OVER / under
TEAM B

Themis, Deborah & Sarah

INFORMATION OVERLOAD MANAGEMENT

Creating a solution for visitors to manage information overload in museums and historical sites

ABOUT THE PROJECT

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This is our design challenge as part of creating a set of solutions for over-stimulating environments in museums and historical sites.

Our team is developing sensory kit guidelines to assist visitors in overloading stimulation situations.

On top of those guidelines we also wanted to propose a technological solution to help visitors manage information overload in a museum context.

CONTEXT

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In our group research and discussions, we noticed that navigating content in museums was a challenge for visitors in over stimulating environments.

Museums and historical sites are part of our collective knowledge and education. However, museum visitors may have difficulties navigating content due to the amount of information to comprehend, the pressure to make sense of it in a limited amount of time. This engagement challenge has been acknowledged in the museum learning field.

CHALLENGE

"How to help overstimulation-challenged visitors navigate museum content?"

SOLUTION

Design an accessible system where the visitor can explore summarized content from the exhibit.

APPROACH 1

QR Code - an image that can be scanned by any modern day smartphone with it's camera app or a QR code reader application.

SOLUTION

Design an accessible system where the visitor can explore summarized content from the exhibit.

APPROACH 2

Summary Discovery - an analog solution where people can view a summary of the information that's highlighted by using special lenses.

RESEARCH OVERVIEW

KEY RESEARCH QUESTIONS

- How do museums manage over-stimulating environments?

- What solutions have museums considered for improving user engagement in the content?

- What technology already exists to help with managing amount of information.

RESEARCH METHODS

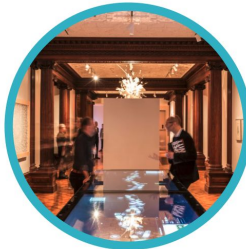Interviews

Intrepid Museum

Bainbridge Island Historical Museum

Louisiana State Museum

NY Historical Society

Cooper Hewitt

- **Secondary Research**
  - Publications
  - Articles
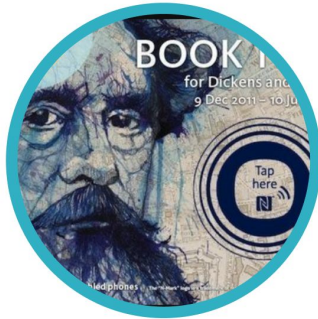 - Papers

COMPETITIVE ANALYSIS

Max Points ●●●   Min Points ●

Features in Content Navigation	Museum of London NFC System	Moma Audio Guide	Whitney Museum QR Code	Cooper Hewitt Connected pen
Ease of use	●●●	●●	●●●	●●●
Accessibility	●●	●●	●●	●●
Is tech ubiquitous?	●●	●●	●●	●●●
Mitigates over-stimulation	●	●	●	●
Engagement	●●●	●●●	●●●	●●●

PRECEDENT ANALYSIS

Contactless Interactions
QR Codes and NFC Tags

Museum Of London

The Whitney Museum

Physical Interactions
RFID (Tech base) and Invisible Ink Discovery (Analog)

University of Michigan Museum of Natural History

Highlight Info. to visitor

Museum in a Box
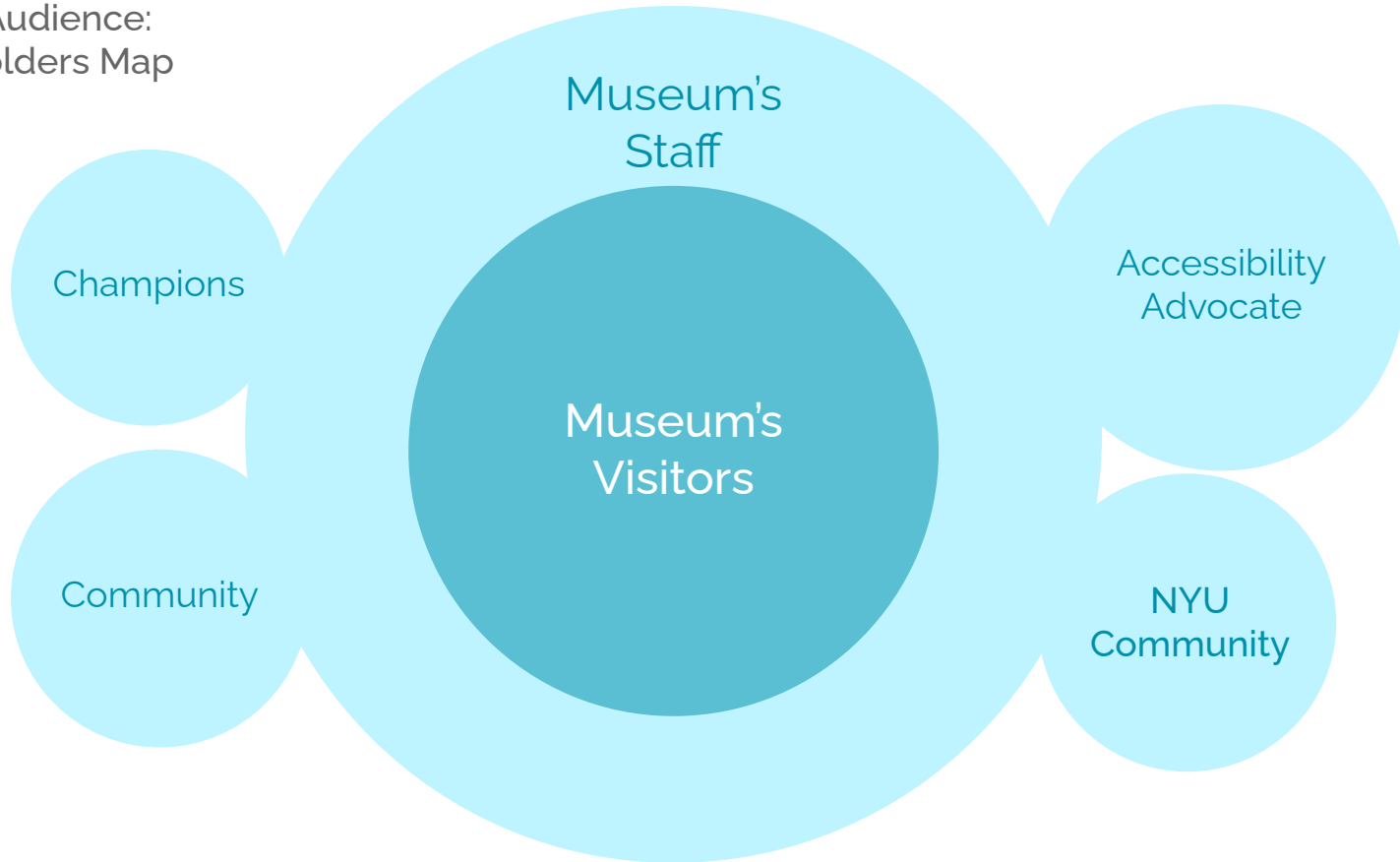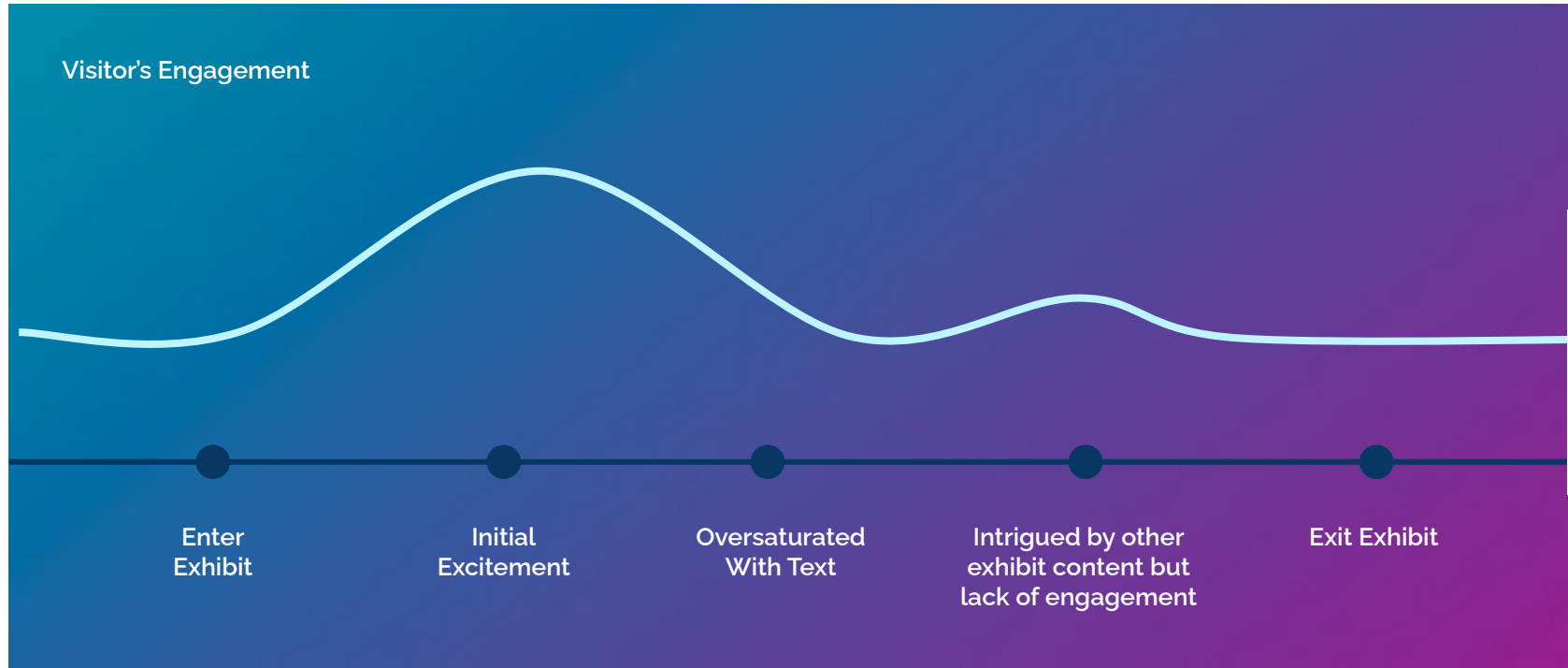
TARGET AUDIENCE

Who are we designing for?

Target Audience: Extreme User

Museum's
Visitors

Target Audience:
Stakeholders Map

Museum's
Staff

Champions

Accessibility
Advocate

Museum's
Visitors

Community

NYU
Community

DESIGN SPACE

GOAL

Design a tool that helps museum visitors to manage information overload.

Features for Visitors should:

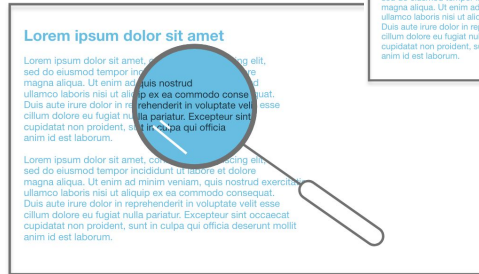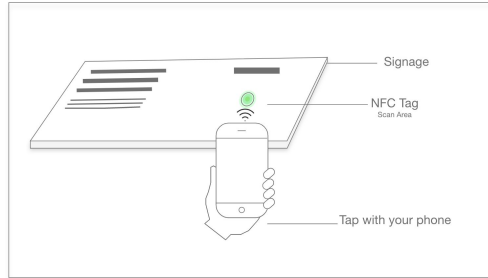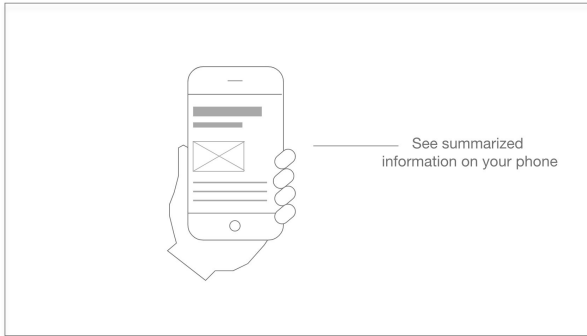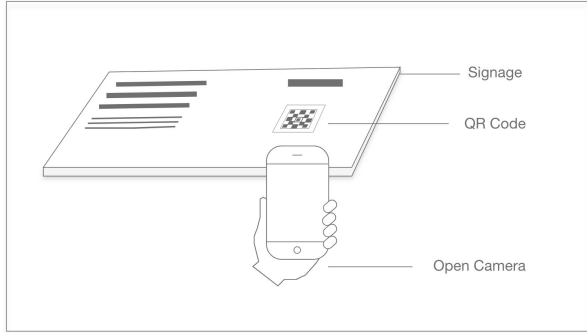- Encourage visitors to self-explore content
- Ease the navigation for a diversity of users
- Provide a tool for visitors to control the amount of information

Facilitation for museum staff:

- Easily modify content if necessary.
- Low maintenance.

BRAINSTORMING

Screen

Scan area

Objects to Scan

Signage

QR Code

Open Camera

Signage

NFC Tag
Scan Area

Tap with your phone

See summarized information on your phone

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Use paper glasses to see the highlighted copy.

CONSTRAINT TABLE

Subjects	NFC	QR Code	RFID	Invisible Ink Discovery
Modes of Interaction	Digital Experience	Digital Experience	Tech & Physical	Analog
Museum Side Technology / Equipment Challenges	Aside from the site where the content is located, in the exhibit there is only an NFC tag information on the side.	Aside from the site where the content is located, in the exhibit there is only a QR code with information on the side.	Requires a set up with a computer, Arduino, and figures.	If the ink is not applied directly to the text then it must be applied on top of a transparent sheet in front: acetate, acrylic or glass.
Internet Access for Visitors	Yes	Yes	No	No
Maintenance	If the content needs to be updated. Regular maintenance of website hosting services.	If the content needs to be updated. Regular maintenance of website hosting services.	The technology is robust, but it will need replacements over time.	If the content is updated.

Access to complete Table of Constraints - Link

SOLUTION

Design an accessible system where the visitor can explore summarized content from the exhibit.

APPROACH 1

QR Code - an image that can be scanned by any modern day smartphone with it's camera app or a QR code reader application.

HOW IT WORKS?

The visitor can scan the QR Code and access virtual content for the exhibit.

This action sends the visitor to a website where the content is summarized, or plays audio and video. The user can use their own mobile devices. The museum only needs to have accessible the signage for the QR Code. This could be placed on a sign next to an exhibit or put in the exhibit itself.

CHALLENGES

-   Accessible navigation, including options for visually impaired users.

SOLUTION

Design an accessible system where the visitor can explore summarized content from the exhibit.

APPROACH 2

Summary Discovery - an analog solution where people can view a summary of the information that's highlighted by using special lenses.

HOW IT WORKS?

This can work in one of two ways:

- The first option is the summary is highlighted in Invisible Ink that can only be viewed with special lenses, either in the form of glasses or a magnifying glass.

- The second option is that the rest of the information is written in a particular color and when you see the wall with a lens of the same color it will filter out all the extra information and leave the highlights.

CHALLENGES

- It isn't a friendly solution to blind or people with low vision.

- The lenses would represent an investment regardless of them being permanent or disposable.

- Permanent options would require disinfecting between uses.

- This wouldn't be immediately obvious to visitors unless there is signage or guidance from staff to tell them the summary exists.

Without Decoder Glasses

PROMO JUST MADE
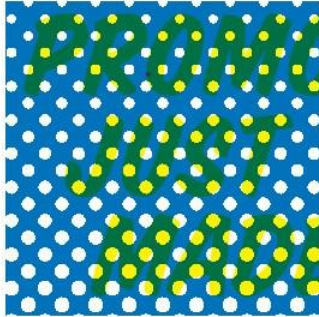
With Decoder Glasses

PROMO JUST MADE

YOU WOULD READ SOMETHING FIRST

THIS WOULD SAY SOMETHING ELSE

HOW TO CREATE A DECODER DESIGN IN ILLUSTRATOR

DESCRIPTION FOR FINAL DELIVERY

FINAL DELIVERY

**Proof of concept.
Visualize how the product will function
with details and step by step research.**

NEXT STEPS

- **Get content to summarize**

- **Design User Interface and interaction**

- **Build Mockup**

What feedback we are looking for:

- Where is the best location to place QR Code ?

- How can we make the Code accessible to blind people or people with low vision?

- Would you be amenable to using the analog option combined with the digital one to make the information audible for blind and low vision people?