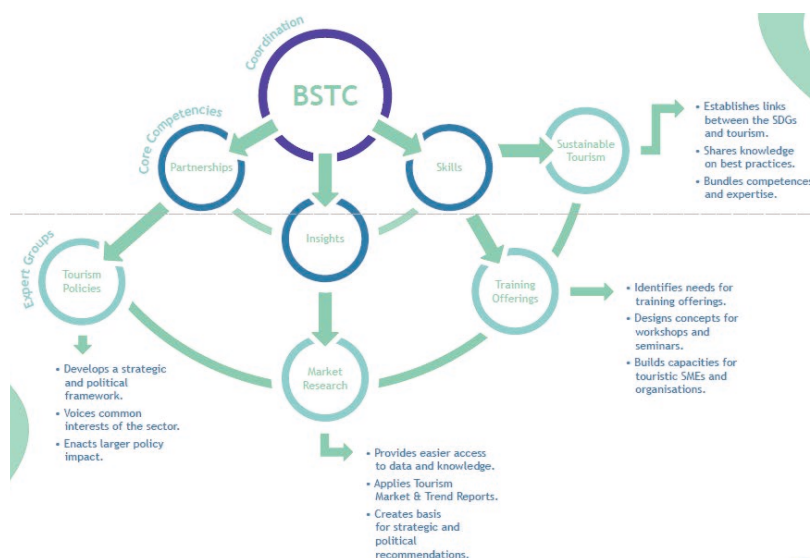


Fig. 4 BSTC Baltic Sea Tourism Center platform

Partnerships

The **competence area “partnerships”** provides and facilitates connections to BSR-tourism stakeholders. “Connection” refers not only to the community of BSR-tourism stakeholders itself but also to the link between them, stakeholders from other industries (e.g. culture, transport, education, innovation) and the policy level inside and outside the BSR.

Strong partnerships form the basis for cross-border cooperation by bundling resources and competences. It enables the tourism industry to talk with one voice and represent the interests of the industry more effectively.

Insights

The **competence area “insights”** researches, unlocks and provides knowledge to BSR-tourism stakeholders. Apart from statistical data and individual market research activities, BSR tourism actors regularly work on joint projects and thus create comprehensive knowledge that often still remains unused after the end of the projects. The BSTC will strive to coordinate and facilitate better use of existing data, thus providing knowledge, inspiration and benchmarking possibilities and preparing the ground for strategic decisions.



Skills

The competence area “skills” aims at improving the competences of BSR tourism stakeholders. It refers to the dissemination of up-to-date knowledge among stakeholders with relevance for BSR tourism and its future development. This will lead to enhanced quality of tourism offers and further internationalization of products and services. Specific topics include product development, sustainability, internationalization, digitalization or seasonality.

In order to further develop the three competence areas, four BSTC expert groups will be set up to deal with tourism policy, market research, sustainable tourism, and training offerings. In the thematic expert groups, more continuous and strategic work on transnational topics should be enabled.

What's in it for you

- Grow your international network
- Enhance the international visibility of your institution
- Get easier access to data, knowledge and best practices
- Take better advantage of international development trends
- Build up capacities in sustainable tourism development
- Benefit from a joint representation of interest

Who can join?

- Destination Marketing Organisations
- Public Administration
- Education & Research Institutes
- Transnational Organisations
- Private Companies

Become a member of the BSTC and an active partner in one of our Expert Groups and thus contribute with your expertise in Tourism Policies, Market Research, Training Offerings or Sustainable Tourism.

Members of the BSTC have access to and benefit from the outputs generated by the BSTC and its Expert Groups.

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BSR	Baltic Sea Region
BSTC	Baltic Sea Tourism Center
BSTC TMM	Baltic Sea Tourism Center - Tourism Market Monitor
BSTC TTR	Baltic Sea Tourism Center - Tourism Trend Radar
Eurostat	Statistical Office of the European Union
GDP	Gross Domestic Product
ICT	Information and Communication Technology
KPI	Key Performance Indicator
OECD	Organisation for Economic Co-operation and Development
UNWTO	United Nations World Tourism Organization
WEF	World Economic Forum
WTTC	World Travel & Tourism Council



Photo by: Dipoli Congress Centre, Visit Finland

Acknowledgements

First of all, I would like to thank all the tourism experts in the Baltic Sea Region who over the year 2019 have provided such great feedback in developing this first edition of the “Tourism Trend Report for the Baltic Sea Region”. Critical discussions during conferences and exchange of views during interviews enhanced the 2019 edition of the report.

I’m again grateful to all people who have taken the time to provide detailed comments and suggestions. This includes - but is not limited to - Klaudija Kionies, Sofi Sjöberg, and Katarina Wakonen who volunteered in finding suitable case stories, Evelyn Heinrich, Kilian Jaehne, Maximilian Martin, Lisa Rammler and Isabel Schulz for collecting the first data set of the BSTC Baltic Sea Tourism Trend Radar. Special thanks to Christopher Blanck for populating the trend database, guiding his fellows through the platform and producing the chapters on digitalization. Last, but not least thanks to Tjark Schlegel for creating the layout.

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