

# **Study of the design and execution of an open innovation contest on visualization designs in the tourism industry**

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As a fast-changing but fragmented industry consisting of mostly small- and medium-sized enterprises, the tourism industry can benefit from leveraging external resources for consumer insight, marketing, and product and destination development. This paper examines the different ways in which open innovation contests have been, and can be, run in the tourism industry as a means to access capabilities beyond organizational boundaries. It does so by identifying innovation contests run by tourism industry actors and decomposing them into their constituent design elements, as seen through the lens of the broader literature on open innovation contests. In the light of this understanding, it then studies the design and execution of one particular contest in-depth. The research contributes both to the academic and practice domains by systematically classifying open innovation contests in the tourism industry and offering concrete lessons from the case study.

**Keywords:** Open innovation contests; Open tourism; Design elements

## **1. Introduction**

The tourism industry is characterized by a high pace of change, but also a high degree of fragmentation (Butler, 2002), with a large share of small- and medium-sized enterprises, making it difficult to cope with change (McAdam et al., 2000). Leveraging complementary, external resources can be a way of addressing such shortcomings (Chesbrough, 2003). More specifically, open innovation contests have been put forth as pathways allowing organizations to tap into resources outside their organizational boundaries (Hofstetter et al., 2017).

This paper has two research aims. The first is to map the design elements used in the design of open contests in the tourism industry in the past five years, and to classify these contests based on existing framework for contest design in the open innovation literature. The second aim is to use this knowledge to design, execute, and study an open tourism contest as an in-depth case study, and by doing so providing specific insights into how such contests can be run.

We address these two research aims by using a multipronged research approach. In order to address our first research aim, we reviewed the literature on the design of innovation contests and identified a framework for design elements of such contests (Adamczyk et al., 2012). Next, we used online news and web search to find innovation contests that have been held in the tourism industry. After locating 16 such contests, we decomposed these contests into their constituent design elements and classified these based on the broader framework identified in the literature.

This helped us to tackle our second research aim, where we used design elements from previous contests to design and carry out our own open tourism contest. Adopting participatory observation as the methodology, we were able to use this contest as an in-depth case study and draw specific conclusions about benefits and drawbacks of various design choices.

This paper contributes to the academic literature on open innovation by investigating the application of an existing framework to the new context of the tourism industry. It also contributes to the tourism literature by mapping the design elements of 16 open tourism contests, and by studying the design and execution of an open tourism contest in-depth. The study also provides a framework that practitioners in the tourism industry can use to design their own open tourism contests. It gives concrete lessons and suggestions based on our in-depth case study of running an open tourism contest.

The paper proceeds as follows. Section 2 outlines the academic literature on open innovation contests and their design elements. Section 3 outlines the methods used in identifying relevant open innovation contests held in the tourism industry, mapping their design elements, and studying a specific open tourism contest through participatory observation. In Section 4, we present the results of the study, while discussing their implications and the contribution of the study in Section 5.

## **2. Theoretical and Empirical Background**

Innovation contests allow a firm (the seeker) facing an innovation-related problem to get solutions from independent agents (the solvers) by, in return, providing an award to the agent that generated the best solution (Terwiesch & Xu, 2008). A number of platforms exist that facilitate innovation contests, providing the benefit of reaching out to a large group of solvers; generating many innovative solutions for the posed problems; and engaging consumers in the processes of finding solutions, which increases the user-centricity, the positive word of mouth (Kozintes et al., 2010), and the collective commitment towards new offerings (Nambisan & Baron, 2007).

The travel industry has also discovered the usefulness of open innovation contests. The travel club Triphunter.de, for example, gained information about new and interesting destinations, while at the same time increasing its customer loyalty, by asking its users to find the best travel photo and travel story (Wiedmann & Langner, 2016).

Organizers of open contests face a number of challenges. One is related to the intellectual property of the ideas and solutions submitted. Typically, the ideas or solutions collected within an innovation contest remain in possession of that organization (Egger et al., 2016).

Previous research has also shown that creating a stimulating environment to motivate participants increases the likelihood of high-quality ideas being contributed (Füller et al., 2011, Zimmerling et al., 2018). Studies additionally emphasize the importance of attracting the right contributors and motivate them to generate new ideas (Adamczyk et al, 2012; Leimeister et al., 2009)

By synthesizing previous literature, Adamczyk et al. (2012) propose a framework of 15 design elements for characterizing open innovation contests. The framework contains 10 extant design elements, namely (1) media, (2) organizer, (3) task/topic specificity, (4) degree of elaboration, (5) target group, (6) participants, (7) contest period, (8) reward/motivation, (9) community functionality, and (10) evaluation. It also contains five novel design elements, namely (1) attraction, (2) facilitation, (3) sponsorship, (4) contest phases and (5) replication. Table 1 provides an overview of the 15 design elements. While most of them concern participation in innovation contests, some are relevant for examining participation in innovation processes, including task/topic specificity, reward/ motivation, and pre-definition of a target group (Ommen et al., 2016).

Table 1. Overview of Extant and Novel Design Elements  
(adapted from Adamczyk et al., 2012)

Extant design elements				
Media	Organizer	Task/topic specificity	Degree of elaboration	Target group
Participation as	Contest period	Reward/motivation	Community functionality	Evaluation
Novel design elements				
Attraction	Facilitation	Sponsorship	Contest phase	Replication

While design elements in the broader area of innovation contests have been mapped systematically, and while a small number of individual cases of open tourism contests have been investigated in the literature (for example Stadler and Bilgram, 2016), no systematic attempt has been made to map design elements in open tourism contest. This paper seeks to fill this gap.

## 2.1 Extant design elements

The extant design elements captured in the framework of Adamczyk et al. (2012) are briefly described below.

*Media* refers to the type of medium where a contest is run. The contest may appear online, such as on an IT-based platform. It can also be run offline, for example at an event. Finally, a combination of online and offline elements are possible.

The *organizer* of a contest can be an individual or an organization, such as a company, a public organization, an academic institution, or a non-profit organization, or a combination of the three.

*Task/topic specificity* refers to level of specificity of the task or topic to be addressed through the contest. It could be very open, where the organizer only provides a broad goal, to very specific.

*Degree of elaboration* in an innovation contests refers to the required level of detail of the submitted solution, which can vary significantly. It can be anything from a description or sketch of an idea to a fully functional solution.

Contest organizers often specify the *target group* of participants, which can vary from an unspecified target group where anyone can participate to a specified

target group where participation is limited by age, place of residence, expertise, or other criteria.

The extant design element *participation as* captures the entry requirements for the participants: whether they should participate as an individual or a team, or if both options are possible.

Every innovation contest has a pre-determined *contest period*, which can range from very short term (a few hours to a maximum of 14 days), via short term (15 days to 6 weeks) to long term (6 weeks to 4 months) or even very long term (more than 4 months).

*Reward/motivation* refers to the reward system set by the organizer to encourage participation in the contest. Rewards can be monetary and non-monetary awards or can be in the form of intrinsic motivators that can range from positive community feedback to gaining reputation among relevant peers.

Innovation contests can be enriched via *community functionality*, which can support interaction and communication between participants, through activities such as fostering community building and enhancing information exchange.

*Evaluation* relates to the assessment criteria of a contest's outcome, which can be in the form of self-assessment by the participants, peer review by participants, evaluation by a jury of experts, or a combination of all three options.

## **2.2. Novel design elements**

The novel design elements captured in the framework of Adamczyk et al. (2012) are briefly described below.

*Attraction* of participants to an innovation contest is crucial since contests rely on people contributing. Individuals or teams can be attracted to contests in different ways and through different channels and means – through online and offline advertising, word-of-mouth, organizing of events, exposure in the media, emails, and others.

*Facilitation* can play an important role during the execution of a contest and can encourage active contributions from the participants. Facilitation can range from professional facilitation to peer facilitation among participants of the contest.

*Sponsorship*, from internal or external sources, is crucial for the proper execution of an innovation contest. Companies, universities, national associations,

state and local government organizations can all act as sponsors of an innovation contest.

An innovation contest can be organized in different *contest phases* or rounds, including either single to multiple rounds.

*Replication* of an innovation contest at a later point can be carried out for continuity. The overall setting and task requirements of a contest might stay unchanged, or might be altered depending on the purpose of the contest. The same contest can be repeated biannually, annually or at other intervals.

### **3. Methodology**

This study used a multipronged approach. We first reviewed the literature on innovation contests to identify the design elements for such contests. We then used online news and web search to find innovation contests that have been held in the tourism industry. Having located a number of such contests, we used the design elements framework from the literature review to map the design elements of all the identified contests. This resulted in a detailed understanding of how innovation contests in the tourism industry had been designed. Using design elements from previous contests, we then designed and carried out our own innovation contest as a case study. Here, the approach shifted to one of participatory observation that allowed the researchers to get a better understanding of the online context under study (Hess et al., 2013). By taking notes throughout the design and running of the contest, the problems and challenges that we experienced were structured and incorporated into the findings of this paper. Each of these steps are described in further detail below, divided into two parts: (1) mapping of innovation contests in the tourism industry and (2) design a execution of a tourism innovation contests.

#### **3.1. Mapping of innovation contests in the tourism industry**

This section outlines the steps in the first part of the study, which aimed to identify innovation contests in the tourism industry and map their design elements.

First, the academic literature on innovation contests was reviewed to identify the design elements of for such contests. A discussion of this literature, and an overview of the design elements identified, can be found in section 2.

Second, online news and web search were utilized in order to identify open innovation contests that have been run by actors in the tourism industry. In both cases,

phrases such as “open innovation contest”, “open innovation competition”, “open contest”, “open competition”, and “hackathon” were used for the searches in combination with “tourism”. Data from news articles published in the Retriever news database in the last 5 years constituted the news sources. The top 500 web pages resulting from a Google Advanced Search made up the web search sources. These searches resulted in the identification of 16 open innovation contests that had been run in the tourism industry in the last 5 years.

Third, the design elements of each of the identified contests were determined using qualitative research of websites, news, press releases, and other online content in relation to the contests. Each design element was classified using the framework in Adamczyk et al., (2012). Table 1 contains an overview of these design elements.

### **3.2. Design and execution of a tourism innovation contest**

Based on the understanding about design elements used in previous contests in the tourism industry that emerged from the first part of the study, we designed and ran our own contest. This was done in collaboration with Tourism in Skåne, the regional tourism organization of Skåne in southern Sweden, and with Kairos Future, a consulting company with expertise in data mining and visualization.

The point of departure for the contest was a key challenge already identified through a process involving representatives of the tourism industry in Skåne (Yetis, 2018). The challenge was to make a design for a prototype for an online “diagnostics tool” for companies in the tourism industry in Skåne, with the aim of providing tourism businesses with individualized information about customer opinions, channels they should be visible in, and information that could help them benchmark themselves against other similar companies.

Based on the challenge, one of the project partners downloaded and aggregated open data about 300 tourism businesses in Skåne from various online sources. This resulted in a database with the following information for each company:

- The company’s revenue, profit, and number of employees, as well as benchmarks for each of these, based on a set of comparable businesses
- The company’s address, city, and geographical coordinates
- Whether or not the business has a profile on Google, TripAdvisor, Facebook, and other key online platforms

- The number of online reviews about the company in total, by month, and by reviewer's country
- The company's average online rating (based on review sites) and a benchmark for comparable businesses
- Words commonly used in reviews about the company (based on review sites)
  - In general
  - In positive reviews
  - In negative reviews
- A measure of the value for money perceived by tourists in relation to the company's offering
- A measure of the service level perceived by tourists in relation to the company's offering

Based on the design elements mapped in the first part of the study, the challenge formulated by representatives from the tourism industry in Skåne, and the database compiled from open online data, the contest was designed.

Invitations to the contest were made using the channels of Tourism in Skåne, Kairos Future, and the online design contest platform Designhill.com. Contributions were encouraged through an award of US\$ 1600, minus fees to the intermediary. A total of 25 designs were submitted. Out of these, the project team selected the top three designs. The final selection of a winner was made by a jury of three: one representative of the project team, one representative of the tourism industry in Skåne, and one professional designer.

A web-based prototype was developed based on the design. The prototype was demonstrated to representatives of the tourism industry in Skåne and their feedback was noted and consolidated.

Lessons about the entire process were drawn based on notes and observations recorded throughout the process of designing and running the contest.

## **4. Results**

### **4.1. Innovation contests held by actors in the tourism industry**

Through our research we found 16 innovation contests organized by a mix of public and private organizations in the tourism industry within the last five years. Each contest is briefly described below.



### Colombia Tourism Innovation Challenge

Organized by the Ministry of Commerce in Colombia and IE Business School, this innovation challenge aimed to boost innovation and entrepreneurship in the tourism industry in Colombia. The program accepted applications from start-ups based in Colombia that develop technology applicable to the tourism industry. The program consisted of two different modules. The first was an intensive program, where selected start-ups participating in the acceleration program were taught by expert mentors from IE Business School. The second was an entrepreneurial event open to the public, where the best entrepreneurs, speakers and international investors met to exchange ideas. The award for the winning start-ups was not monetary but instead in the form of mentoring for launching their products and to attract investments.

### Edinburgh Tourism Innovation Challenge

Organized by the Data Lab, with support from Scottish Enterprise and Edinburgh Tourism Action Group, the 2017 Edinburgh Tourism Innovation Challenge aimed to generate economic, social and scientific value from big data for the tourism industry. The contest, which was organized as a hackathon, presented the challenge of analyzing a range of tourism-related data and help take steps to solve the current problems in the Scottish tourism industry. The contest was run as a 3-day event, where teams of technology professionals and students, as well as tourism- and festival-related experts, were brought together to analyze a range of tourism-related data and help take steps to solve the current problems in the Scottish tourism industry. The top-ranking teams were invited to apply for up to £3,000 in funding for prototyping or conducting a feasibility study of their concept.

### Hackathon for Smart Destinations

Organized by the World Tourism Organization; the Ministry of Energy, Tourism and the Digital Agenda of Spain; and the Government of the Principality of Asturias, Hackathon for Smart Destinations aimed at developing smart technology solutions for sustainable development. The hackathon was open to academics, developers, designers and tourism professionals who were given the opportunity to share their solutions in a sequence of short presentations. A price of 10,000 euros was awarded to the best solutions.

### *Heritage and Community Rail Tourism Innovation Competition*

Organized by the Department for Transport in the UK, the contest aimed to support innovation approaches to improving the tourist experience offered by heritage and community railways. More specifically, the organizer asked participants to come up with suggestions on issues such as improving stations and ticketing, as well as disabled access and cycle facilities. The competition was open to the public and ran over a period of 8 weeks. The competition generated 17 winners, who received grants ranging from £25,000 to £75,000 to develop their ideas.

### *Jamaica Tourism Innovation Challenge*

Sponsored and run by the George Washington University International Institute of Tourism Studies; UN International Year of Sustainable Tourism for Development; and Jamaica Ministry of Tourism, 2017 Jamaica Tourism Innovation Challenge aimed to generate a marketing campaign strategy to promote community-based tourism opportunities, such as sustainable hotels, restaurants and activities targeting visitors seeking an authentic Jamaican experience. The challenge was open to teams of 2 to 4 students from around the world and teams were asked to submit a short video pitch of the idea as well as a written marketing plan. The winning team was given the opportunity to attend the UNWTO, Government of Jamaica and World Bank Group Global Conference on Jobs and Inclusive Growth: Partnerships for Sustainable Tourism.

### *Kosovo & Montenegro Tech and Tourism Innovation Week*

Organized by the Kosovo ICT Association (STIKK) in partnership with Syri i Vizionit, and financed by the European Union, the event aimed to contribute to sustainable economic development by fostering innovation & entrepreneurship in the tourism industry. Entrepreneurs who participated in the event were asked to pitch their ideas for the development of touristic packages and the development of digital tools to improve the visibility and quality of tourism in the region through web or mobile apps. The contest took around 10 weeks from launch until completion and the winner received funding up to €3,000 to implement their ideas.

### *Lisbon MBA Tourism Innovation Competition*

Jointly run by the Lisbon MBA and Turismo de Portugal, The Lisbon MBA Tourism Innovation Competition has been organized twice. In the first edition of the competition in 2015, the aim was to find innovative solutions to measure the behavior of tourists in the countries and/or cities they visit. In the second edition in 2016, the competition aimed to identify digital, innovative methods or strategies that allow the improvement of the touristic experience on monuments and museums. The winning idea received a prize of €10,000 or a €18,000 scholarship for the Lisbon MBA and the three finalists were invited to present their ideas at a conference in Lisbon.

### *Marriott TestBed*

Organized and run by the Marriott Hotels, Marriott TestBed aimed to find seed or early-stage start-ups with pilot-ready products to enhance the in-room experience and overall environment in the company's hotels. The program was run as a 10-week accelerator program that provided start-ups the opportunity to test their products within a Marriott hotel in a major European city. The award for winning ideas was mentoring and support, rather than a monetary contribution. The winners got feedback from Marriott's guests and associates to help accelerate their products, as well as mentoring from a range of experts from Marriott Hotels. They were also given the chance to get global exposure through Marriott Hotels' marketing and media.

### *Mekong Innovative Startups in Tourism (MIST)*

Organized by Mekong Business Initiative and Destination Mekong, The Mekong Innovative Startup Tourism (MIST) is a not-for-profit tourism accelerator program with the aim of developing solutions for identified tourism market opportunities. The program aimed to receive solutions, both tech and non-tech, in 11 predefined areas. It was open to early-stage startups based in Cambodia, Lao PDR, Myanmar, Thailand, or Vietnam, requiring at least one of the co-founders to be from one of these countries. The program allowed participants to be part of a 6-month mentorship program while getting \$20,000 in-kind support. Winners received up to \$10,000 in prize money, and got the chance to receive investments for their start-ups.

### *Singapore Tourism Innovation Challenge for Hotels*

Organized jointly by the Singapore Tourism Board and Singapore Hotel Association, 2017 Innovation Challenge aimed to get prototype ideas from participants to drive productivity and enhance guest experience for the hotel industry. The challenge ran for about 3 months from briefing session until proposal submissions. Successful participants were given access to industry partners for mentorship and real-world environments to trial prototypes developed. They also received financial support from the Singapore Tourism Board to co-fund up to 70% of the prototype development costs.

### *Singapore Tourism Innovation Challenge for Travel Agents*

Organized jointly by the Singapore Tourism Board and National Association of Travel Agents Singapore, 2017 Innovation Challenge aimed to crowd-source innovative proposals addressing existing problems faced by the travel agent industry in Singapore. The event included networking sessions that provided the participants with an understanding of the industry needs. Along with the chance to access and work with industry partners, successful participants received mentorship and financial support from the Singapore Tourism Board to co-fund up to 70% of the prototype development costs.

### *Smart Vienna 2020*

Run in 2015 by the Vienna Tourist Board, the Smart Vienna 2020 initiative was an online collaborative open innovation process in order to develop its 2020 Tourism Strategy. Vienna Tourist Board aimed to gather unconventional suggestions and solution ideas by involving stakeholders from the tourism industry in development processes. A selection committee consisting of five members selected the top three winning ideas. Winners of the contest got a weekend trip to Vienna for two persons.

### *Tel Aviv Smart Tourism Initiative*

Organized by the Municipality of Tel Aviv-Yafo, Tel Aviv Smart Tourism Initiative aimed to integrate tourism technologies that are made in Tel Aviv into the physical tourism infrastructure of the city. The program was open to entrepreneurs and start-ups in Israel and the participating start-ups worked with developing web and mobile applications as well as other digital solutions for the development and maintenance of

smart tourism across the city in the micro (e.g. hotels, restaurants) and the macro (e.g. city infrastructure) levels. Start-ups involved in the initiative were competing for the Mayor's Smart Tourism Award given by Tel Aviv Global & Tourism and Tel Aviv-Yafo Municipality, a cash prize worth 10,000 NIS. The winners also received financial and legal counseling and mentorship.

#### *Ras Al Khaimah Adventure Travel & Sports Innovation Challenge*

Organized jointly by the Al Khaimah Tourism Development Authority and the George Washington University International Institute of Tourism Studies, the challenge aimed to find innovative ways to grow adventure tourism in the United Arab Emirates. Participants were asked to develop a strategy for an adventure sports event that would bring adventure travel enthusiasts to Ras Al Khaimah and raise its profile as a leading adventure destination. Submissions were accepted from teams of 2 to 4 people in the format of a short video pitch and a written description of competition strategy. The winner received a cash prize of US\$5,000 and a free trip to the United Arab Emirates.

#### *Tourism Innovation Award, Luxembourg*

Run by the Ministry of Economy in Luxembourg in 2018, the contest targeted small- and medium-sized businesses in the country with the purpose of promoting innovation, stimulating creativity and the development of original projects, making the tourism sector receptive to new trends, and encouraging sustainable development and social responsibility. An award of €15,000, along with project assistance and mentorship, was offered to the winners in two categories, namely smart tourism and sustainable tourism.

#### *Tourism Innovation Competition (TIC)*

Organized by the Temasek Polytechnic's School of Business in Singapore, the competition has been running annually since 2010 and aims to give students opportunities to learn about the tourism industry and possible career options. Changing every year, the students are given a medium to high specific task. For instance, in the last competition, participating teams were asked to develop innovative ideas or concepts for mobile-based games centered on one of six "walking trails" or locations in Singapore and present their ideas in the form of a poster. The competition

is open to all upper secondary school students and students from the Institute of Technical Education (ITE). In the last competition, the top three teams received cash prizes and the champion also received training on a mobile authoring platform to create and publish trails.

#### 4.2. Design elements used in the identified tourism innovation contests

The identified innovation contests were characterized using the design elements framework of Adamczyk et al. (2012). Table 2 summarizes the types of design elements used in the 16 contests.

Table 2. Classification of design elements of 16 open tourism contests

Design element	Distribution among tourism competitions
Media	Online/mostly online (5), offline/mostly offline (1), mixed/both (10)
Organizer	Public organization (7), academic institution (2), private (2), mixed (5)
Task/topic specificity	Open task/low specificity (4), medium specificity (3), medium-high specificity (9)
Degree of elaboration	Idea (3), sketch (3), concept (8), prototype (1), solution (1)
Target group	Specified (15), unspecified (1)
Participation as	Individual (2), team (6), both individuals and teams (3), organizations (5)
Contest period	Very short term [hours–14 days] (3), long term [6 weeks–4 months] (8), very long term [> 4 months] (5)
Reward/motivation	Monetary (5), non-monetary (6), mixed (5)
Community functionality	Given (5), not available (11)
Evaluation	Jury evaluation by external parties (9), evaluation by the organizers (7)
Attraction	Announced and advertised online (16) (lack of information about offline advertising)
Facilitation	Mentoring by organizers (2), no facilitation (14)
Sponsorship	Public organization (7), academic institution (2), private organization (2), mixed (5)
Contest phases	One round (10), two rounds (2), three or more rounds (4)
Replication	Annual (7), biannual (1), once (8)

#### 4.3. Design elements used for the experimental open tourism contest in Skåne

By using the design elements found in the academic literature and previously held contests in the tourism industry, we proceeded to design our own innovation contest. The challenge for the contest came from a process (not part of this study) that

involved a variety of stakeholders in the tourism industry in Skåne, Sweden. The design choices made were limited by the available resources and conditions. They are outlined in Table 3.

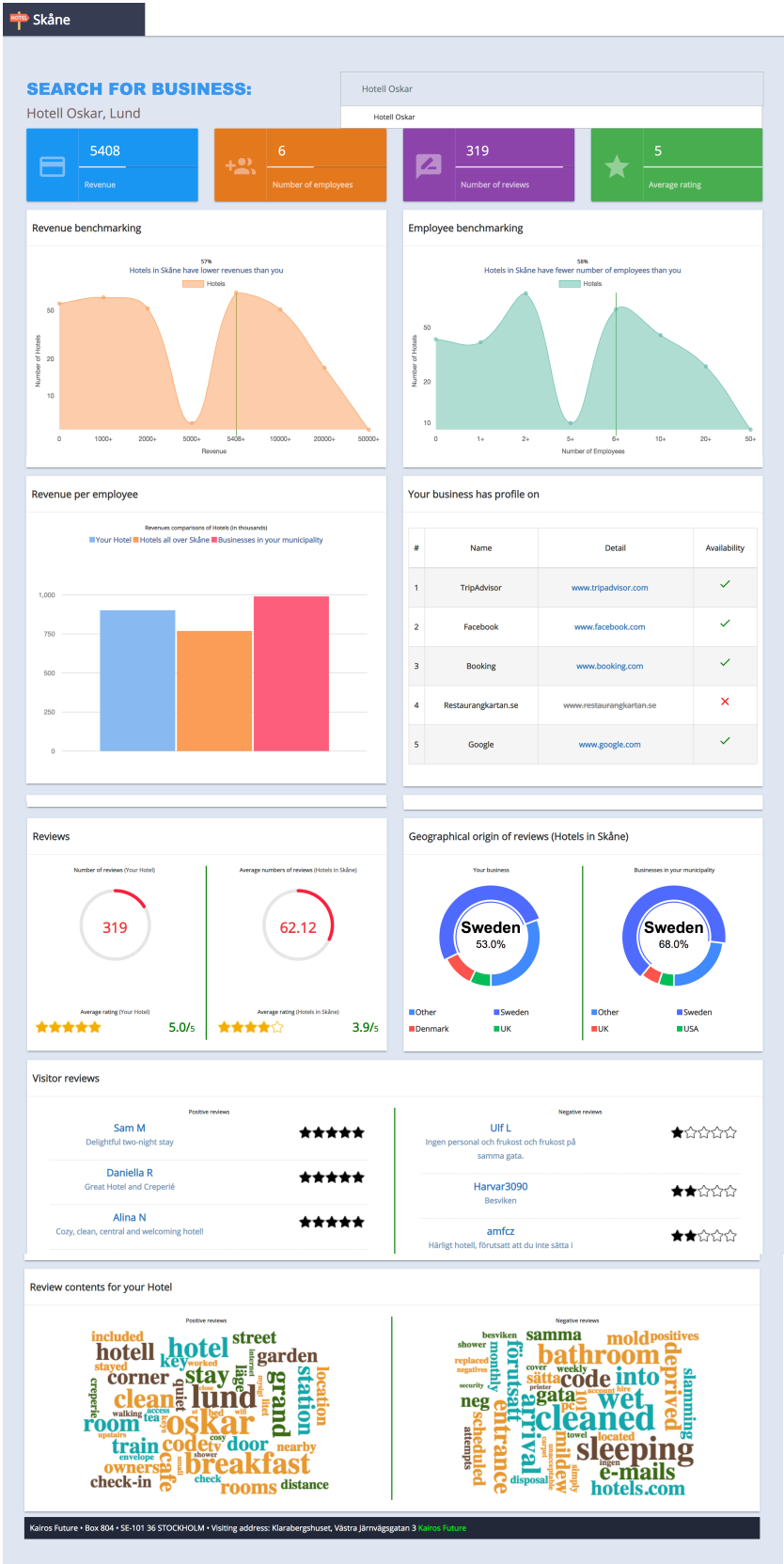
Table 3. Design choices made for innovation contest in Skåne

Design element	Design choice for innovation contest in Skåne
Media	Competition run online on a selected contest platform. This choice was made to enable participants from all over the world.
Organizer	Mixed: Stockholm School of Economics as an academic institution, Tourism in Skåne as a public organization, and Kairos Future as a private company.
Task/topic specificity	Medium-high specificity: design of diagnostic tool based on challenge formulated by representatives from the tourism industry in Skåne and specification of available information.
Degree of elaboration	Concept (what the functionality of the diagnostics tool should be, but not what it should look like)
Target group	Designers
Participation as	Both individuals and teams welcome to participate
Contest period	Short-term (originally intended to run for three weeks; eventually open three weeks before Skåne Innovation Week and closed four weeks after the event)
Reward/motivation	A monetary reward of USD1600 (minus fees charged by the contest intermediary) given to the winner
Community functionality	None
Evaluation	Jury evaluation (one member from Tourism in Skåne, one from the project team, and one design expert)
Attraction	Online through the selected contest intermediary and the networks of the project partners, as well as offline during Skåne Innovation Week.
Facilitation	No facilitation anticipated, but this was adjusted during the process (see Section 4.4).
Sponsorship	Research funding organization (Besöksnäringens forsknings- och utvecklingsfond, BFUF)
Contest phases	One round intended (but adjusted during the contest to include four rounds of feedback)
Replication	Only run once.

#### 4.4. Outcome of the open design contest in Skåne

The winner selected by the jury among the 25 designs submitted was implemented as an interactive website, enabling further testing and feedback from tourism businesses in Skåne. The winning design is shown in Figure 3.

Figure 3. Web-based prototype that was developed based on the winning design. The website's visualizations are based on aggregation and analysis of data about 300 tourism businesses in Skåne.





#### **4.5 Lessons from the open design contest in Skåne**

Several lessons were derived from the observations made during the case study.

First, we did not intend to use facilitation during the process and only a single phase was initially intended. However, it turned out that due to the risk that designers take when they submit designs (only one designer gets rewarded), they were not willing to spend much time on the design process. This meant that the early designs were too generic to be useful. Therefore, after each round we eliminated a number of designs and provided feedback to the designers who were still in the race. Knowing that they were among the remaining participants increased the motivation of the designers to improve their previous designs. We made sure all participants received the same feedback, in order not to give unfair advantage to some. In total, four iterations were made.

Second, as a result of the need to iterate, we extended the duration of the contest from three weeks to seven weeks. Keeping the contest running for a longer time also meant we received a higher number of designs than what would have been the case if the contest would have run for three weeks. Many designers have busy schedules, meaning that tighter contest deadlines leave less room for contributing.

Third, the iterative approach enabled increasing task/topic specificity over time during the contest. If the topic specificity is too high to start with, designers are locked into a narrow set of possibilities. If the specificity is too broad, on the other hand, designers take a bigger risk and are less likely to contribute. Thus, starting with a broad topic and then providing feedback, increases the specificity with each iteration. This approach combines the chance of getting unexpected contributions with the chance of getting an end result that is relevant.

Fourth, the degree of task/topic specificity determines what platform should be used for the open tourism contest. In the case of our contest, the task itself was well-defined (designing an online diagnostic tool for tourism businesses based on clear a description of the available data and how the tool was to be used), but no directions about how to visually present information was provided. Since our contest specifically targeted designers, we opted for a design platform which only runs design contests.

Fifth, the choice of design platform turned out to be more difficult than expected due to the lack of transparency, making it difficult to use a standardized set of metrics to benchmark the different platforms. Most platforms did not provide clear

information about the fee structure upfront, making this a matter of negotiation. Most platforms were also unwilling to share aggregate information about the backgrounds of their contributors. We thus had to collect and aggregate third-party information about the platforms for the comparison. For this, we used Google reviews, Alexa website traffic statistics, and online forums to compare the number of visitors and average ratings given by previous users of the websites. While this approach is far from perfect (the information derived is likely to contain biases), it did enable elimination of multiple platforms. The approach led to the choice of Design Hill for the design contest.

Sixth, the monetary reward is likely to impact the number of contributions. The rewards given in the open tourism contests we studied fell within a wide range. In our contest, the reward was \$1,600, minus fees to the contest platform provider. This amount was sufficient to receive 25 designs from designers all over the world.

## **5. Discussion and contribution**

This research has explored how open tourism contests can be run. It has done so by combining a framework for the design of contests in the literature, decomposing previously held open tourism competitions into its constituent design elements, and running an open tourism contest as a case study. The study provides a framework that practitioners in the tourism industry can use to design their own open tourism contests. It also gives concrete lessons and suggestions based on our experience of running an open tourism contest.

The findings the study lead to a number of suggestions for the design of future design competitions.

First, the study suggests that the potential opportunity cost that design contests are associated with for designers, lead to an approach of submitting generic designs that do not require much time. We therefore suggest adopting a funnel-like processes, taking an iterative approach to successively increase the task specificity. Eliminating some designs after each step and providing feedback to the designers, keeps them motivated and increases the likelihood of receiving relevant designs. To take this one step further, a reward could be given after each phase, decreasing the risk even further. The aim of the first stage could be to get design ideas. The second phase could aim to produce a design draft based on the winning idea. The third phase could then aim to

improve on the best design draft. Finally, a fourth stage could aim to produce a final design. With this approach, four different designers could each be rewarded.

Second, a duration of one month or less is too short for such a process. A duration of 6-8 weeks is more realistic.

Third, combining online and offline channels increases the exposure and likeliness of attracting good designers. A contest that is only run on an online design is likely to be considered by designers as just one of many possible contests to participate in. Running offline events, such as a launch event and an award event, is likely to create more engagement and more attention locally among designers, students, and other relevant target groups.

Fourth, some of the contests offer mentorship and facilitation to the contest winners. This is less relevant for a design contest, where the designs will be implemented by someone else, but makes sense for contests aiming to promote entrepreneurial ideas. Thus, the purpose of the contest should always inform the contest design.

This paper contributes both to the academic literature and to practitioners contemplating running open tourism contests.

It fills two gaps in the literature. First, while design elements have been mapped in the broader context of open innovation, they have not been mapped in the more specific context of open tourism. Our research fills this gap by mapping the design elements of 16 open tourism contests. Second, the execution of an open tourism contest has not previously been studied in-depth. This paper does so through the means of participatory observation in an open tourism competition for the tourism industry in Skåne, Sweden.

The study also supports practitioners in the tourism industry in two ways. First, it provides an overview of design elements available when designing open tourism design contests and describes how these design elements have been used in various open tourism contests in the past. Second, the study has generated a prototype for a “diagnostics tool” that seeks to address what representatives from the tourism industry in Skåne, Sweden felt was their key challenges. This particular case, along with the 16 other contests covered in this paper, may provide inspiration to practitioners and show what can be done using the open tourism approach.

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