# Design Thinking Culture Heritage Libraries

## Summary

Design thinking approach will help develop creativity and give value to the library activities. Design Thinking is a user-centred, creative, and collaborative problem-solving methodology. It is a method that transforms ideas and projects into real actions and tangible prototypes. At the beginning of the process we need to gather pertinent information, we need to visualize ideas, evaluate them and come up with a solution to the problem or the need. So, in the design thinking we always begin with the problem never with the solution. Design Thinking is a 5 steps process to come up with meaningful ideas that solve real problems. The first step (Empathize) will help you place the need of the user and your understanding to their problem at the centre of your work, by conducting interviews that will help you identify their needs and be able to create products or services for them. In the second step we should define the problem by watching the interviews that will also help us understand the real needs that people are trying to meet with certain activities. We can also use the empathy maps to identify feelings, thoughts, and attitudes of existing or potential users and understand their needs and this will help us to make strategic decisions and design an experience that satisfies the user. After defining the problem, comes the brainstorming it's an ideation technique. The goal of this step is to come up with a high number of ideas that solve the problem and show them to the people you are trying to help, to get their feedback. The next step will be the prototype. In this step we should build and represent the ideas by a simple model of a proposed solution used to validate them. The final step will be to test the prototype with real users. The point is to learn what works and what doesn't, so any feedback is great. This test will help you have feedback about the prototype quickly and simply and collect information to improve the prototype and future ideas. Keep in mind that we can restart if needed at any step. Design thinking is a proven and repeatable problem-solving methodology that anyone can employ to achieve successful results.

For recap see **https://www.youtube.com/watch?v=_r0VX-aU_T8**

# 1. Introduction (Guide for this Module)

This module describes how to develop creativity and give value to the library activities by using design thinking approach. This method was developed at Stanford in the 1980s and aims to apply a designer's approach to respond to a problem or innovation project, in our case it will be cultural heritage in library activities. Design Thinking is a user-centred, creative, and collaborative problem-solving methodology. It is a methodology that transforms ideas and projects into real actions and tangible prototypes. Since Design thinking is suitable for analysing and solving problems in different types of organisations, it can also be used in universities, libraries, and other educational and cultural heritage institutions.

This way of thinking and innovating relies heavily on user feedback and offers an opportunity for a group to be creative. Design thinking aims to respond to a need, whether it is explicit. It is therefore important to rely on certain anthropological methods such as observation, immersion, or co-construction with users.

This module provides information on basic principles of Design thinking. It will explain:

- What Design Thinking Really Consists of.
- What Different Stages Are.
- What Are its Greatest Advantages in General and Especially for Libraries.
- What Are Opportunities for its Practical Applications.

For more detailed information see Objectives of the module, Learning Outcomes and Description of contents.

# 2. Course Objective and Learning Outcomes

Design thinking is used to describe two different but overlapping concepts: an innovative way of problem solving and a process of activities and methods to support this innovative way.

## *2.1. Objectives of the Module*

This module will teach you how:

1. To define what Design Thinking is.
2. To understand the basic to learn, how Design Thinking organises and guides the process of designing new services.
3. To develop design thinking training to better understand this process and methodology.
4. To identify resources needed for organising the Design Thinking workshop.
5. To analyse and perform Design Thinking workshop activities by following step-by-step instructions.
6. To evaluate acquired knowledge by performing self-assessment tests.
7. To combine multiple skills of members of the institution with a common goal to bring a meaningful project to life in record time.

## *2.2. Description of the Content and Guidelines*

This module requires 6 hours of study time. It includes a brief presentation of what design thinking is all about. It will also explain how Design Thinking will help librarians to understand

and address the patron's needs and how this method and approach can help them designing new services to promote cultural heritage.

Module consists of the following parts:

- Introduction
- Different Workshops
- Discussion Forum
- Summary
- Self-assessment Test
- References/Resources

Learners are expected to read and understand the concept. They can consult suggested resources for further information. After completing this module learners will be able to use design thinking to create a user-oriented services in their library. A test is included for self-assessment on the content provided. They can revise the study material and use the suggested templates when necessary.

# 3. Content

## *3.1. A brief history*

The idea of design as a way of thinking can be traced backed to Herbert Simon in 1969 in his book "The science of the artificial." From 1987, when Peter Rowe was the first one to use the expression design thinking in his book "Design Thinking" to 1992 when Richard Buchanan's published is highly influential article "Wicked Problems in Design Thinking" the concept continued to shape the practice. At the same time, the Stanford University and the design agency IDEO under the aegis of Tim Brown, a trained designer are formalising design thinking as an innovation process with specific steps, methodology and tools. Design thinking is now conceived as a new approach to innovation that extends well beyond the traditional sphere of intervention of designers.

## *3.2. What is Design Thinking*

Design thinking is a user-centred, creative, and collaborative problem-solving methodology. It is a mindset and methodology that can be summarise with the following points:

- A way to take on design challenges by applying empathy.
- An approach to collective problem solving.
- A framework to balance needs and feasibility.
- A means to solve complex or wicked problems.
- A mindset for curiosity and inquiry.
- A fixed process and a tool kit.
- A problem-solving approach to handle problems on a systems level.
- A culture that fosters exploration and experimentation.
- A design buzzword to suggest that designers can do more than just design.
- A management buzzword sold as the next strategic tool.

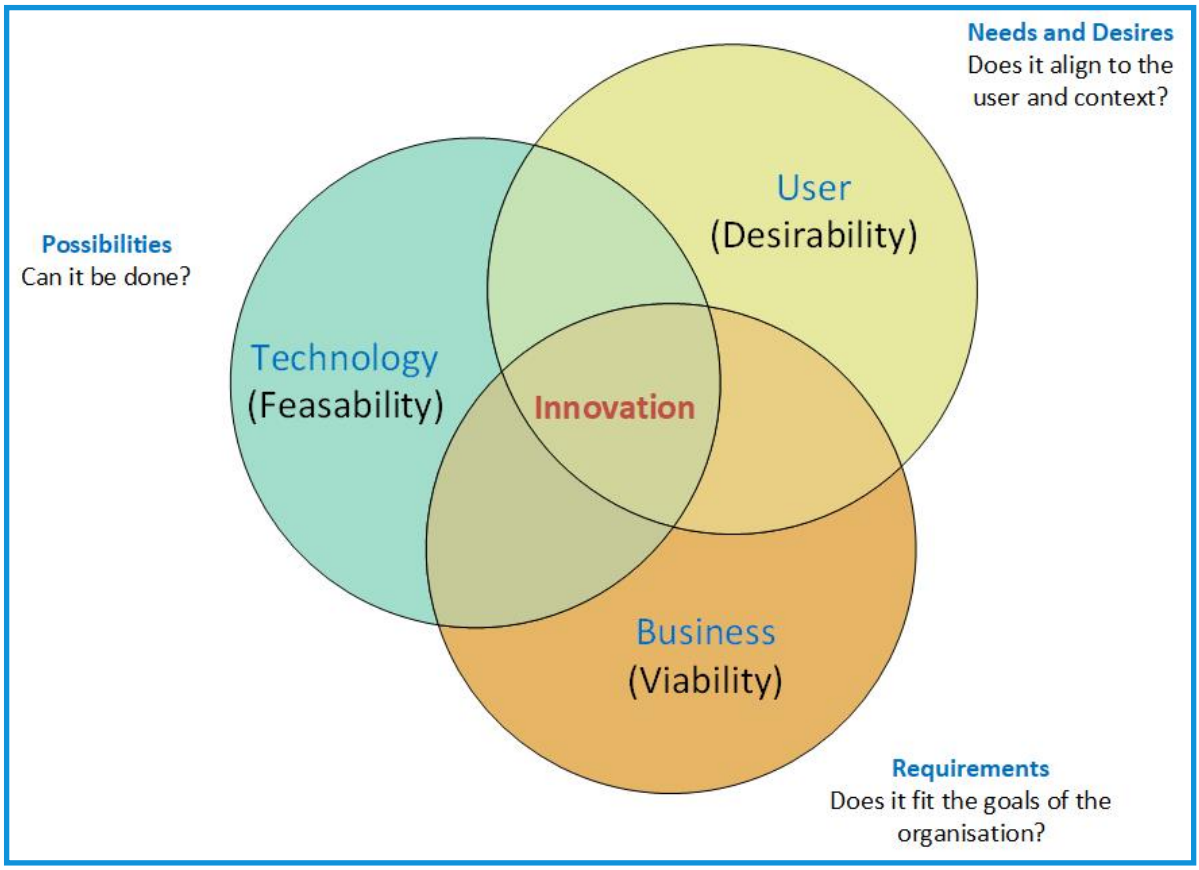
## *3.3. Key Success in Design Thinking process*

To be successful in the process of design thinking, it is important to be:

- Free of prejudices about the service you want to offer.
- Free of expectations about the service you will design.
- Filled with curiosity to understand things more deeply.
- Open to a world of possibilities.
- Accept to fail and learn from failures.

### *3.4. Design Thinking as a process of designing new services.*

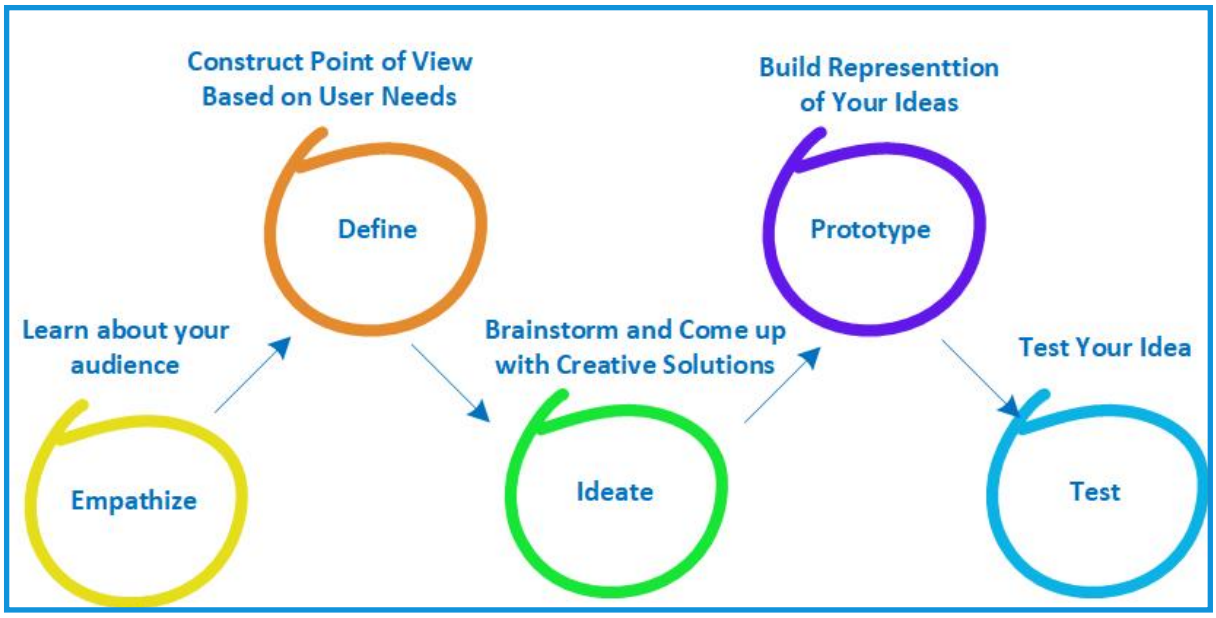
The Design Thinking process gives better result when it is performed by a cross-functional teams that can be illustrated by the figure below.




You will still need to gather pertinent information at the beginning of the process, visualise ideas to properly evaluate them, and come up with a solution that fits the problem or need.

Design thinking requires that you place the needs of the user and your understanding of their problem at the centre of your work. Then, grounded in research and fuelled by creativity, teams come up with ideas, create models of those ideas, and critique those ideas in a cycle of iteration that moves toward a solution.

Design thinking produce solutions with the user and their context always in mind, increasing the likelihood that your user will be happy with your solution. Design thinking is a proven and repeatable problem-solving methodology that anyone can employ to achieve successful results. This process can be summarized by the figure below:




This process is iterative. At each step we can go back and restart if needed.

# 4. How to design service by using Design thinking?

In design thinking, we always start with the problem, never with a solution. We need to define the problem in a simple sentence. The library owns a rich cultural heritage collection that lack of visibility. How can design thinking help to promote it? We need to develop a common understanding of the problem from both points of view of the team librarian and the patrons.

## *4.1. Workshop 1. Initial Problem Description*

- **Aims of the session:** Rich a common understanding of the problem and describe it.
- **Group**: 12 participants from different generations
- **Duration:** 60 min.
- **Materials needed**: Pens and Post-its. Several sheets of A4 paper in portrait and A3 paper in landscape.

**Step 1.** help participants to formulate the problem statement by writing questions on the A4 paper or you can use a template. Let participants use different colours for questions and answers.
Examples of questions that could be answered:

- What is the problem? Why is it a problem?
- Who has the problem? Who has a need?
- When and where does the problem occur?
- How is it solved today?

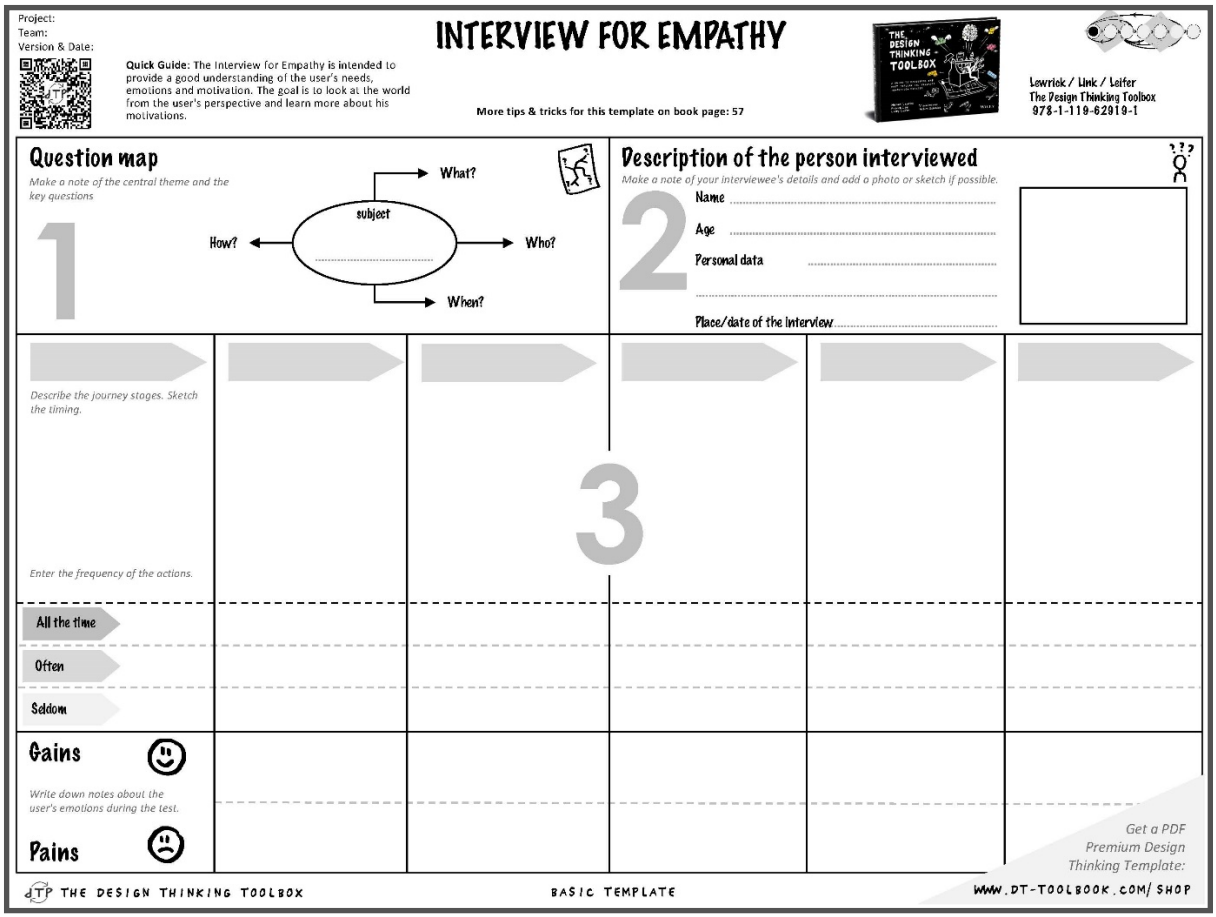
**Step 2.** Attach these papers to the wall and put an A3 sheet in landscape layout underneath them. Then consolidate the problem definitions or select the most appropriate using participants consensus or voting.

**Step 3.** Start transferring the individual problem definitions systematically into an overarching problem. For example, “How might we redesign the services around the cultural heritage collection to allow patrons to enjoy it richness, so the collection can attract more users?

## *4.2. Workshop 2. Learn about your audience (Empathize)*

Empathy interviews are the cornerstone of Design Thinking. By entering and understanding your user's thoughts, feelings, and motivations, you can understand the choices they make, you can understand their behavioural traits, and you are able to identify their needs. This helps you innovate and create products or services for them.

- **Aims of the session:** Consider the problem from the point of view of the user and build empathy with users.
- **Group:** Group of 2 interviewers. One conducts an interview with users and the second takes notes on emotions and body language.
- **Duration:** 60 minutes
- **Materials needed:** Notepad or template 1 or template 2 (depending on your need) and pen. Camera or smartphone for the documentation (do not forget to ask the permission).




PS. Questions should not be phrased in a way that makes it seem like there is a correct answer. Specifically, they should not have any biasing emotion language that steers the interviewees response in a positive or negative direction. Rather, the questions should be more objective so that participants can draw from their own experiences in their answer. This will allow for the most genuine responses.

**Step 1:** Create a well-thought-out question map with the main subject; it is crucial for an in-depth interview. Use the *How, What, Who* and *When* questions and explore the subject with the interviewee. Don't use a structured questionnaire.

**Step 2:** Work with “journey stages” in addition to the question map. It helps to identify patterns at an early stage. The question map and the “journey stages” aim at gathering unexpected insights that are triggered by different thought processes.

Empathy interviews allow users to speak about what is important to them. They help to understand the emotional and the subconscious aspects of the user. They allow interviewers to gain insights on how users behave in given environments and situations. They can reveal solutions you might not have discovered otherwise, or unmet needs and challenges you might be overlooking.

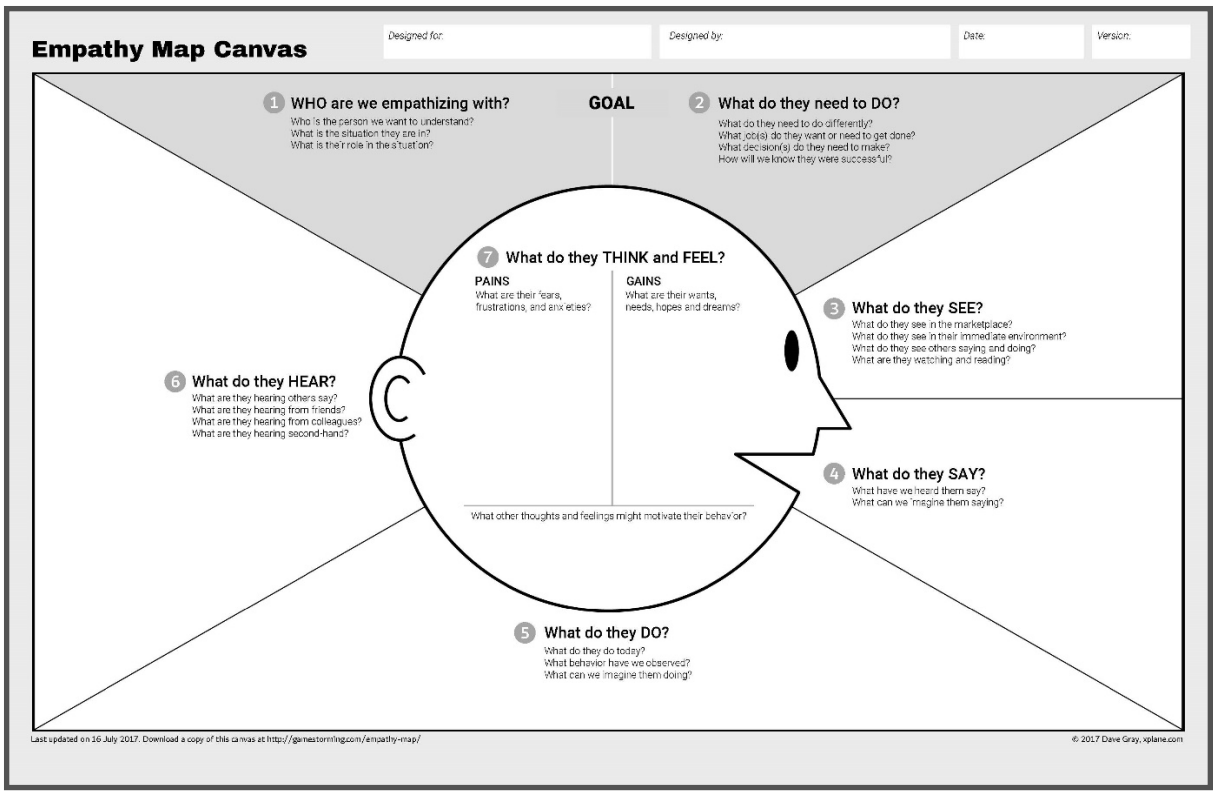
For more explanation watch: https://www.youtube.com/watch?v=C79Ou-i3T-E

### *4.3. Workshop 3. Construct a point of view of user’s needs (Define)*

Empathy maps can be used whenever you find a need to immerse yourself in a user’s environment. It is used to identify feelings, thoughts, and attitudes of existing or potential users and understand their needs. It is a collaborative tool librarian can use to gain a deeper insight into their customers.

*PS. We also suggest speaking to experts who know the user. Librarians can also be active and “Walk in the shoes of the user!”*

- **Aims of the session:** Understanding of the user’s needs. Find out in the context of the library what will help the users to use the cultural heritage collection and what are their preference.
- **Group**: several groups of 2 people
- **Duration:** 30 min.
- **Materials needed**: Notepad or use a template. Pens and Post-its to write the essential points on the empathy map.



**Step 1.** The method is simple and fun. Hand each team member sticky notes and a marker. Each person should write down their thoughts on stickies. Ideally, everyone would add at least one sticky to every area of the map in a clockwise direction. You might ask questions, such as:

- What would the user be *thinking and/or feeling*? What are some of their worries and aspirations?
- What would their friends, colleagues, and boss be likely to say while the user is using our collection? What would the user *hear* in these scenarios?
- What would the user *see* while using our collection in their environment?
- What might the user be *saying and/or doing* while using our collection? How would that change in a public or private setting?
- What are some of the user's *pain* points or fears when using the collection?
- What *gains* might the user experience when using our collection?

**Step 2.** File in the fields **Pains and Gains.**

These steps allow constructing the point of view based on user needs. The empathy map will help you to make strategic decisions and design an experience that satisfies the user. It is mainly used to "understand", "observe", "define the point of view" and "test phases.

For a different template watch: https://www.youtube.com/watch?v=QwF9a56WFWA

### *4.4. Workshop 4. Brainstorming and come up with creative solutions (Ideate)*

Brainstorming is an ideation technique in which all participants can contribute their knowledge. It is frequently used as a "brain dump" so that everybody on the team has a chance to make their ideas and solutions known. This procedure helps people clear their heads. This technique has no limits.

- **Aims of the session:** Generate many ideas that the team spontaneously comes up with. Use the entire creativity potential of the participants.
- **Group**: several groups of 4 or 6 people
- **Duration:** 30 min.
- **Materials needed**: Post-its. Pens. Wall or Whiteboard

**Step 1.** Ask participants to write their ideas on a Post-it.

**Step 2.** After a certain period, one person begins to stick his own ideas on a flip chart and explain them. If there is already a similar Post-it, another one is glued next to it.

**Step 3.** During the explanations of the other team members, new ideas are generated (ideation) and written on new Post-its.

**Step 4.** The result is a clustered collection of ideas, which can be later evaluated.

This brainstorming session will allow to have a high number of ideas at hand in a short period of time. These ideas come from an interdisciplinary perspective on a problem that represents different skills and knowledge.

### *4.5. Workshop 5. Build representation of your idea (Prototype)*

A prototype is a simple experimental model of a proposed solution used to test or validate ideas, design assumptions and other aspects of its conceptualization quickly and cheaply, so

that the designer/s involved can make appropriate refinements or possible changes in direction.

**Aims of the session:** to assess whether the needs of the user were met with the implemented ideas.

**Group:** prototype can be created by one person or by a larger team**.** Experts and additional team members can help to check that everything has been considered.

**Duration:** 60 minutes

**Materials needed:** Paper, Post-its, pens. Whatever material it takes to create the prototype.

**Step 1:** Before prototyping, it is important to know what kinds of insights we want to gain. It is necessary to formulate assumptions to be tested and how the experiment is to be carried out.

**Step 2:** Interacting with the prototype will become an exciting experience for the user and the test will result in new insights.

**Step 3:** Determine the level of resolution and what exactly is to be done. Define different prototypes to be built. Often it makes sense to think in alternatives and then opt for one.

**Step 4:** Choose a variant and outline the experiment, if necessary. Low-resolution prototypes focus on the insights with respect to needs, practicality, and functionality and are mostly used in the divergent phase. High-resolution prototypes concentrate on feasibility and profitability.

Prototyping allows to engage with end users or stakeholders, in ways that reveal deeper insight and more valuable experiences, to inform design decisions going forward.

To illustrate: https://www.youtube.com/watch?v=Vpd7uov5UM0

### *4.6. Workshop 6. Test your idea (Test)*

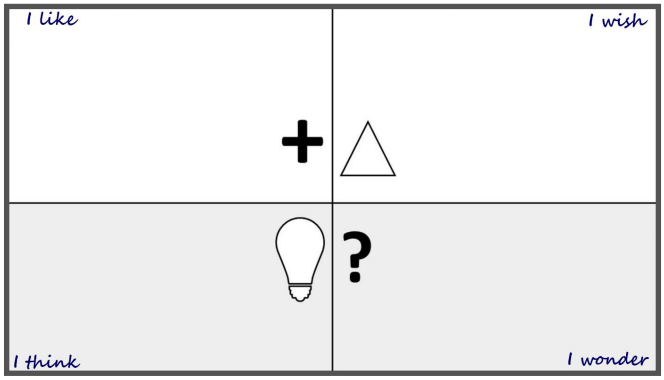
During service testing, it's important that you take into consideration all feedback, both positive and negative, so that nothing slips through the cracks. A Feedback Capture Grid is a great way to collect this feedback.

**Aims of the session:** to test my prototyped ideas quickly and simply and write down the results for further development.

**Group:** 2 people. One person interviews, observes and demonstrates the prototype. The second documents the findings and asks further questions, if needed

**Duration:** 10-15 min. per test. 60 minutes total.

**Materials needed:** Visualisation of the idea as a prototype. A capture grid (see below) per test



**Step 1:** Ask the tester (user/customer) to think aloud.

**Step 2:** Fill in the fields of the grid with these thoughts.

**Step 3:** Ask “Why?” questions 5x to understand the answers of the tester even better. Pay attention to emotions, conflicting body language, and initial reactions.

**Step 4:** Collect the feedback capture grids from the various interviews and work out similarities or major differences together with the design thinking team; they can be used for the further development of ideas and prototypes.

Testing will help to have feedback about the prototype quickly and simply and collect information to improve the prototype and future ideas.

### *4.7. Iteration*

This process is iterative. At each step we can go back and restart if needed.

# 5. Discussion forum

Discussion forum offers an opportunity to ask questions and discuss with the other learners a variety of topics concerning the use of design thinking concept to create new services. They can also discuss about services designed by itself. To be implemented.

# 6. Self-Assessment Test

1. **Design Thinking is:**
   - ☐ Thinking about design
   - ☐ Asking users to solve problems
   - ☐ Designing ways in which people think
   - ☐ Defining, framing and solving problems from users’ perspectives
2. **What are the Steps of Design Thinking Process?**
   - ☐ Understand => Draw => Ideate => Create => Test
   - ☐ Empathize => Design => Implement => Produce => Test
   - ☐ Empathize => Define => Ideate => Prototype => Test
   - ☐ Understand => Define => Ideate => Produce => Try
3. **Design Thinking is an iterative process. True or False?**
   - ☐ True
   - ☐ False
4. **Which of the firm below is associated the most with Design Thinking?**
   - ☐ IKEA
   - ☐ IDEO
   - ☐ iDESIGN
   - ☐ IDEA
5. **During which stage would you interview people to gain an understanding of how they feel?**
   - ☐ Prototype
   - ☐ Define
   - ☐ Ideate
   - ☐ Empathize
6. **When defining a problem, your problem statement should include a solution.**
   - ☐ True
   - ☐ False

7. **During which stage would you brainstorm ideas based on your observation?**
   - ☐ Prototype
   - ☐ Define
   - ☐ Ideate
   - ☐ Empathize
8. **During which stage would you create a model of your solution.**
   - ☐ Prototype
   - ☐ Define
   - ☐ Ideate
   - ☐ Test
9. **During which stage would you write a problem statement focused on a specific need or goal?**
   - ☐ Prototype
   - ☐ Define
   - ☐ Ideate
   - ☐ Empathize
10. **During which stage would you want users to be able to try out your solutions for themselves?**
    - ☐ Prototype
    - ☐ Define
    - ☐ Ideate
    - ☐ Test

# 8. Resources


Clarke, R. I. (2020). *Design thinking. Library futures : Vol. 4*. ALA Neal-Schuman.

Lewrick, M., Link, P. et Leifer, L. J. (2020). *The design thinking toolbox: A guide to mastering the most popular and valuable innovation methods*. Wiley.

Mootee, I. (2013). *Design thinking for strategic innovation: What they can't teach you at business or design school*. Hoboken, N.J: John Wiley & Sons Inc.