

DESIGN THINKING TEASER

Interreg 
Alpine Space

DesAlps

EUROPEAN REGIONAL DEVELOPMENT FUND



The origin of the Design Thinking Teaser

The Design Thinking Teaser is a toolkit that has been created in the framework of the DesAlps project. DesAlps is an European project that since 2016 has been working to support and promote the use of Design Thinking for innovation through the experimentation of this methodology's techniques for SMEs. The objective of the European project is to encourage innovation and sustain its integration into support policies in the ecosystems of the Alpine Space. Therefore, the structure of this toolkit was developed by a team of Design Thinking experts selected by the lead-partner t2i - technology transfer and innovation on the basis of the objectives of the European project.

To create the Design Thinking Teaser, Serena Leonardi of Amploom and Silvia Toffolon of Creography have combined their expertise in the field of Design Thinking, but also their experiences of working and applying the methodology in small and medium enterprises. Finally, thanks to being generated in the framework of the DesAlps project, the Design Thinking Teaser process and tools have been tested and validated through numerous workshops directly on SMEs from different sectors of the Alpine Space. The experiences in each workshop have contributed to continuous experimentation, verification and implementation of the Design Thinking Teaser that we are here proposing to you.



DESIGN THINKING TEASER



Why using this toolkit?

If you landed on the www.designthinkinglab.com platform and opened this toolkit, we imagine that you are an innovation manager within an SME, an innovation consultant operating in the world of small and medium enterprises or simply a curious person who has heard of Design Thinking. We also imagine that you would like to deepen your knowledge about this methodology in order to understand if it is the right one to bring into your small or medium business or to support your consulting activity. Or that you are already convinced that Design Thinking is the right way to go and you are just looking for the right tool to test it. To help you understand and consciously choose this methodology, we have created the Design Thinking Teaser, a toolkit designed specifically to help those who are intrigued by this method to become familiar with the tools, working methods, and mindset of Design Thinking. We have given shape to this toolkit with not with the aim to make people autonomous or to transmit an entire mindset, but to let people test the methodology and understand what it is about.





When is it useful?

As we said, the Design Thinking Teaser was designed to introduce the tools and methodology typical of Design Thinking to those who intend to apply this method in their company but have never experienced this type of tools before. In fact, the purpose of Design Thinking Teaser is also to let people experience a different mindset and thinking process than we are used to. To better reach this goal we chose to base the toolkit on a typical starting situation while aiming for innovation in SMEs. In the Design Thinking Teaser, the typical starting situation represents a company profile in line with that of the SMEs of the Alpine Space and a typical initial design brief. We made this choice so that the people who will test the toolkit could test the methodologies of Design Thinking for the first time on a planned field of application different from their own. In this way it is easier to better assimilate tools and concepts without being influenced by the context of their company. In such a manner, the Design Thinking Teaser is also able to stimulate a collaborative and collective way of working within the groups in which it is used. Generally, in fact, the activities of Design Thinking are based on teamwork, because it allows for a richer exchange of ideas and therefore facilitates the creation and implementation of solutions.

Even if we are aware that training people to a new mindset takes time and a lot of energy, we have structured the Design Thinking Teaser for a 1-2 day learning introduction, because we know that the context of SMEs in the Alpine space is a context where the available resources need short and concise training. Since the purpose of this toolkit is to assess whether Design Thinking is the right tool for your reality, we believe that at the end of the activity with the Design Thinking Teaser it will be easier to understand if you need to activate a more deep and structured path for your business following the Design Thinking methodology. For more information on this topic you can look at page 13.

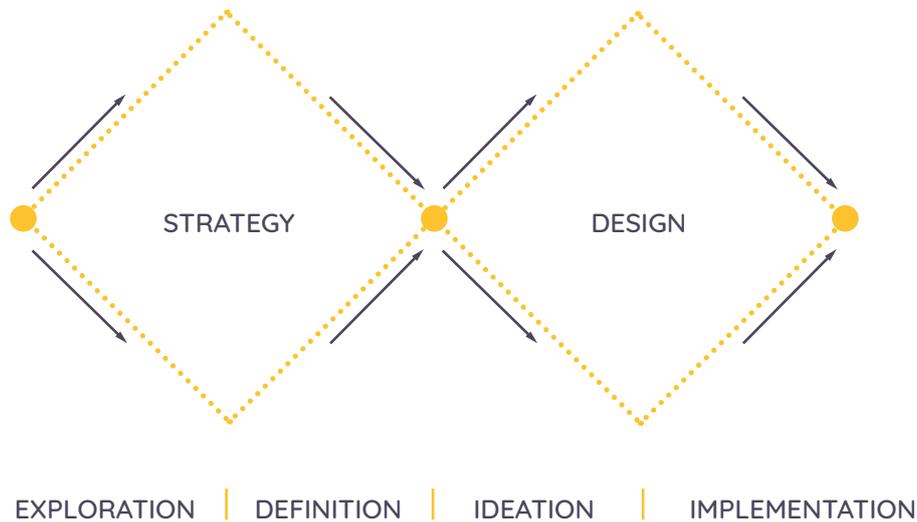


How was the Design Thinking Teaser conceived?

The Design Thinking Teaser is based on a process model in order to make the typical Design Thinking path clear to the ones who haven't experienced it yet. There are many ways to represent the process model of Design Thinking, here we have chosen the Double Diamond as we believe it is the easiest way to understand it and it is visually clear for those who have not yet used this methodology. The model of the Double Diamond that we propose to you has been developed by the Design Council, a UK independent charity and the government's advisor on design, which has defined it in this way:

“In all creative processes a number of possible ideas are created (‘divergent thinking’) before refining and narrowing down to the best idea (‘convergent thinking’), and this can be represented by a diamond shape. But the Double Diamond indicates that this happens twice—once to confirm the problem definition and once to create the solution.”

Therefore we have developed the Design Thinking Teaser so that it follows the entire Double Diamond process, that is, as a flow of activities that guides learning participants through the methodology of Design Thinking. To better support this flow, we have created different types of materials that you will find inside the toolkit for you to print and use. The material you will find is both in the form of templates to be filled in and in the form of cards that already contain information searched for and entered by the creators of this toolkit. The choice to carry out the research work beforehand and to deliver the “pre-filled” material to you was made for a number of reasons. Since a Design Thinking path begins with an initial research phase, first of all we



believe that this phase user-oriented should be conducted with certain expertise so that the results give interesting ideas and support the design phase. As you can imagine, the insights coming from this phase influence the result of the whole process and in order to extract them we usually carry out desktop researches, targeted interviews and surveys, which require experience in conducting them and are also time-consuming. That's why we thought it would be more interesting to show you an example of the output of the research phase so that it can be clear to you for future applications. Also, as you can expect, the initial research phase takes a lot of time, and to keep the timeframe short and focus on all the phases of Double Diamond, we decided that this was the most appropriate balance.

The Design Thinking Teaser does not offer solutions. Instead, it offers techniques, methods, tips and templates to support everyone involved in the SMEs world through the Design Thinking process. Therefore, we would like to underline that what you will find in the Design Thinking Teaser are not the entire and complete tools of this methodology, but they are the ones that we considered fundamental and basic to transmit the mindset. Given the purpose of this toolkit, we propose a selection of methods and tools of Design Thinking, not an exhaustive collection. Usually, in fact, depending on the project in which it is applied, activities and tools are chosen and adapted by Design Thinking experts to help achieve the goal.



How to use it?

One of the fundamental ingredients of the Design Thinking methodology is the concept of collective intelligence. The value of this process is in fact given by the fact that it is dealt with in groups, not individually. Although sometimes it seems that teamwork can compromise the abilities of the individual, in reality, a way of working based on the comparison and collaboration of different individuals with different perspectives and backgrounds generates richer and more stimulating conversations and consequently more solid and innovative ideas. For this reason, we recommend using the toolkit in a group of a minimum of 3 and a maximum of 5 people. If more participants are involved in the learning session, they can be divided into several groups while maintaining the same ratio of people per group. In this case, each group will carry out the activities of the Design Thinking Teaser at the same time. For group building our advice is to create them as heterogeneous as possible taking into account not only the sector of origin in the company, but also the age and gender. The heterogeneity of the members of the group ensures a fruitful exchange of ideas and opinions, as you bring to the table not only a different perspective on the work, but also your personal and cultural background.

For optimal management of the activity, we recommend the guidance of an expert facilitator on the methodology of Design Thinking who can guide you along the way. The presence of a facilitator ensures not only that the activities are clear by all participants so that the mindset is understood and the timings are met, but also that all participants contribute and collaborate in the process. Moreover, a facilitator with experience in the project field can lead a working group with training purposes in a more effective and conscious way. If you are interested in more information about facilitation, you can find all project references on page 13.

To start these learning days in the best possible way, we suggest using warm-up activities. These activities are designed to help participants start approaching the dynamics of the methodologies they will use throughout the day. Not only that: they are also useful for starting a conversation

within a group and creating a common knowledge base of the topics and method.

Another useful element to foster a collaborative working environment, in which people can express themselves and work fruitfully, is a suitable space that supports and favors the approach to the new mindset. For this reason, we recommend a few measures to choose (or create) the ideal working environment for this type of process. First of all, each workgroup should have a table large enough to comfortably contain the templates that the participants will use so that they are clearly visible to all and it is convenient to write to us. You can find and download all the templates you will need during the activity in the bundle of the Design Thinking Teaser. For optimal use, we recommend that you print them in the suggested size: you can find a preview of the templates in the appendix of the toolkit.

It would also be useful if the walls of the room could be used to hang the materials used. As for the room, in addition to the fact that you can stick paper tape on the walls without ruining anything, it would be preferable to have a room with natural lighting, so that people stay awake and focused during the work.

Depending on the number of participants and groups, pay attention to the acoustics of the room, hearing and seeing a group working keeps the pace in other groups, but if the noise is too annoying and chaotic you risk getting the opposite effect. As material available to each group, we usually use squared post-it of different colors, markers, and tape paper; basic materials that are always useful in all activities. We would also like to underline that no device is required during the Design Thinking Teaser, in order to avoid possible distractions of the participants.



Sounds great! But how does it work?

To make the Design Thinking Teaser more effective, during the development of the toolkit we ask you to identify yourself in the role of designers who are contacted by a company, in our case DesOven, which addresses you because it has a problem and would like a way from you to solve it. Or it could be that you are an internal Innovation Team made up of people dedicated to solving the problem and you have been given this design brief by DesOven. In the Design Thinking Teaser the typical starting situation we propose is that of DesOven, a company that produces industrial ovens for restaurants and bakeries with an annual turnover of 25 million. The design question with which the company comes to you is this:

“What products or services can we design to improve the user maintenance process?”

As we said before, the user research has already been done and the results of the interview with a cook and possible user, Alex, have been reworked into meaningful quotations and images (Template: 1. Alex Says). From these cards, the participants of the group have the opportunity to start reflecting on the topic and can start to draw some insights. The insights and conclusions drawn from the cards should be used to compile Alex’s Personas (Template: 2. Personas) according to these categories: needs, pains and challenges, and ambitions. Once these aspects have been determined, it will be possible to fill in the “How might we question” (Template: 3. How might we question), which is a reformulation of the project brief based on user research. In the Double Diamond the “How might we question” is the meeting point of the first diamond “strategy” and the second diamond “design”, and will be the starting point for the next phase.

To stimulate the generation of ideas and solutions in response to the “How might we question” there are various tools and materials available within the toolkit. First of all, cards with technological trends and some case studies already researched by the creators of the toolkit on the theme

of maintenance in other areas from which participants can draw inspiration (Template: 4. Best practice). Second, two different methods to conduct brainstorming. In addition to the best-known method in which everyone writes their own idea about post-it and shares it with the other members of the group and the discuss about it, another brainstorming method that we propose is called brainwriting. This technique, which consists of several rounds (Template: 5. Brainwriting), is to have each group member write an idea to solve the problem stated in the “How might we question” on the template individually and then pass the template counterclockwise to another group member.

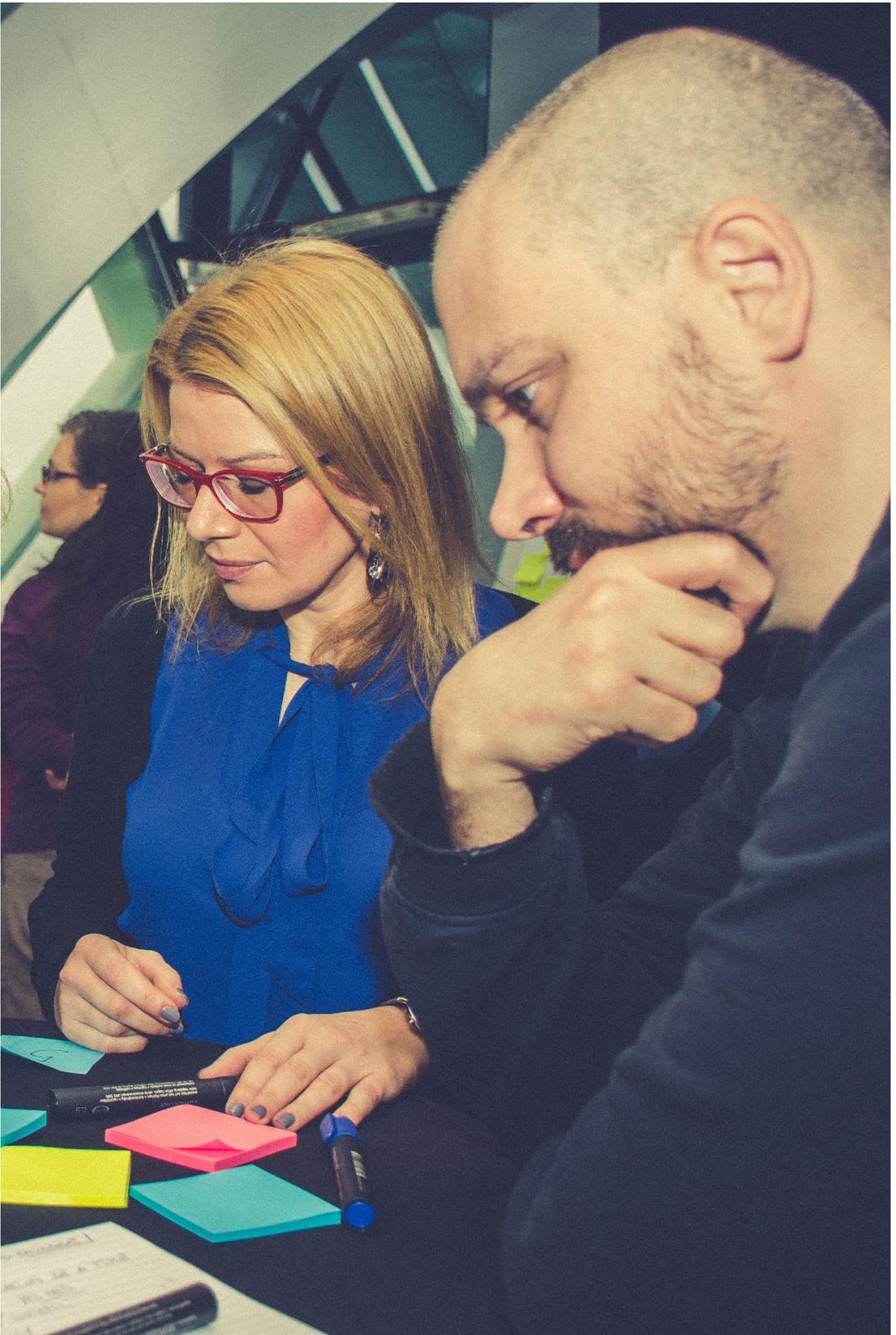
Since during the brainstorming phase the focus is on the number of ideas, and not on quality, after generating an adequate number of ideas we must move on to a phase of skimming. For this phase, we propose a positioning chart of the ideas (Template: 6. Idea Chart) that classifies them according to two parameters: economic viability and user desirability. This is a group-based activity: as a group you go through all the ideas generated and discuss to decide the position of each idea in the chart. Usually, the ideas on



which it is worth focusing on in the following phases are those that are positioned at the top right of the graph.

Once the most promising idea has been identified, we move on to a drafting phase, so that it can be defined in more detail and visually (Template: 7. Idea Description). Do this activity as a group, going together through every point of the template. The very last step of the process is to prototype the chosen idea: each group will try to make a prototype of its own idea with the available materials, such as paper, cardboard and markers, so that it is possible to visualize the idea and make it tangible. Obviously we realize that talking about prototyping within an activity that lasts no more than two days is very challenging, but what we ask is to understand what is the heart of your solution and try to simulate it, whether through an object, a wireframe or a simulation. You can build it using any material you have available, the important thing is to start to understand the real core of your idea, and display it so to figure out weak points, possible improvements and ask for feedback.

In case several groups are doing the Design Thinking Teaser at the same time, we suggest that at this point each group presents its idea to the rest of the participants showing the built prototype, so as to receive further feedback from them as well.



DESIGN THINKING TEASER



DesignThinkingLab

If you are interested in getting more information about the processes of Design Thinking, we inform you that in the locations of the partners involved in the project there are reference points for the activities of Design Thinking in the Alpine Space.

In addition, you can find all the Design Thinking LABs plus their Design Thinking materials and events in the virtual platform www.designthinkinglab.eu.



1



Lead-Partner
tzi technology transfer
and innovation
Italy

6



Partner
bwcon
Germany

2



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Business Upper Austria
Austria

7



Partner
ITG
Austria

3



Partner
Chamber of Commerce Padova
Italy

8



Partner
risingSUD
France

4



Partner
Chamber of Commerce
and Industry of Slovenia
Slovenia

9



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Italy

5

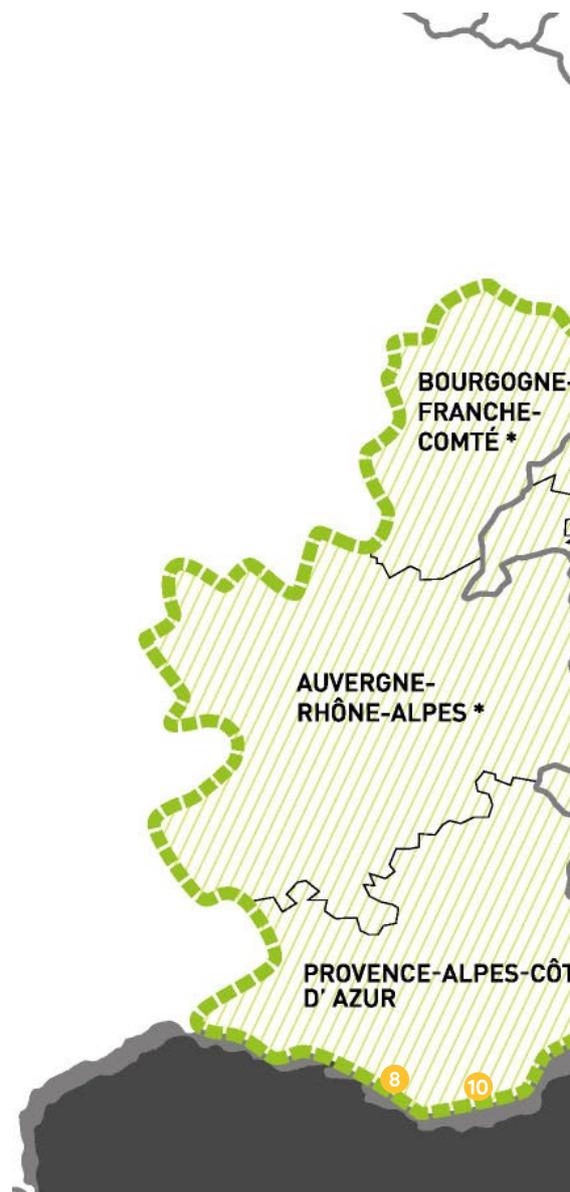


Partner
Maribor Development Agency
Slovenia

10



Partner
TVT Innovation
France



The Design Thinking Teaser has been created in the framework of the DesAlps project, which is co-financed by the European Regional Development Fund (ERDF) through the Interreg Alpine Space programme.

We want to thank every expert and tutor that helped us test the Design Thinking Teaser and every professional or SMEs who applied this toolkit under our guidance.

#MadewithAlpineSpace





APPENDIX

ALEX SAYS:



"Once a year the oven company calls me and asks me if everything is okay with the product. Most of the time it is useless, because I can only answer positively or talk about problems that I have had that are already solved."

Design Thinking Teaser
Serena Leonardi



Design Thinking Teaser
Serena Leonardi



ALEX SAYS:



"It is very stressful to face the situation of a broken oven and a restaurant full of people. You have to use your creative skills to find a solution that can save your evening."

Design Thinking Teaser
Serena Leonardi



ALEX SAYS:



"Perfect maintenance is maintenance that I don't have to worry about. I wish the technician would always be close to my oven, so it wouldn't break."

Design Thinking Teaser
Serena Leonardi



ALEX SAYS:



"If anything in the oven breaks or doesn't work, I'll call the switchboard for assistance. The problem is that every single call is recorded and I have to pay for it, which is not convenient."

Design Thinking Teaser
Serena Leonardi



ALEX SAYS:



"Usually problems with kitchen equipment occur on weekends when the restaurant is full. Many times I have to find a way to cook without an oven, because the maintenance technician arrives too late. Also calling a technician over the weekend is extremely expensive."

Design Thinking Teaser
Serena Leonardi



Design Thinking Teaser
Serena Leonardi



ALEX SAYS:



"The perfect oven is indestructible and reliable."

Design Thinking Teaser
Serena Leonardi



PERSONAS



Profile:

Alex is 35 years old and works as a cook. He runs a restaurant that does both large events such as weddings or celebrations, and daily dinners for groups of any size. The restaurant is open 6 days a week and can accommodate up to 120 people. Alex has 4 different ovens in his restaurant.

Representative motto:

“

”

Needs:

Pains and challenges:

Ambitions:

HOW MIGHT WE QUESTION



 Since
(context)

 how can we help
(user)

 to
(explicit need)

 so that he/she can
(implicit need)

 even if
(threats)

?

Example:

Since he uses only some of the functions of the oven,
how can we help Alex, the passionate cook, **to** make better use
of his oven **so that he** can keep costs low and offer high quality
to his customers, **even if** he has little time to attend training courses?

INTERNET OF THINGS



Maintenance data can be collected from multiple sources, such as different types of sensors (e.g. vibration, acoustic sensors,...). This data can then be analyzed by experts in sophisticated systems and algorithms to be used.



*E.g. Aquaco - a fish farmer - is an example of how you can use your IoT to improve your business. Aquaco uses the **data collected** by a series of sensors located in small recording devices to regulate animal feed, monitor oxygen levels and other environmental factors and to receive alerts and notifications promptly if necessary.*

Design Thinking Teaser
Serena Leonardi



INTERNET OF THINGS



Maintenance data can be collected from multiple sources, such as different types of sensors (e.g. vibration, acoustic sensors,...). This data can then be analyzed by experts in sophisticated systems and algorithms to be used.



*Es. Aldes, a company specializing in air conditioning systems and air quality, has integrated a **new system intelligence**. This makes the devices connected and communicating with the central system and with the devices of the end customers, allowing greater traceability and real-time management of information.*

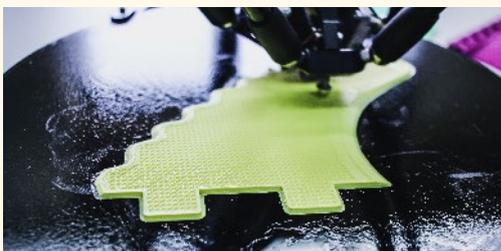
Design Thinking Teaser
Serena Leonardi



3D PRINTING



3D printers are becoming more and more popular to produce parts for different applications and are gradually becoming common in both industry and consumer sectors. For example, they are used to produce spare parts.



*E.g. Groupe Seb, a French company specialising in small household appliances, is currently experimenting with a system of **spare parts produced on demand** using 3D printers. This would allow the system to be disposed of 'in stock' and to produce the piece only when it is actually needed.*

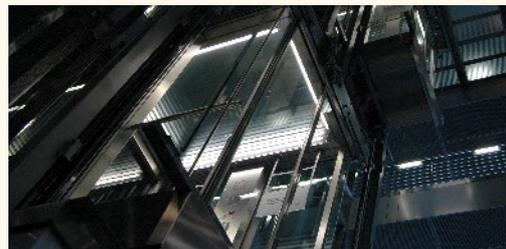
Design Thinking Teaser
Serena Leonardi



PREDICTIVE MAINTENANCE



The ability to collect and process large volumes of maintenance data in a cloud can strengthen and support maintenance services.



*E.g. Thyssenkrupp Group has developed MAX, the first real-time **predictive maintenance** solution for elevators. This IoT solution for automatic learning reduces out-of-service situations through real-time diagnostics. MAX predicts maintenance problems before they occur and allows lift technicians to report the need to replace components and systems before the end of their lifecycle.*

Design Thinking Teaser
Serena Leonardi



BRAINWRITING



Round 1

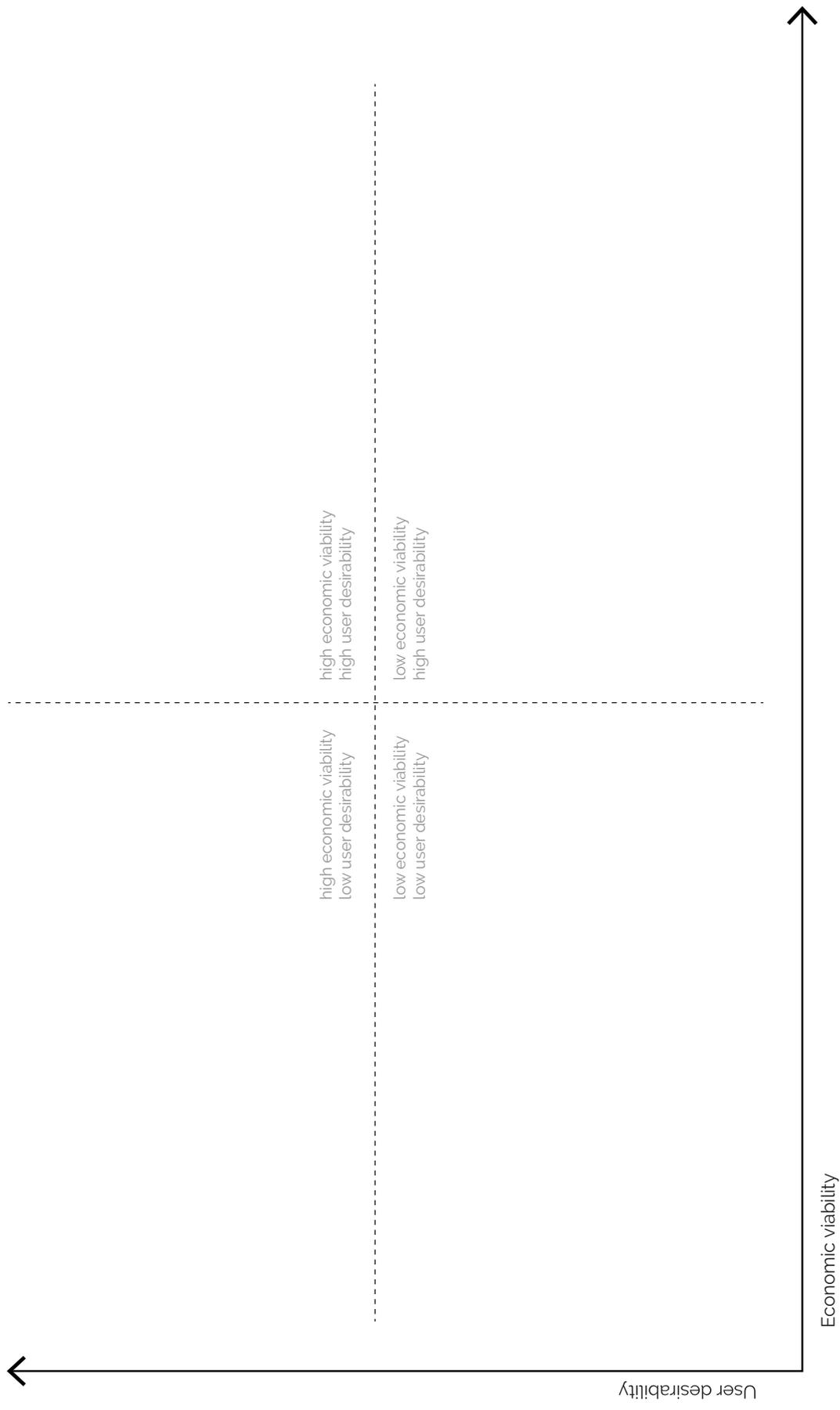
Round 2

Round 3

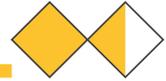
Round 4

Best ideas from these rounds

IDEA CHART



IDEA DESCRIPTION



Idea name

Drawing

How does it work?
