

E  
X  
P  
E  
R  
I  
E  
N  
C  
E  
  
D  
E  
S  
I  
G  
N

IN  
THE

L  
I  
B  
R  
A  
R  
Y  
  
S  
P  
A  
C  
E



a method guide

## INTRODUCTION

Welcome to this mini guide on using a constructive approach when developing experience design for the library space. The background for this guide is the year-long development project “The digital in the physical space” funded by the Danish Cultural Ministry.

Our guide is based on our findings from the development of two design solutions that were built to communicate and facilitate online databases, inside the library space as physical installations. These databases are provided by the libraries as part of their digital services. With the aid of exhibition and interaction design, these installations evoke the library user’s interest in how to find and use the online databases. In this guide, we outline our take on the design method Prototyping.

The problem area that we delve into with this project is as follows:

Public libraries in Denmark use a large portion of their budget on subscriptions to online resources, digital services, etc. In fact, the amount of digital material by far exceeds the amount of physical materials (i.e. books, CDs, DVD, etc.).

But when comparing the use of the digital materials versus the physical, the numbers turn upside down; the use of digital materials is marginal. Why is that?

There is no simple answer to this question, but here we propose three theses that have laid the basis for our work with this project.

*Problem 1: The digital material is not visible. The campaign posters and banners that promote our digital material are drowned by a large amount of the other visual information inside the library.*

*Problem 2: The material has no physical form, and therefore it cannot be “picked up” while browsing the shelves.*

*Problem 3: It is too difficult to find the material. The accessibility is often restricted by websites with poor usability, or by the fact that the databases has cryptic names that give away no clues on the content.*

Our project is entirely focused on creating design for the physical library space. We believe that making sure the users even know the materials exist should come first when it comes to promoting digital resources. No demand can be created in the user if she does not know of her opportunities in the first place.

## PRETOTYPING

In 2015, and in collaboration with Aarhus Libraries and Chicago Library, IDEO published the toolkit guide "Design Thinking for Libraries", aimed at preparing librarians and other professionals to work with design thinking in a library context. Design thinking in the broad sense of the term is the foundation for our work in developing the project "The digital in the physical space", but we have chosen to narrow our focus in the project by using Pretotyping as our primary method.

With Pretotyping, the focus is on the constructive part of the design proces. By quickly building concrete designs, ideas can be tested on the user almost right away, and important feedback to improve the concept is readily available. With the Design Thinking for Libraries toolkit, the user studies lie in the beginning of a project where the problem area is defined. In our project, the problem area: the poor use of digital materials; is already defined, and has been for many years. Therefore our focus is on finding new ways to communicate and promote the existing materials, by means of interactive installations inside the library space.

## NARRATIVITY IN THE EXHIBITION DESIGN

Danish museums such as *Kongernes Jelling - Home of the Viking Kings*, *The Maritime Museum of Denmark* and *Ragnarock - Museum for Pop, Rock and Youth Culture* all use narrativity to evoke feelings and sensory experience in the user. Narrativity can open up the exhibition to the user, making it easier to contemplate, organise and memorise the impressions. This is why we make use of and find inspiration in many of the innovative ways that today's museums curate and communicate exhibitions.

### AUTHENTICITY

Do I believe what I am told?  
Can I trust my experience?

### DEPTH

Am I getting wiser?  
Am I learning more?

### ORIGINALITY

Am I surprised?  
Is it told in an inventive way?

### CLARITY

Am I let through the exhibition in a satisfactory way?  
Do I understand what is communicated?

### INTIMACY

Is it of relevance to me?  
Does it concern me?

### DYNAMICS

Is it fascinating?  
Does it vary?  
Am I entertained?

*Check list for exhibition designs,  
compiled by project manager Morten Teilmann, National Museum of Denmark.*

# ► Narrativity *noun*

*/narə' tivity/*

The quality or condition of presenting a narrative.

We are inspired in many ways by museums and experience centers. Besides being inspired by narrativity, we make use of their analysis of the different user types in the museum in our own process of developing personas, user stories and storyboards. The museum user types are by and large similar to the library user.

## 5 IDENTITIES FOR THE MUSEUM VISITOR:



**Explorer:** Visitors who are curiosity-driven with a generic interest in the content of the museum. They expect to find something that will grab their attention and fuel their learning.



**Experience seekers:** Visitors who are motivated to visit because they perceive the museum as an important destination. Their satisfaction primarily derives from the mere fact of having 'been there and done that'.



**Rechargers:** Visitors who are primarily seeking to have a contemplative, spiritual and/or restorative experience. They see the museum as a refuge from the work-a-day world.



**Facilitators:** Visitors who are socially motivated. Their visit is focused on primarily enabling the experience and learning of others in their accompanying social group.



**Professional/hobbyist:** Visitors who feel a close tie between the museum content and their professional or hobbyist passions. Their visits are typically motivated by a desire to satisfy a specific content-related objective.

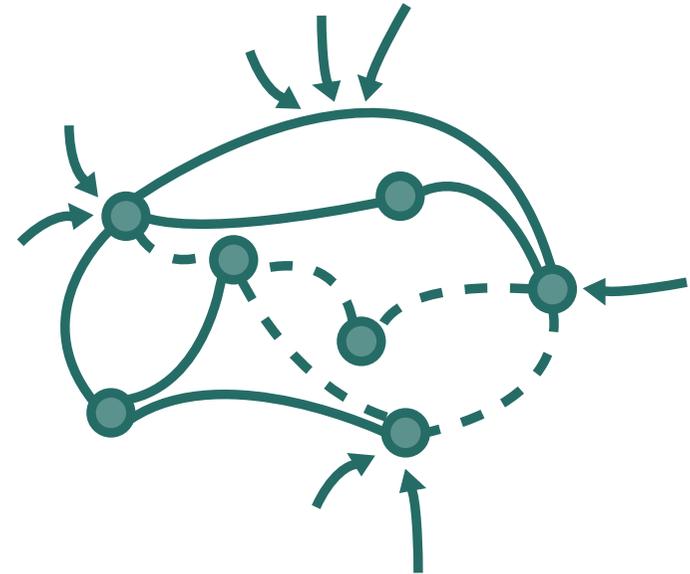
*Reference: Falk, John Howard 2009, Identity and the Museum Visitor Experience, Left Coast Press, Californien*

## THE LIBRARY AS EXHIBITION SPACE

On one hand, there are many ways we can find inspiration in the museum's exhibition designs when working in the library space. On the other hand, there are substantial differences between the use of the library space and the museum space. This makes it impossible to fully render the methods and practices of exhibition design used by the museums in the library. In the library, there is no such thing as a fixed exhibit or topic that we can build an exhibition around.

Our solutions need to be reusable in a new context over and over again. This means that our installations need to be flexible and mobile, both in terms of up- and downscaling the physical dimensions, but also in terms of content. The library space is open in a way that hinders us from controlling how the user moves about. Plus the space is multifunctional, which often means that we cannot control lighting, there is a lot of use/overuse/abuse of the furniture and equipment, etc. This means that the technologies we use need to be proven solid for wear and tear.

Also, the library user is not visiting the library to get an exhibition experience, which influences how we must think and design narrativity and visual attraction. We are not able to control the user interaction and the pathway through our exhibition in the same way as the museum curator. Therefore the content we communicate needs to be understandable, regardless of your starting point;



*Model made with inspiration from Tom Sharmans article "Exploring Meta-Narrative" on medium.com*

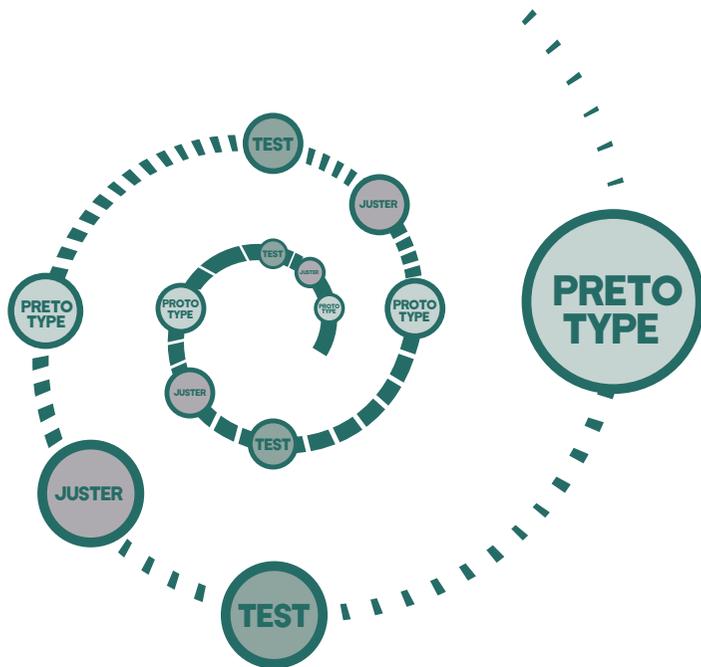
the user has to be able to understand the full topic from every single element in the exhibition. This means that a single track narrative will not work. We need to create connecting points in the narrative, in order to ensure that the story we want to communicate is at hand, regardless of whether people delve into it or just stop by for a second.

A fair amount of library users are visiting with a specific goal. In our experience, this means that we have to "make noise" visually or through audio, in order to ensure that users discover the installations or exhibition designs, e. g. by making use of eye- or ear catching features i.e. sound, pulsating light, different colours or shapes that distinguishes the installation from the rest of the furniture and equipment. This can, in our experience, be done without ruining the contemplative environment that the library also needs to provide.

# THE DESIGN PROCESS

- a walkthrough of the different phases

The design process is rarely linear. In order to develop something useful, it is necessary to re-visit earlier results and findings in order to progress with the design. It is important to give room for the iterative nature of the design process and be open to the findings, but also to be aware of the culs-de-sacs that you will encounter. It all adds up and influences the end result.



# RESEARCH



In the research phase, you need to cast a critical glance at the digital material. Team up with colleagues who have knowledge about your databases, resources, etc.

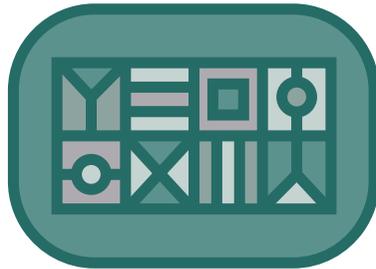
What subscriptions does your library have? Why? Can similar material be found outside the closed ecosystem of the digital library services? Is that material just as high quality, maybe even better? Can you combine the two? Do you have popular materials in the physical collection that have digital counterparts and would be of interest to the user, if she was aware of their existence? Periodicals, newspapers, language courses? What do the users know about the digital material? What services would be of special interest to the users? What challenges and barriers influence the use of the digital materials? Visibility? Usability? Do you tend to forget to tell the users that the digital material exist?

Make a diagram or matrix in order to get an overview of your knowledge about the digital material.

*Analytical, experience based approach.*

*Tools: Research, interviews, lending statistics, usability analysis, topic-oriented promotion of the digital material vs. promoting the database in itself, format/technology, less is more approach, limitations.*

## MOODBOARD

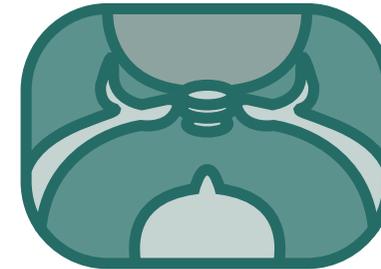


Parallel to working with the research and problem definition, you can create a moodboard. Making a moodboard is both stimulating and can later be of positive influence when coming up with solutions. A moodboard is a display board where you hang pictures, text, colours, objects, etc. for inspiration. Stepping away from the analytic part of the process for a moment is important, and working on a moodboard enhances creativity; it evokes other senses and in short gives your analytical skills a break. It makes it easier to take a fresh look at the digital material and to get ideas for the design.

*Associative, visual approach.*

*Tools: Research, visual research, sketches and drawings, photos, colour palette, inspiration from other exhibitions, interactive designs, etc.*

## IDEATION



The aim of ideation is to develop concrete ideas for design solutions using visual, interactive, auditive, and tactile effects. Make sure your ideas integrate well with the surrounding library space. Make design that goes beyond only stimulating the visual sense.

Let your research be your starting point for a discussion about what to communicate. Do you want to focus on a specific topic with the use of various digital resources? Or do you want to highlight a specific resource? What are your success criterias? Do not hesitate to select a wide range of criteria at first. Later on you can exclude criteria you no longer deem relevant. Frame your ideation session, but be open to renegotiating the frame later on in the process.

Start sketching your ideas from the beginning. At first, in order to communicate your ideas to your team. Later on, to define and fine-tune your design for a pretotype.

You can find use in a number of different ideation process tools at [interactiondesign.org](http://interactiondesign.org)

*Associative, a posteriori approach.*

*Tools: Brainstorming, narrativity, what-if thought experiments, sketching, mood board, research matrix.*

## PROTOTYPE



The idea with prototyping is to quickly develop a physical product that can be tested on the user. It is important to emphasise, that the term “prototype” both includes rapid prototypes and advanced prototypes.

A prototype is a simple artefact or model that you can test on a user. It can be very simple using carton and tape, or it can be a little more up-scale using simple programming/electronics. It’s purpose is to communicate your idea in a way that makes sense to the user, and to test actual use or reactions to a design. Advanced prototypes are usually more expensive, time consuming and as close to the end product as possible.

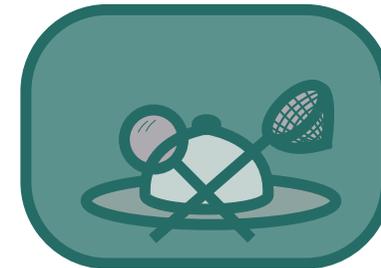
We recommend that you test and develop your prototype all the way through the design process: From mere outlines all the way to a fully functional prototype resembling the end product.

In the back of this method guide you will find a link to our Imgur-site, where you can see examples of the process from prototypes over prototypes to finished design solutions.

*Developing the design concept.*

*Tools: Sketches, various building materials, mock-ups, Arduinos/electronics/interactive prototypes.*

## TEST



At this point, let the users evaluate your idea. Your test design should include a description of the purpose with the test. Write open questions that require more than a yes/no answer. Be sure to inform the user about the estimated time of the test - and keep track of time.

Decide on what categories (age, sex, education level) you intend to cover. Work together in pairs. One as the interviewer, the other taking notes.

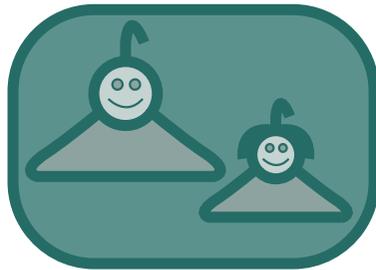
We recommend that you test at least 6-8 users at 2-3 different places in the library, depending on your design. Take note of how the location might affect your test in relation to target group/appeal/interest.

The user test is tangible feedback on your design. Depending on the nature of the feedback, decide whether it is time to move on to develop personas and user scenarios, or if your design needs adjustment. If the feedback points in a negative direction towards the conclusion that your idea should be discarded, then you should take a step back and revisit the ideation process.

*User oriented approach.*

*Tools: Target group/segmentation analyses, test design, interviews.*

## PERSONAS



The persona development should be intentionally postponed until late in the process. We believe it is important to the creative streak to keep the opportunities open for a while, before deciding on user scenarios, user groups, etc.

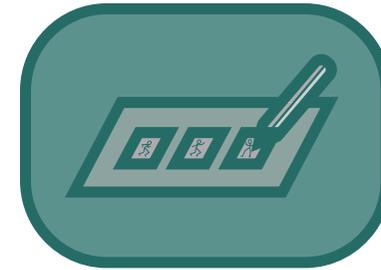
You know your library, your users, their use of the library and how they move about in the library space. By now you have tested some of your ideas on your users and hopefully received useful feedback. You might add various user group analyses to strengthen your findings (see for instance our separate paragraph on identities for the museum visitor).

With this knowledge in mind, you develop 3-5 personas. Afterwards, create user stories for each one of your characters. Discuss which one of your personas is most likely to become a user of your design solution. Also, discuss why others are less likely to do so. Can you reach more than one user group by widening your approach? Or is it better to focus on reaching the most obvious potential user group? Evaluate the pros and cons.

*Analytical, a posteriori approach.*

*Tools: Target group/segmentation analyses, visual research, sketches and drawings, user tests.*

## STORYBOARD



When you have agreed on what users to target with your product, it is time to develop user scenarios and storyboards. Scenarios and storyboards deepen your understanding of the concept. Can you create realistic scenarios involving your design? Are adjustments needed?

Create user scenarios/storyboards for 2-4 of your personas.

Start out with the user scenario. Write a short story in salient features. The narrative should begin with the user entering the library. Why is the user here? What is she experiencing in regards to the design solution? What does the experience trigger?

Remember that a user scenario can result in the persona not using the design. Being realistic is more important than being kind to your design.

When the user scenario is in place, you sketch a storyboard. View the storyboard as a visualization of your user scenario. You do not need to be good at drawing - a stick figure is fine. Complement your drawings with short explanations to avoid any confusions.

*Go to our link collection at the back of this guide to find detailed descriptions on how to create personas, user stories, and storyboards.*

## THE ITERATIVE PROCESS

Now you are ready for the iterative process. Adjust your prototype, test it, adjust it, test it... Until the design is absolutely right. Then it is time to finish your design solution. It can be a bit anxiety-provoking to test your design on complete strangers, but it is so useful - and then it is actually quite fun, while you are at it.

We promise!

## CLICKABLE LINKS

Link to The Guardian interactive article "The story of palm oil":  
<https://www.theguardian.com/sustainable-business/ng-interactive/2014/nov/10/palm-oil-rainforest-cupboard-interactive>

Link to pictures from "The digital in the physical space":  
<http://imgur.com/a/RAVJB>

Article on user stories: "How to tell the users story"  
<https://www.newfangled.com/how-to-tell-the-users-story/>

Article on storyboards: "Agile scenarios and storyboards"  
<http://www.romanpichler.com/blog/agile-scenarios-and-storyboards/>

Link to inspiration on personas: "UX: Personas, Storyboards & Scenarios"  
<https://www.pinterest.dk/kmcurk/ux-personas/?lp=true>

Article on ideation methods: "Learn How to Use the Best Ideation Methods: Brainstorming, Braindumping, Brainwriting, and Brainwalking"  
<https://www.interaction-design.org/literature/article/learn-how-to-use-the-best-ideation-methods-brainstorming-braindumping-brainwriting-and-brainwalking>

Article on prototyping by Alberto Savoia: "Pretotype It"  
[http://www.pretotyping.org/uploads/1/4/0/9/14099067/pretotype\\_it\\_2nd\\_prototype\\_edition-2.pdf](http://www.pretotyping.org/uploads/1/4/0/9/14099067/pretotype_it_2nd_prototype_edition-2.pdf)

## THANK YOU!

Thank you for reading. We hope you will find this method guide useful in your future work developing new design solutions in your library space. For further information and inquiries, please do not hesitate to contact us.

This publication was created on the basis of the development project "The Digital in the Physical Space" funded by the Danish Cultural Ministry in 2017.

## CONTACT INFORMATION

Projekt owner: Ballerup Libraries under  
Digital Leader, Michael Anker.

Project manager: Arendse Ørding  
Art Director: Emilie Oksholt

Text and layout: Arendse Ørding og Emilie Oksholt  
Graphics: Emilie Oksholt  
Proof reading: Emma Blake

Participating libraries:  
Herlev Library, Glostrup Library,  
Lyngby-Taarbæk Libraries,  
Roskilde Libraries, Herning  
Libraries, and Ballerup Libraries

Partners:  
YOKE, Initials BB

For further information and inquiries  
about the project, please contact:  
Michael Anker, Digital Leader at  
Ballerup Libraries, [mank@balk.dk](mailto:mank@balk.dk)