

Towards an Illustrative Maturity Matrix for Smart Tourism Destinations

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Abstract. Managers in the Tourism industry in Southern Denmark are reluctant to embark on the voyage towards digital transformation. This paper shows, based on a minor survey and interviews with key partners, what the structural and cultural obstacles are, that brings about this hesitancy. The authors focus on the inability of the management to visualise the transition as well as imagining the next step. They also suggest a story-based maturity matrix as well as a competence development programme to bring the region of Southern Denmark closer to becoming a Smart Tourism Destination.

Keywords: Smart Tourism Destination, Big data, Digital Maturity Matrix.

1 Introduction

In 2016 a national strategy for the tourism industry was launched by the Danish government. (Den nationale strategi for dansk turisme, 2016). The strategy gives 10 recommendations, where #6 centres on digitalisation of the Danish tourism industry: “The digitalisation of Danish tourism must be strengthened. The tourism industry must use new shared economic and digital business models, products and services to create growth and innovation.” (National Strategi 2016, p. 6, authors’ translation).

This demand for a digital strengthening of the tourism industry follows an international trend where terms like Smart Tourism Destination (STD) (Bernabeu, López, Sánchez & Baidal 2016) among others are used. This is the result of transferring the Smart City urban management approach to tourist destinations (Baggio & Cooper, 2015: 146) and the equivalent Spanish National Strategy describes five standards of criteria for a tourist destination to be considered Smart. In the Danish National Strategy, the approach is slightly different. A number of trends are described as having a disruptive impact on the Danish tourism industry. The trends described are the digitisation of requests for travel/vacations, the up rise of sharing economical solutions as AirBNB, the recommendation and review social media as Trip Advisor, and the growth in internet based travel shopping in general. (National Strategi 2016, p. 21).

At University College Lillebælt, Denmark we have for the past five years collaborated with nine regional partners of varying kinds and sizes from a national park to a

camping site. Based on these experiences as well as interviews with two key actors in the tourism industry of southern Denmark and a minor survey of 35 stakeholders from the same region this article wishes to address the following research question: How can the management of tourism destinations in the region of Southern Denmark be supported in decision making regarding digital challenges?

2 Method

The research team conducted a paper based survey which were handed out at three networking meetings in the region. 35 recipients were reached. They were all from local and regional tourist destination (museums, tourist organisations, event creators, hotels). The survey was filled out by hand by participants and later digitized.

In March 2019, the research team conducted two semi-structured interviews with key partners (Kvale & Brinkmann 2009: 97). The interviewed were respectively a Director of the Secretariat of a regional national park and a director of a regional collaboration of four major tourist destinations, a regional airport and the surrounding eight municipalities. The interviews were recorded, transcribed as well as documented through notetaking.

3 Findings and discussions

3.1 Survey

The companies which answered the survey, were of different sizes based on # of employees. Of the 35, 17 had 1-9 employees. Seven had 10-19 employees, whereas three had 50-99 employees. Only three companies had more than 100 employees and two did not state any number of employees.

Of the 35, 22 wrote they had a digital strategy, whereas five described it as “coming” and eight answered, no. Of the 22 who answered yes to a digital strategy, 13 answered that it supports marketing, branding and “spreading the word” about the destination. Six stated that it helped with their presence on social media, whereas three stated that it helped them get information about their customers or generate leads. 11 of the 35 companies had experiences working with third party digital services as e.g. Expedia and Hotels.com. 32 of 35 had one or two associates who was responsible for working with digital media in the organisation. Only three companies had an external service company do their digital representation, whereas 23 did it themselves, and nine collaborated with an external service.

We are aware that the sample in the before mentioned survey is inadequate to yield anything but a slight indication of the level of “digital maturity” in general. However, the preliminary findings in this pilot study indicate a DIY approach to working with digital representation. A majority has a digital strategy, and a large part of them seem to view this mainly as a marketing/branding exercise (a new digital way of marketing

your company). This could indicate that predominantly digital presence is viewed as a marketing push-strategy (Peter & James 2002: 132). With a push strategy marketing is seen as dissemination rather than a means to create a bond between the customer and the company. It is all about spreading the information rather than learning something about your customer, or meeting their needs.

3.2 Interviews

The two interviewees were, as a headline for the interview, asked: What are the major obstacles that hamper the realization of the trends mentioned in the Danish National Tourism Strategy in their opinion? Both interviewees pointed to obstacles which were caused by certain structural ratios such as size and type of companies that are typical of the tourism industry in Denmark. It is an inhomogeneous industry where a majority of the companies are small companies with less than 20 employees. For the small ones, "lack of" resources / economy is a hindrance to digital development. This is corroborated in our survey. The rise of digital media requires precisely the manpower and resources /economy that the small companies do not have - and therefore they find it hard to handle digital development. In addition, the management is frequently the same as the owner.

The companies that are not owner-managed typically have a management team and they also have a digital strategy. These are e.g. chain hotels etc. They typically have people employed in more "specialist areas" such as marketing etc. and they work with technology because they have more employees and more resources.

But both interviewees also agreed that even within larger companies with a digital strategy there tends to be a certain reluctance in relation to embarking on exploiting the benefits of digitalisation. Both point toward some more general "cultural" obstacles. One of the interviewees talks about "a sales oriented culture". It is all about selling well defined products with a profit (accommodation, tickets, meals, merchandise etc.) and success is counted by # of items sold, not e.g. by customer responses. There is of course a general acknowledgement, that customer experience may affect sales, but goals for the quality of customer satisfaction are rarely stipulated or followed.

Another cultural obstacle stems from who the actual people of the tourism industry are. It should be taken into account who the managers in the tourism industry are, as they do the hiring. They are not people from the technology sector and they typically do not have a higher education, both interviewees emphasize. Many who start businesses in the tourism industry, choose to do so, because they like to deal with people, and they are not necessarily digitally skilled.

In the experience of the director of the regional collaboration the management of the different destinations tends to make developmental decisions based on what worked last year as well as watching the competition. Decision making is incremental, rather than radical when embarking on something new.

The interviewees describe how the use of data for developing the destinations is something that should be visualized for the managerial level - it is not self-evident that they may benefit from it and how. The managerial level does not know, how they can use data and what for.

Both interviewees also agree, that there is a general awareness of the benefits to be had from “paying attention to the data”, because it shows what the customers prefer and how they can be helped. The director of the regional collaboration gave an example, where a partner missed the chance of digital input. He recounted how the manager of a regional waterpark actually had the possibility to view data on who in a family went bathing, and who stayed at home in the holiday apartment. This was possible, because each family member got their own bracelet for entering. And it turned out that the moms stayed at home, whilst dad took the kids swimming. So maybe the moms were bored? This could potentially be devastating for the water park, as the moms generally choose the places to go on vacation. An obvious solution could have been to ask the moms in e.g. a digital evaluation survey, but instead the manager of the waterpark concluded that maybe the waterpark needed more women in the managerial team.

3.3 A maturity matrix of stories

Bearing in mind the words of our interviewee, who said that development is often driven by watching the competition, we assume to present a more readily understandable aid: A number of stories collected in a maturity matrix which describes and visualizes the transition from not using data at all – to making it the basis of the business model for companies in the tourism industry.

The idea is to describe local business’ use of data to show how others (the competition) use it. The intention is to make it possible for a manager of a smaller company (with an eye on the ROI of any investment) to recognise their own data use, and see how others developed it further. Very low key and approachable. The potential of this is to take into account the structural obstacles (size of the companies) as well as the cultural ones described above.

We imagine a matrix/table with a number of columns indicating e.g. different uses of data, and then stories for each of five rows, which are named “Barely started”, “Early stages”, “Commitment”, “Established” and “Advanced”. This “staircase for digital maturity” is inspired by the work of RegLab who in 2018 published two reports on the findings of 40 in-depth qualitative interviews with managers of small and medium-sized companies that successfully transformed part or all of their business model digitally. The companies are not within the tourism industry, but share many of the same internal processes. The authors of the report describe a “staircase” of five stages for companies’ digital transformation and maturity (RegLab 2018: 10 – translation by authors).

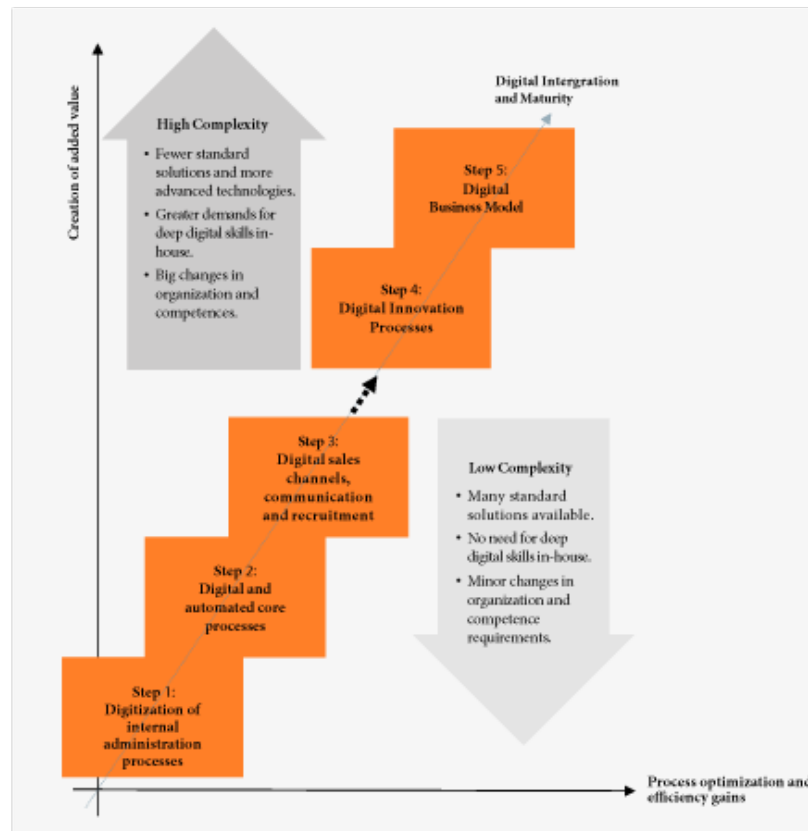


Fig. 1. The RegLab description of the 5 stages of digital maturity. (RegLab 2018: 10 – translation by authors)

We wish to work with this maturity model and hopefully adapt it more to the tourism industry. One aspect of such an adaptation could be the following. In an industry with so many smaller companies, the top tiers of the RegLab model might need to be applicable to a collaboration of companies rather than one sole company.


The RegLab maturity staircase is not the only abstract (or maybe academic) model for understanding digital transformation being developed in Denmark at present. Hans Eibe Sørensen and his team at Copenhagen Business School have developed a number of tools for aiding management in data-driven development of businesses (Ritter, Petersen and Sørensen 2017 and Sørensen 2018b). These tools are ready for download free of charge (in Danish).

However, on p. 26 of the “Practice Guide: Dataprofit” in one of the tools developed by the above mentioned Sørensen and his team a workshop for the managerial team is suggested. It states nine different functions (CIO, head of analysis, Chief Legal Officer, CEO, Commercial director, representative of the employees, Head of Production, Chief

Sales Officer and Chief Strategic Officer) in the company's organisation, which need to be present at this workshop. Ritter, Petersen and Sørensen clearly state, that not necessarily all functions will be present in every organisation, but it is still an indication of a larger organisation to even think about that many functions. It is hard to see a smaller company being able to see themselves in these functions – especially if the digital presence is handled by 1-3 employees. As one of our interviewees said it: “The managers need to be able to see themselves immediately benefitting from being more data-driven”.

This is why we, based on the RegLab maturity model, suggest a more story driven maturity matrix, which enables a manager to recognise his or her own company in the stories.

One such table could look like this:

Stages in a Maturity Basis regarding data integration in the Tourism Industry	
<p><i>Barely started</i></p> <p><i>(Step 1 RegLab Model)</i></p>	<p>Frørup Rejser</p> <p><i>The small Danish Travel Agency, Frørup Rejser (10-19 employees), does not yet have a digital strategy; however they do have an interactive webpage, where they showcase their journeys and potential customers can book online. The customers cannot pay online, as this is a manual process with bills and bank transfers – costing many internal resources. The agency collects only little data from their customers, for which reason they do not have the possibility to target relevant segments through their newsletter and social media.</i></p>
<p><i>Early stages</i></p> <p><i>(Step 2 RegLab Model)</i></p>	<p>ODENSE BYS MUSEER </p> <p><i>At Odense Bys Museer (100-199 employees) they have a multifaceted webpage which represents all five museums in their online portfolio. They have a digital strategy and have quite recently started working internally with their digital business and online presence – it used to be outsourced. When buying a yearly membership, you become part of the museum club, where you have access to all museums, as well as you can bring one adult and two children for free. When you enter the museums, they ask you where you are from and how many people (adults and children) are with you and which exhibitions you are entering – thus collecting data from visitors. Once you have the pass you receive newsmails from the museum club.</i></p>
<p><i>Commitment</i></p> <p><i>(Step 3 RegLab Model)</i></p>	<p>SKOVREJSER</p> <p><i>Skov Rejser (2-4 employees) is a Danish online travel portal that arranges package travel out of Germany. Skov Rejser is an all-online based company, where potential customers search, book and</i></p>



	<p>pay direct. They collect data about their customers' travel preferences and thus have the ability to segment their customers according to interest-based needs, as well as offering them log-in to their own "My Skov rejser". The management discuss their digital strategy every week and choose specific digital KPI's that they act upon. Currently they are working on two strategies; one concerning influencers and the other on whether to engage in online sales through second parties such as booking.com etc.</p>
<p>Established (Step 4 RegLab Model)</p>	 <p>The Be Happy Pass- loyalty card (made by a regional collaboration of four major tourist destinations, a regional airport and the surrounding eight municipalities, called Legoland Billund Resort) is in an innovation phase of becoming digitized with the purpose of gaining knowledge of the pass holders' behavioral patterns, thus knowing how to market and cater to their needs. This could be very economically rewarding for the stakeholders.</p>
<p>Advanced (Step 5 RegLab Model)</p>	 <p>One of the Danish National Visit bureaus, Visit Aarhus, has in 2018 made an agreement with the Danish Tele company TDC, about anonymously tracking (through mobile data, picked up from tele masts) the movement of international tourists, in East Jutland, between different attractions. The purpose of collecting such big data is to customize half and full day package tours for international tourists. So far this initiative has collected data from more than 90.000 tourists – and ongoing.</p>

Fig. 2. An example of one Illustrative Maturity Matrix table

4 Conclusions and the need for further research

In the introduction, we asked, how the management of tourism destinations in the region of Southern Denmark can be supported in decision making regarding digital challenges put forward in the Danish National Tourism Strategy. After the survey and the interviews, we believe that they can be helped by publishing a number of stories/narratives in a maturity matrix, which indicates how "mature" you are as a company, and how you may incrementally develop towards a wider spread use. This is a low-key solution which tries to take into account the suggested structural and cultural obstacles to development within the sector. This maturity matrix (or the first version of it) should

be presented to managers from the sector and region to get an indication of whether or not it makes a difference.

At University College Lillebaelt we are in the Spring of 2019 launching an EU Regional Fund program to address managerial digital challenges called Digital Leadership Culture. Digital Leadership Culture is a large three-year digital project, funded by the European Social Fund, with more than 36 million DKK. The main purpose is on developing digital and leadership competencies within small and medium-sized Danish companies (companies categorized with in the size frame of 1-250 employees and a maximum of a yearly income of 50 million EURO) (Erhvervsstyrelsen 2017). In total, it is expected that approximately 1500 leaders and 750 small and medium sized Danish companies will take part in the program.

University College Lillebaelt is Lead Partner in the National Digital Leadership Culture Project and from locations in the southern region of Denmark, the educational institution and its digital team will run six programs over the course of the next three years, hereof at least three of the courses will be centred around STD (Digital Ledelseskultur 2019). Here we are inviting local managers from the Tourism Industry as well as other industries to participate in courses on digital development, as well as networking for a brighter digital future. We plan to try the first versions of the matrix out at upcoming meetings.

We will at the Lion-App conference present the first findings in regards to presentation of the illustrative maturity matrix.

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