

Introduction

Overnight guests in the city of Lucerne benefit from the advantages of the GuestCard:

- Free use of bus and train in fare zone 10
- Discounts for mountain railways, museums, excursions ... (total 65 discounts)
- Free Internet with single sign-on at selected places

Basic data such as demographic characteristics, number of nights or other tourist services is stored centrally:

- Name / Surname
- Accommodation
- Arrival / Departure
- Adults / Children
- Language

Optional:

- Birthdate
- Mail / Phone
- Nationality

7 days after departure, the information about guests are anonymized.

Challenge: Develop a concept for the expansion of data generation and data use of the GuestCard Lucerne. Which guest information could be won, processed and used and how?

Target: Strengthening the tourism offer of the entire region and individualizing the guest experience. In other words: Create ideas for a more valuable GuestCard for the defined stakeholders.

The following map shows the overnight stays in Lucerne for the year 2018. Only countries with over 20'000 overnight stays are shown in the figure. You can see that the biggest market for Lucerne is Switzerland with over 1.5 million overnight stays in 2018. The second biggest market is China, followed by the USA.

Tourist overnight stays in Lucerne in 2018 (only countries with over 20'000 overnight stays are shown)

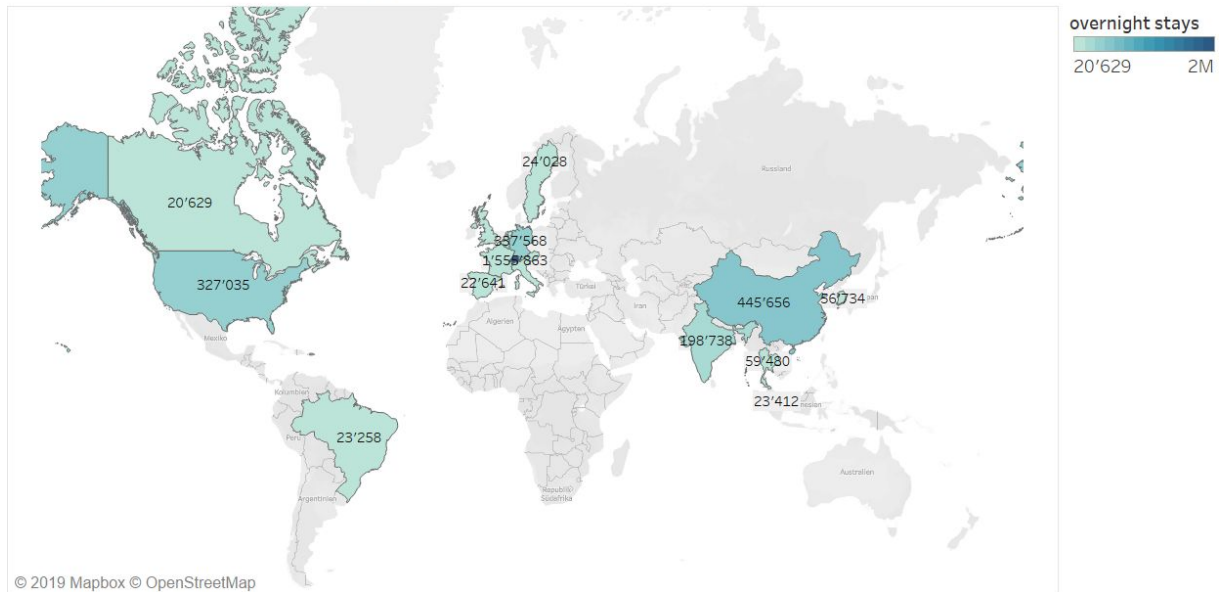


fig.1: overnight stays in Lucerne in 2018

Concept



fig.2: a) elaborating all the relevant stakeholders, b) working out issues for each and every stakeholder and collecting ideas for potential solutions

Stakeholder: Tourist

Issues

No structured, centralized information **A)** regarding activities, tourist attractions etc. in Lucerne and **B)** regarding the use of the Guest Card.

- A) There is no useful platform that provides all the information needed (or is a good “starting point”). Platforms that exist now are confusing, contain too much information (that is not properly categorized or personalized) and are most of the time outdated in design. Visitors have to collect information from different platforms which is time-consuming, can be overwhelming and the visitor ends up being uninformed. → insufficiently informed tourists will most probably only visit well-known places which is a clear disadvantage for small local businesses.
- B) There is no easy-to-access overview that contains important information about the way hotel-guests can benefit by using the Guest-Card. Also, the registration-process and application of the Guest-Card are outdated.

Solutions

- Simple and up to date Application that contains all the relevant information for first-timer and repeated visitors.
- Application-users are given the possibility to create an account.

Benefits

- Users benefit from personalized suggestions e.g., preferred activities, areas to visit etc.
- Mark places you liked and would like to visit again or plan to visit in the future and possibility to share those places with other users.
- Creating an online community that has the possibility to share experiences, write reviews, share their new discoveries and events they will attend or have attended to (gain “points”/ rewards as an active user of the app).

Stakeholder: Lucerne Tourism

Issues

- Data secrecy (Anonymizing)
- Missing guest tracking information (Who did what)
- No prediction

Today's guest card offering has many benefits for tourists, as well as merchants and shop owners in Lucerne. Lucerne Tourism benefits from steady or even increasing visitor number. However, the current solution has also several drawbacks.

Firstly, anonymizing data lead to a decrease in value of this data. Anonymizing them, however, is not even necessary according to the law and data can be used more effectively.

Secondly, since the journey of a tourist is not tracked, the city can not reconstruct a tourist's day in Lucerne and can therefore give no recommendations to other tourists or merchant.

Lastly, the city is not able to make any predictions. This impediment is based on the fact that the city does not collect any data. Moreover, since no data of the usage of the promotion is collected and the city does not know where tourists go to, the infrastructure might not be planned accordingly.

Solutions

- Collecting data via App
- Taking over the whole management/facilitation of the app
- Predictive Analytics
- Adjustments GDPR-Guestcard

By collecting the data via an app, Lucerne Tourism and the city is able to engage in predictive analytics. Meaning that the city can identify peak times of the year as well as heat areas within the city. Thereby, the provision of infrastructure can be planned accordingly (e.g. public toilets, Wifi). In order to make a more efficient use of data, it is recommended to make sure that Lucerne Tourism makes sure that it is compliant with GDPR.

Benefits

- Finding out more about visitor's preferences
- Providing the city with infrastructure
- GDPR compliant
- First mover by launching such a modern app which combines all the functionalities
- More satisfied tourists -> Word of Mouth marketing WOMM -> more tourists.

Stakeholder: Hotels / Accommodation

Issues

In the past, the administrative workload for the hotels to hand out the guest cards was high. The receptionist had to help the tourist with filling out the guest-card-form at the reception desk. Moreover, the hotel staff had to invest a lot of time for the explanation of the card benefits. This process was time-consuming for both reception staff and overnight guests. With the introduction of the "digital guest card" at the end of 2017, this process was significantly optimized. Since then, hotels have been able to generate a digital code (QR code) directly from the registration, which allows them to obtain the digital or printed guest card. Thanks to the "digital guest card", the hotels also had the option of delivering the guest card to the guest before arrival, thus enabling a self-check-in system.

What remains, however, is the fact that the services of the guest card are unclear for many tourists. As a result, guest cards are either not used or hotel staff have to give individual introductions. The introduction process can be very time consuming and expensive. In order to motivate the hotels to support the usage of the Guest-Card actively, we need to guarantee an efficient "tourist onboarding process".

Solutions

Thanks to the use of the new app we get a direct communication possibility with the tourist. We would like to use this direct communication option to give each user some onboarding information when the app is initially launched. The advantage of the information transfer during the initialization of the app is that all Guest Card users have to be guided through this process (each of the guests share the same basic knowledge regarding the app). We can communicate the information either with various slides or in the form of a 1-minute video. The slides or the video should contain the following information in different languages:

- Benefits of the Lucerne Guest Cards
- Where to find what in the app (functionalities)
- How can I use vouchers?
- Contact address for questions
- How will my data be used?

As can be seen from the last point, this onboarding workflow should also address the issue of data protection and ask for the agreement of the tourist.

In addition to "onboarding process" we plan to create a FAQ (future plan: chatbots?) area within the app, where the tourists can inform themselves about the most frequently asked questions.

Benefits

Thanks to the measures described above, we hope that the effort required for the individual explanation of use of the Lucerne guest card can be significantly reduced. Another advantage we see is that we can provide all our guests with the same necessary information in a structured form. We hope that this will also increase the usage rate of guest cards.

Stakeholder: Service Providers

Issues

- ***Economical benefit is not clear***
 - Currently they do not know how many of their offers are being used by visitors with the visitor card, there is no tracking of the usage and therefore service providers are not able to evaluate the performance of their product/service offering.
- ***Participation of service providers in the visitor card program is not clear***
 - It is not clear which service providers can participate in the program, what is the process in acquiring/selecting service providers, and data which are required in order to determine the types of service providers which tourists would be most interested in.
- ***Additional benefits / discounts not easily accessible by visitors - User journey to call to action is too long***

Service/Product offering of service providers currently limited to website link/pdf, which is not easily accessed by visitor -

https://www.luzern.com/fileadmin/user_upload/Luzern_Tourismus/PDF/Services/Erm_aessigungen_Gaestekarte_EN_PDF_Website_20-11-2019.pdf

 - The extra steps required by the visitor to see the additional benefits/discounts of the Lucerne card, make it less likely for the visitor to be informed about the service providers which provide discounts. Currently, the 6 steps that are required are as follows:
 1. Guest receives visitor card from Hotel or receives e-mail prior to travel
 2. Guest goes to Lucerne card website:
<https://www.luzern.com/de/services/gaestekarte-luzern/>
 3. Guest clicks on “discover all discount”
 4. Guest clicks on “All discounts with the Visitor Card” to view PDF
 5. Guest views PDF of all offers and clicks on relevant service provider
 6. Guest is redirected to the service provider website and needs to find specific offer
- ***No possibility of communication between service providers and visitors***
 - Currently, there is no link between the service providers and visitors, which means that service providers do not know any visitor preferences, activities, or usage of the discount offerings.

Solutions

- ***Tracking of discounts used via QR code***
 - Standardizing the use of discounts offered at service providers by using QR codes to redeem the offer will provide the needed data for service providers to evaluate and

analyze the performance of their current offerings, as well as provide more relevant recommendations/offers to visitors (example of using vouchers as with "Prozentbuch").

- ***Tracking of visitor activity via Beacons***
 - The use of Beacons will allow service providers to send customized offerings to visitors when the visitor is near their location (example: Minden).
- ***Tracking of visitor movements within the City via WiFi logins***
 - Collecting data from visitor WiFi logins can be used to determine heavily accessed areas of the city. Therefore predictions of visitor journeys can be made and relevant offers to the visitor in real time when combining with the use of beacons.
- ***App feature that highlights service providers' offerings***
 - Having a section of the app which features all service provider offerings combined with QR code redemption will reduce the steps required for the visitor to redeem the offers. A user friendly interface with the option to filter service providers according to the visitor's preferences will also increase conversion potential.

Benefits

- Service providers can gain a better understanding of their customer profiles and therefore adapt their service offerings according to visitor preferences. As a result, this will potentially increase their customer acquisition rates.
- Revenue generating potential for Lucerne Tourism by creating online ads business model

Stakeholder: Public Transport

Issues

Guests in Lucerne don't always pay for their ticket when they're leaving Lucerne's zone 10. This could be due to a lack of information or voluntarily.



fig.3: Lucerne public transport map

Solutions

The solution could be a system which gives the tourist a notification when he/she leaves the zone 10. Maybe an app like fairtiq could provide a ticketing-system which charges the “driven” amount to the tourist's credit card on a daily basis.

Benefits

- Sunk costs for public transport providers could be avoided
- Improve image of Lucerne tourism vis-a-vis tourists: Make sure that tourist do not have to pay fines because of lack of information

Guest Card as an Application

The future solution should eliminate today's issues (e.g. decentralized information of activities, no information regarding the benefits of the guest card) tourists face and thereby increase the customer journey of the customer. Moreover, the solution will allow the city to make use of up-to-date data and even enhance the customer experience by making recommendations based on collected data from previous tourists.

In order to reach this goal, it is highly recommended to create an app with a lean and tidy overview. Further functionalities can be added over time. After the sign-up and login (described in section 5.1), the home screen is visible to the client. In the upper section, basic tourist information (Name, Guest card ID, Nationality) is portrayed. Moreover, a guest's individual QR Code (allowing for discounts, usage of public transportation) will be shown in the upper right corner. Through the menu bar, the client can access the following four sections:

- Discounts
- Attractions
- Transport
- Settings

In the following section, the customer journey of a tourists as well as the functionalities in the app are described from a tourists point of view.

Sign-up process

The sign-up process to the app can be described as follows:

1. A tourist decides to spend their holiday in Lucerne
2. The tourist makes a booking either directly with the hotel or with another platform provider
3. The hotel/platform provider will send a booking confirmation, including a manual how to download the app and a personalized QR code.
4. The tourist will download the app and their personal device
5. The tourists creates an account
6. After having set up an account, the QR code can be added to the profile. The QR only be visible, once the arrival data in Lucerne has approached
7. The tourist arrives in Lucerne
8. The guest card will be activated automatically on the date of arrival. If, however, the customer has not downloaded the app before, the digital guest card will have to be installed at a later stage.

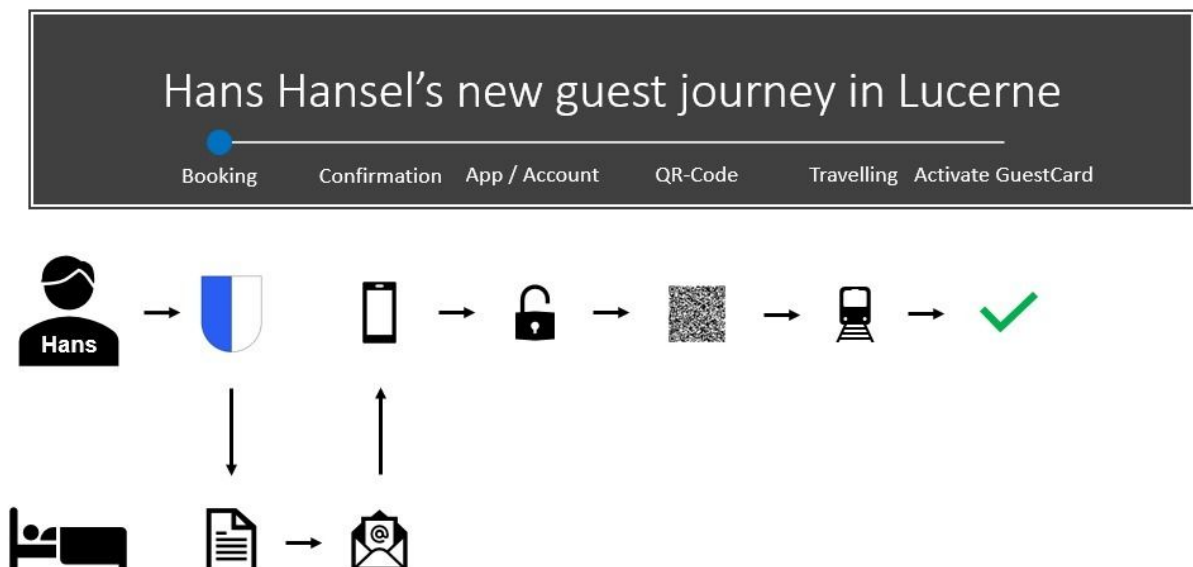


fig.4: Illustration of the sign-up process

Transport

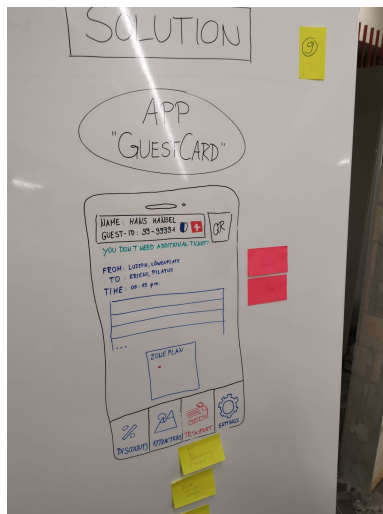


fig.6: digital mockup for the section "public transport"

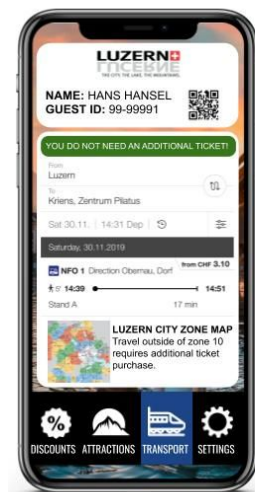


fig.5: drawn mockup for the section "public transport"

The view of this section is similar to the one of SBB. The guest can edit the To/From-locations based on their needs, as well as departure time. After the submission of required inputs, an overview of possible connections will be presented to the client. The route will be shown on a map, on which the different zones are visible. Only if the journey leads to/ or starts from a location outside of zone 10, the customer will receive a notification that an additional tickets is needed. If it is technically feasible, the ticket can be bought within the app. Otherwise, the client will be redirected to the SBB web shop.

In this view as well, basic tourists information (Name, Guestcard ID, Nationality) as well as the QR code will be visible in the upper section. The availability of functions can also be divided into milestones. By offering the client an online timetable within the app, the customer journey can be enhanced in the short-term. In the long-term it is recommended to include a map with the current location and offer the option to buy tickets in the app, if the client is about to leave zone 10.

Discounts

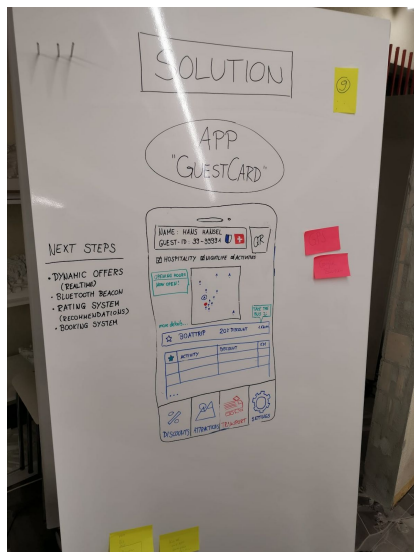


fig.7: drawn mockup for section "discount"



fig.8: digital mockup for section "discount"

In the section "Discounts", the client can access centrally managed coupons, meaning that the provider of the app (e.g. Lucerne Tourism) will manage the offers.

The guest has the option to filter discounts according to three different categories, which include: Nightlife; Hospitality, Activities. Each category will be presented in a different colour on the map. If one clicks on one of the dots on the map, the opening hours, the distance from one's current location, as well as further details will be presented. Moreover, the tourist can add favorites to a list, which can be shared with friends from back home. This measures included quick-wins.

In the long-term, the map should be developed even further and the administrative efforts of the app provider reduced. By allowing the service provider to add discounts themselves, administrative efforts can be reduced and a direct connection to the end-customer can be established. McDonalds, for example, would have the option to offer a free coffee to each meal depending on time and the amount of guests. Moreover, by implementing bluetooth beacons, tourists which are closed-by can be targeted individually. Thereby, service provider might increase the likelihood of bringing more people to their stores.

Furthermore, tourists should have the option to leave comments on the page. Thereby, future tourists do not have to consult several pages (e.g. Tripadvisor, Google) anymore to find hidden gems or places which are not worth visiting. Furthermore, a booking option allows the guest to inform themselves, book a place, and use discounts without leaving the page.

Attractions

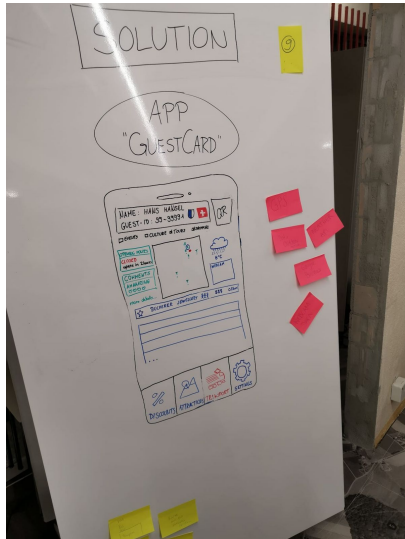


fig.9: drawn mockup for section "application"



fig.10: digital mockup for section "application"

Similar to the discount section, guests can filter according to their preferences. In a first version, following selections are available:

- Events
- Culture
- Tours
- Shopping

On a map, the current location of guest can be determined and close-by attractions (depending on the filter) will be shown. The different attractions will also be marked with different colours, in order to increase usability for the guest. If a dot is selected, the client can see additional information such as opening hours, weather information, webcams and ratings from previous guests.

In a listview below, selected as well as other close-by attractions will be shown. Guests can directly add them to their favorite list, which can be shared with friends. Moreover, a short description about the activity as well as the price range (\$\$\$\$ = expensive; \$ = cheap) and the distance from the guest's current location to the attractions is indicated.

Since the data is readily available, it is recommended to implement them at the beginning of the project.

Settings

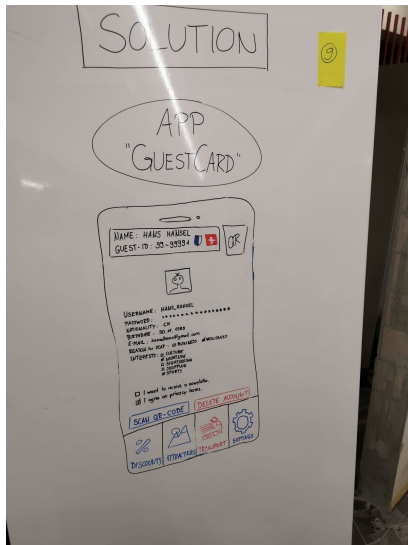


fig.11: drawn mockup for section "settings"

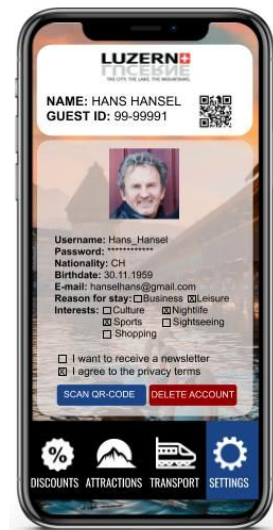


fig.12: digital mockup for section "settings"

Personal interests can be edited in Settings. Static data such as name, date of birth and nationality, cannot be changed since the guest card is personalized. The guest can see the below mentioned data and has the following options:

- Profilbild
- Username:
- Password:
- Nationalität
- Geburtsdatum
- E-Mail:
- Reason for stay: Holidays, Business
- Interests: Culture, Nightlife, Sightseeing, Shopping, Sports
- subscribe newsletter
- I agree on privacy terms
- Scan new QR-Code
- Delete account

Solution “Back-End”

Collection of data

This chapter describes Lucerne Tourismus’ collection of data and shows the differences between the data collection today and in the future.

Today

Today Lucerne Tourism collects the following data via the QR Code:

- Prenom / Surname *
 - Accommodation *
 - Arrival / Departure *
 - Birthday *
 - Language *
 - Number of Adults and Children *
 - Mail / Phone Number
 - Nationality
 - Wifi-Tracking when a tourist logs into the city’s Wifi
- * mandatory fields

Seven days after the guest’s departure all the collected data will be anonymized.

After the anonymization no customer journey can be built. There is no information of used discounts, public transport or knowledge of returning guests available.

In future

- The anonymization will be replaced by a pseudonymization. Because of that change, it will be possible to create a customer journey.
- The login will provide knowledge of returning guests.
The guest will log-in as following: after booking a hotel he/she will receive a booking confirmation of the hotel with information on how to download the guest-card app. After downloading the app he/she creates an account and scans the received QR-Code. Now the guest card is activated. When the guest returns to Lucerne the step of creating an account is replaced by a login to the app.
- The discount information for each tourist is gathered as following:
The guest’s QR-Code will be scanned by the service provider and automatically be sent to Lucerne Tourism.

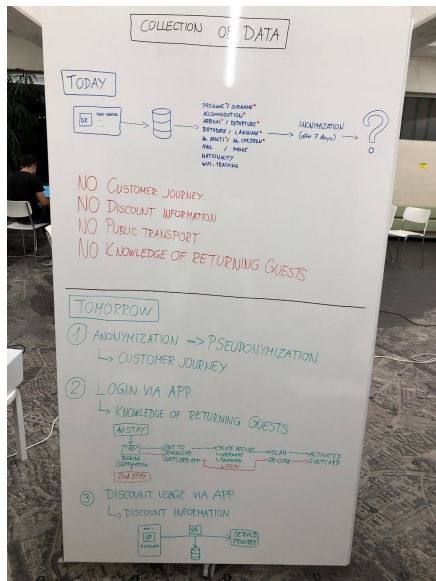


fig.13: data collection process; today and tomorrow

Usage of Data

This chapter will show what Lucerne Tourism can do with the gathered data.

Today

Today statistics concerning overnight stays, accommodation types, Wifi-Connections and more can be made.

In future

- Lucerne Tourism can enrich the current statistics with open data (weather data, holiday data ...) and create predictive analytics
- Newsletters can be sent to members who created an account on the guescard-App.
- A customer journey can be created and be used to build personas and clusters. Proposals for future guests can be created.
- The discount usage can be monitored and optimized
- Single Wifi-users can be tracked. With that data Lucerne Tourism has a live-feed of guest traffic and can direct them according to that heatmap.

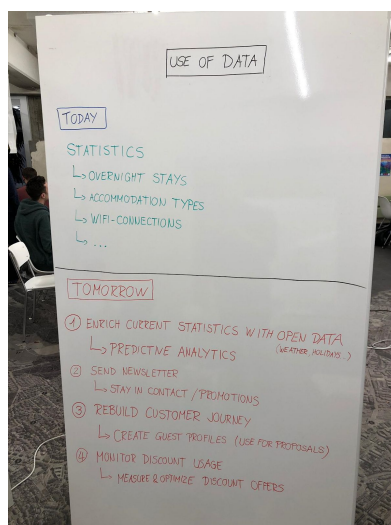


fig.14: use of data; today and tomorrow