



UNIVERSITAT DE  
BARCELONA

## STORYTELLING: REPORT

Presentation and Visualisation

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## **INTRODUCTION**

In this report you can find all the explanations and decisions/implementations that were carried out in order to obtain the final presentation of our StoryTelling.

## **CASE STUDY**

Barcelona is a very important touristic city and tourism drives an important part of its economy. A very popular way of visiting Barcelona is staying at an Airbnb listing. Barcelona is a very big city with a wide range of offer, so standing out from competition is a very big deal and can make or break the profitability of your investment.

An important part of getting guests to your Airbnb is being relevant on the web and having good reviews. We have observed data of Airbnb listings in Barcelona, extracting key information on what makes a good Airbnb. This information will be made available to users through our Dashboard and the ones who use it will have an advantage over the rest.

## **THE BIG IDEA**

The main idea of our dashboard is to sell it for consulting purposes for Airbnb hosts. In order to do this, we put ourselves in the role of an owner by asking ourselves the questions that they might ask themselves when renting their apartment. In this way, and during the presentation, we show the usefulness of our product.

## **WHO IS YOUR AUDIENCE?**

### **(1) List the primary groups or individuals to whom you'll be communicating.**

*Our primary audience are Airbnb hosts and real state agencies. Due to the information presented, it may also be useful to guests.*

### **(2) If you had to narrow to a single person, who would that be?**

Due to the wide monetary range and greater availability of apartments, the best candidate to our dashboard would be a boss of an agency.

### **(3) What does your audience care about?**

Our audience is mainly interested in making money by renting their apartment. Secondary interests that can make this possible are the following: having a highly profitable Airbnb, having good guests, having good reviews, beating the competition, setting a good renting price among others.

### **(4) What action does your audience need to take?**

If the audience follows our instructions, derived from an exhaustive study summarised in the good use of our dashboard, they will be able to satisfy the stated objective.

## **WHAT IS AT STAKE?**

### **What are the benefits if your audience acts in the way you want them to?**

If our audience acts in the way that we want they can benefit from a lot of things. They can have a proper study from the competition and get ahead of the competitors. They will be able to select the best renting options (room/apartments), which will help them to set an optimal

price according to the time of the year. Besides that, they will know what to do in order to advertise the apartment effectively (wordcloud and study of other reviews). Thanks to all this, they will attract more guests, obtain positive reviews and, most importantly, they will profit from his/her apartment.

### What are the risks if they do not?

Not following our advice can lead to dramatic consequences such as: getting behind the competition, losing potential guests, having bad or not good enough reviews which will cause them to take less advantage of the opportunity or even lose money.

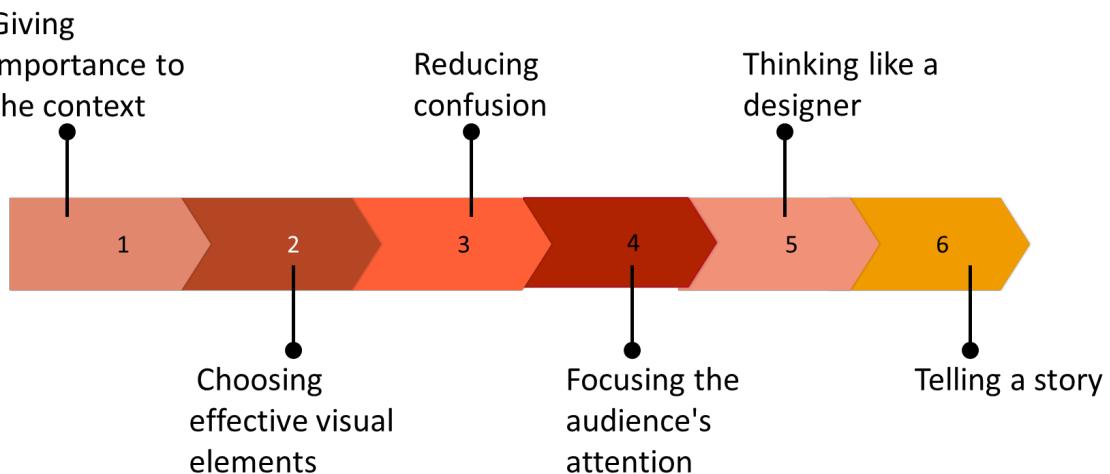
## FORM YOUR BIG IDEA

It should:

- (1) Articulate your point of view,
- (2) Convey what's at stake, and
- (3) Be a complete (and single) sentence.

Airbnb hosts that are not following good practices and tendencies are getting behind their competition, making their listing less attractive and losing potential guests. Our dashboard will help you follow tendencies and get insights of what customers value the most.

## PREPARE THE PRESENTATION



### Step 1. Giving importance to the context

In this step we will set up the elements of the story through storyboarding.

We retrieve the context and the **big idea**: audience, benefits and risks and recommendations.

#### General Context. Annual data of tourism in Barcelona

First of all, we briefly explain what Airbnb is, and its relevance in the city of Barcelona. Then, we provide data of tourism in Barcelona through the years, paying attention to the evolution of the Airbnbs with respect to other accommodations, like hotels.

To visualise it, we show some charts and complement it with text about it. We start with a bar chart about the amount of visitors the city has, and some relevant conclusions one can extract from it. Then, we sum up the tendencies of last year, focusing on how fast Airbnb is growing.

Finally we plot two time series, represented using line charts, of the average length of stay in Barcelona, and the accommodation cost per person and day in Barcelona. It is important because Airbnb guests spend more days in their lodgings than in any other accommodation, and taking into account the increase of the prices, we can conclude that renting an Airbnb is a very good opportunity to make money.

Conclusion: Good opportunity to make profit.

### 1b. Problem analysis.

<b>PROBLEM</b>	<i>I don't know if it's worth it to start renting an Airbnb.</i>	<i>I want to start renting an Airbnb, but I don't know what to start with.</i>	<i>I have an Airbnb but with bad reviews, what can I do to improve?</i>
<b>ACTION / ANALYSIS</b>	<i>Check the tourism data and decide if it is worth it the investment.</i>	<i>Look at the tendencies of your district and what make successful hosts have good reviews.</i>	<i>Have a look at your competitors and what are their strong points.</i>
<b>OUTCOME</b>	<b>OPPORTUNITY</b>	<b>RECOMMENDATION</b>	<b>DISCUSSION/ APPROVAL</b>

## Step 2. Choosing effective visual elements

In this section we are going to explain how we display all the data through different types of charts and other effective visual elements.

With given data we prepare the best charts to display them

Chart selection and encoding. Precision.

### Logo of the company

We chose the image on the right as the logo of the company we created. We wanted the main colour of the logo to be similar to Airbnb's. The magnifying glass is the main object of the logo because our dashboard is about studying the competition. The curves inside the magnifying glass represent the tendencies of the neighbourhood and how can we adapt to them. Finally, the house and the key give an idea of what the company is studying and in what context BNB INSIGHT can be useful for the user.



## Charts used in the context

At the beginning of the presentation, as we mentioned before, we display one bar chart that represents the number of visitors through recent years and two time series where one can see the average length of stay in different types of lodgings and the average accommodation cost per person and day. Actually, the number of visitors plot is also a time series, but a bar chart usually represents how a magnitude is distributed between different answers, that is the final objective of this graphic.



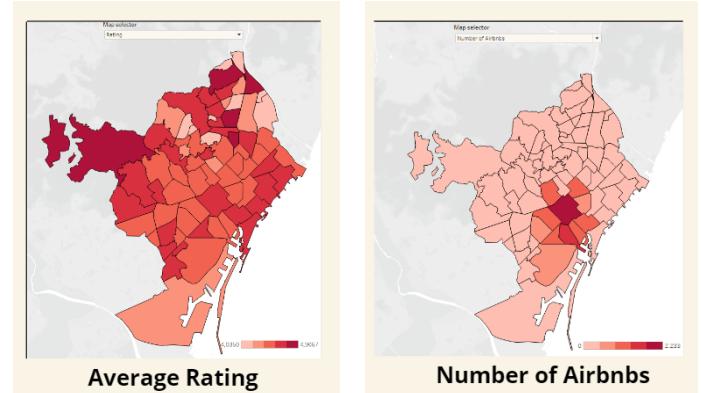
We chose the background colour to be a washed white colour. The yellow tones which represent warmth and friendliness, which is what we expect from an Airbnb host. For a lot of things we used the colour of the logo of Airbnb (Rausch) to create a theme throughout the presentation. We are aware that these two colours did not offer the best contrast, but it was good enough and we like the effect of warmth it created. We also selected dark and clear blue for ‘Hotels’ and ‘Others’, in order to differentiate with the Rausch colour (and the background) and also to visualise the blue ones as kind of a different group from the Airbnb statistics. In the last line chart we selected the green colour to simulate money and also because it contrasts with the background.

## Charts used to explain our dashboard

Later, we show in the presentation many charts directly taken from our dashboard, like the maps of distribution of Airbnbs in Barcelona divided in districts and the average rating of each district, the time series of price and occupation, doughnut charts of room type and number of guests or the map that shows the exact localization of all the Airbnbs of Barcelona.

### Maps with colour gradient

To accommodate colour-blind individuals, ensuring a clear distinction between yellow and blue, we designed the colour gradient on the map as a scale of reds. Notice also that red is the colour that the human eye can distinguish with the easiest, so it is a good choice for a gradient with different tones. To enhance separation between neighbourhoods, we added a black border. Additionally, for improved colour differentiation, we opted for a discretized colour spectrum instead of a continuous one. Although a continuous spectrum is theoretically more comprehensive, discretization enhances the ability to distinguish between neighbourhoods.



### Time series

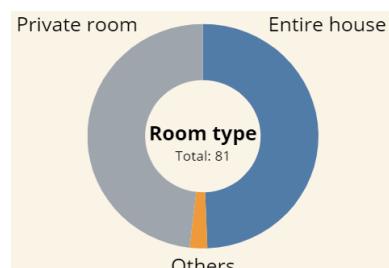
We included two time series charts depicting accommodation occupancy and per-person prices to showcase seasonal variations. This aids hosts in setting optimal prices and understanding peak demand periods. Opting for a line chart over a bar chart, we captured the year-long evolution of these variables, aligning them on a shared axis for easy correlation observation. Again, we reused the green colour for the average price line chart and we chose the purple to show the occupation because it is a colour that contrasts a lot with the background.



### Doughnut Charts

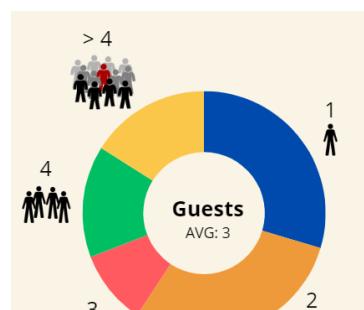
#### Room type

Note that the variables represented in this chart are categorical, which means that each category should be represented with a colour that is different from the other ones. In this case, having a colour gradient is not recommended, as well as it can be related to an ordinal chart. Finally, notice that we chose a colour-blind palette to make it more accessible to a larger audience.



#### Number of guests

As in the previous chart, the variables here are categorical, so that the colour choice here is made in order to differentiate one category from the rest (no colour gradient).

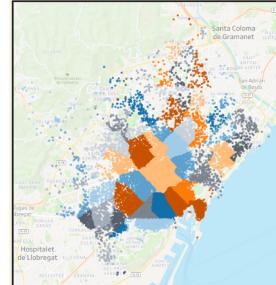


We chose colours that are not used in any previous chart, to avoid relating one chart with the other ones, since they represent different attributes.

Our pilot user told us that if we show the number of guests with the numeric symbol, it may not be clear, so in order to better visualise the number of guests, we decided to support the numeric symbol with stickmen.

## *Map of Airbnbs*

As we did with the maps of the Airbnbs distribution we also coloured the map according to neighbourhood, but the colour is not indicative of any value, only a delimiter. That is why we used the colour-blind palette of Tableau to make these limits as clear as possible for the maximum number of users.



## Wordcloud

Here, the size of the words included in the wordcloud are related with the frequency of appearance of that word in the reviews, so that the most important ones are going to be bigger in the wordcloud. We think this is crucial because we tend to pay attention to bigger words instead of the smaller ones. We also thought about the colour of the wordclouds; typically green is associated with good things, and red with the bad ones. So, we decided to plot the wordcloud with positive reviews in a scale of greens, and the plot of negative valortations in a scale of reds.



## Step 3. Reducing confusion

In order to reduce confusion in our presentation we show the presentation many times to our pilot users. Thanks to that, we notice several things such as:

The order of the slides sometimes make the understanding of the presentation confusing.

Some doughnut charts needed extra support to be clearer.

Presenting many graphics together in the same slide was a bit confusing, so presenting them in separate slides was easy to understand for the audience.

We wanted to show some good/bad reviews. Although we knew that the audience weren't going to read it, in one slide, we decided to highlight key words whereas in another slide we decided to summarise the key information to avoid people disengaging.

## **Step 4. Focusing the audience's attention**

Highlight parts of the chart where you want more attention

Everytime we show a chart, we want the audience to pay attention to a particular part of it, enabling them to draw a conclusion about them. Sometimes one chart complements another one, and that's why we sometimes display two charts together.

## Charts used in the context

Here we want the audience to focus on the evolution of Airbnb. With the bar chart, we try to show how fast tourism is recovering from the pandemic, especially Airbnb. With respect to the line charts, we want the audience to pay attention to the price increase and that Airbnb is the most preferred option when the guest wants to spend more nights in the accommodation. We think these two charts together will be more helpful for the audience to realise that having an Airbnb is a very good opportunity to make money.

### Charts used to explain our dashboard

The idea with these charts is to show how our dashboard works, and in which cases each chart is useful. In the presentation, we try to answer questions a host may ask himself/herself when it comes to starting an Airbnb. With *maps with colour gradients and the map of Airbnbs* we try to summarise the distribution of Airbnbs of Barcelona. The *wordcloud* highlights important aspects that will help the host to make a good Airbnb. *Time series* are important because we want to let the audience know that it is very important to vary the accommodation price throughout the year, depending on the Airbnb demand. Finally, with the *doughnut charts* we sum up the tendencies of the lodgings that are offered in the neighbourhood.

While in the first charts it is clear that we want the audience to focus on the benefits of starting an Airbnb, in the “dashboard” charts it becomes a little bit harder to define where to focus because of the simplicity (intentionally) of the charts.

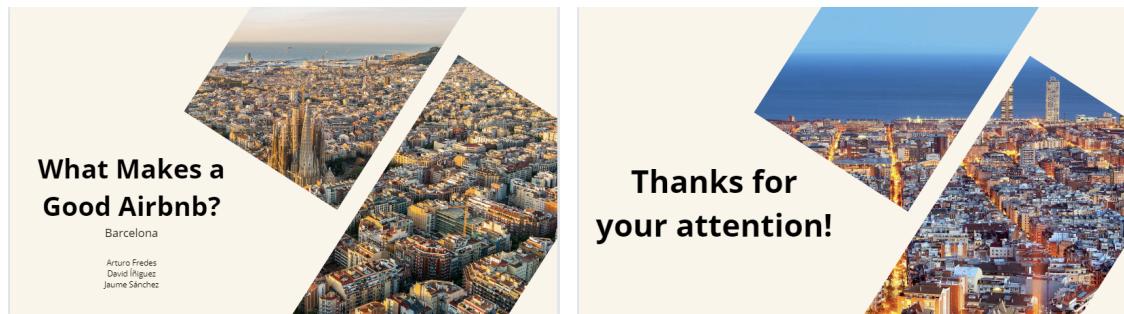
## Step 5. Thinking like a designer

**Presenting charts:** We usually presented a single chart or only charts with related information in each slide. This way we did not overwhelm the audience with information and were able to present it gradually in a way they can digest.

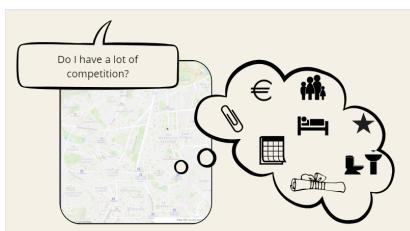
When multiple charts were presented in the same slide we chose a layout that preserves cleanliness. For more information about the charts check the previous sections.

### Good practices:

-We added the logo of our company in a corner of each slide so the presentation carries our brand.



We created similar slides for the beginning and ending to give a sense of closure. The first slide displays a picture of Barcelona during the day, while the last one a picture of the city at night to represent beginning and end.

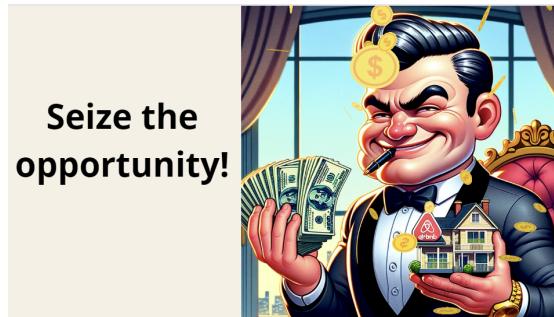


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We chose a minimalistic style and we gave it continuity throughout the presentation. We use images which illustrate concepts combined with short text to highlight key aspects and make them more clear and memorable to the audience. We kept text as short as possible, to make sure the audience does not get bored and misses these key pieces of information.



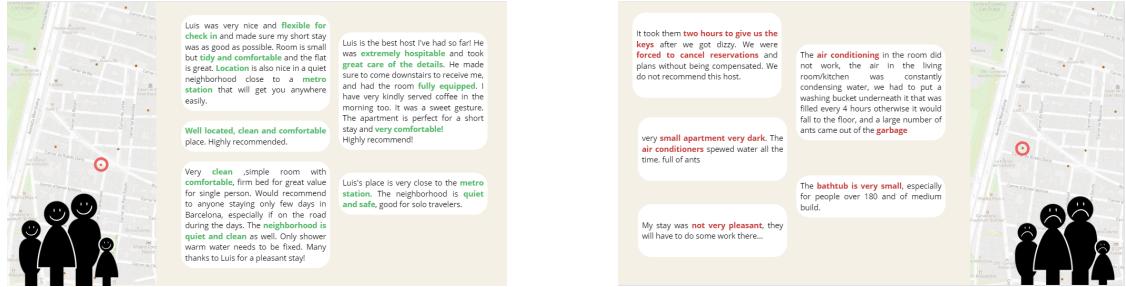
To give more importance to the climax, we created a slide with a completely different style in order to break with the previous aesthetic. In that slide we used DALLE to design an image that captures the message we want to give (get money with Airbnb). We can see a classy and wealthy man showing his money and an Airbnb house in cartoonish style, giving it a little bit of humour. We added animation to make the slide pop out even more. We displayed this image in a partial bleed format with the message "Seize the opportunity" to the left. This slide carries the main message of our presentation and calls to action. We wanted it to pop out to engage with the audience and make it memorable.



Following this climax slide, comes a moment of interaction with the audience. We let the message sink in, and give them a moment to reflect about the possible doubts they could have. This increases engagement from part of the audience and helps in giving the information in a more gradual way. We talked to a pilot user to obtain the main questions he had. We used them as the main thread of our presentation. We reveal these questions after hearing what the audience says (hopefully they coincide).

<p>How should I advertise my apartment?</p> <p><b>3.7</b></p> <p><b>117€</b></p> <p><b>3</b></p>	<p>one bedroom apartment in Barcelona. Sale price 117€ per night. It's a room with one bedroom in Sant Andreu Barcelona, near Fabra i Puig and Sant Andreu. It's a small, bright and charming small apartment ideal for a small family or small group of friends, located in a quiet residential area and beautiful neighborhood of Sant Andreu. It's a small apartment but very warm and comfortable. It's located in the center of Sant Andreu one of the most charming areas in Barcelona with its own personality and atmosphere. It's local style. Barcelona has a 5.504€-per person per night city tax, there is a 20% discount if you book online. Until 21:00, there is an extra fee of 40%. For arrivals later than 00:00 Please note that we respect the neighbors noise at night, we like to respect the neighbors and be respected. Please don't lose the keys!..</p>	<ul style="list-style-type: none"> <li>Concise</li> <li>Highlights positive aspects</li> <li>Straight to key objective information</li> </ul>
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In this section we are comparing two different apartments. To highlight that we are doing a comparison, we chose a layout where the two apartments can be located in the map, in the centre of the slide. At each side of the map we display the information of each of the apartments and keep the layout constant changing the information we want to show in each slide. We are aware that in the slide in which we show the descriptions the audience will not read them. It is just to show how the length of the description and adding superfluous information affects the advertising.



When we show the comments of the positive and negative apartment we use a partial bleed image with the map, where the apartment we are talking about is highlighted. In one case we show it to the left and in the other case to the right to accentuate the difference between both. We also included an illustrative image with happy and dissatisfied guests in each one to reinforce the message. We made the key words bold and in red or green depending if they were positive or negative. This way we made sure the audience got the message.



Finally, to give an element of surprise and call for audience participation again, we added a qr code with a free trial of our product (Although in practice it does not work).

## Step 6. Telling a story: The narrative arc

We first introduce why Airbnb is a good option/platform to sell an apartment and then, as our research has done in Barcelona (and audience is expected to have an apartment here), we give the audience relevant information about it. Once the introduction is done we encourage the audience to take advantage of the opportunity they have, introducing a series of questions that (an owner) they might have. The narrative continues to resolve all the questions posed at the beginning. Thereafter, we summarise everything that has been resolved emphasising the usefulness of our dashboard.

With this, the narrative arc can be considered as:

**The plot:** There are many owners that don't know the great opportunity that they are missing with Airbnb and how much profit they can win. That is why we created BnB Insight.

**Rising action:** explanation of why Airbnb and information about Barcelona.

**Climax:** Let's take advantage of the great opportunity that we have selling our apartment using our dashboard, which will lead to benefits.

**Falling action:** answering all the questions that an owner will ask himself/herself.

**Ending:** summary of everything our dashboard has helped to solve, try our dashboard.

To end this report, let us explain what each member of the group did.

### **Team Members' Roles**

In the development of our project, we have identified three fundamental components that require attention and dedication: the preparation of the presentation, the writing of the corresponding report and the subsequent presentation of the StoryTelling in class. In this context, it is imperative to highlight that, as a group composed of three members, we have addressed the first two parts equitably, ensuring that each member contributes proportionally.

Rather than assigning specific tasks based on particular skills, we choose to work together at each stage of the process, ensuring that each member of the group has a comprehensive understanding of the work performed.