

Appendixes

**Get Inspired by
Museum Online Collections**

 **TU Delft**

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**Appendix Master Thesis
Design for Interaction**

User-centered museum collection access project title

Please state the title of your graduation project (above) and the start date and end date (below). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

start date 31 - 03 - 2022 05 - 09 - 2022 end date

INTRODUCTION **

Please describe, the context of your project, and address the main stakeholders (interests) within this context in a concise yet complete manner. Who are involved, what do they value and how do they currently operate within the given context? What are the main opportunities and limitations you are currently aware of (cultural- and social norms, resources (time, money,...), technology, ...).

More and more institutions offer their digitized collections (ENUMERATE,2014). For example, the British Museum, Rijksmuseum, the Metropolitan Museum, etc. have open access policy for their art collections. Users can find information about an artwork on the homepage: artist name, genre, period, and whether it is on display in the museum. Moreover, there is in-depth information about artworks including accompanying text, audio explanation, references, and links to further readings. Visitors can also search specific artwork through metadata. Images can be enlarged, downloaded in high resolution, printed, or shared on social media.

The study of Villaespesa (2019) defines six segments of users of online collections. They are professional researcher, personal interest information-seeker, student researcher, inspiration-seeker, casual browser, and visit planner.

In this project, I would like to improve the art-exploring experience for inspiration-motivated audiences, which are Inspiration-seekers and casual browsers. They can also be seen as creators. Museums and art are valued as a source of inspiration. There are millions of artworks online, free for exploring. It would be a pity for these inspiration-seekers to get trapped in the search-box. Since seeking inspiration is a creative process, the interface of online collections should be improved for a more intuitive art-exploring experience.

On the other hand, user generated data are meaningful for museums. They could be used for museums' future promotion strategy by e.g. identifying the popularity of each artwork based on the data. By learning how the audience interacts with online collections, museums may offer personalized newsletters and guided tours to attract more visitors.

In short, there is an opportunity for us to create new access to online collections maximizing the value of digitized art for inspiration-motivated audiences as well as museums. Challenges and limitations, in this case, will be collecting user generated data and managing a large amount of data.

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Appendix A. Project Brief

introduction (continued): space for images

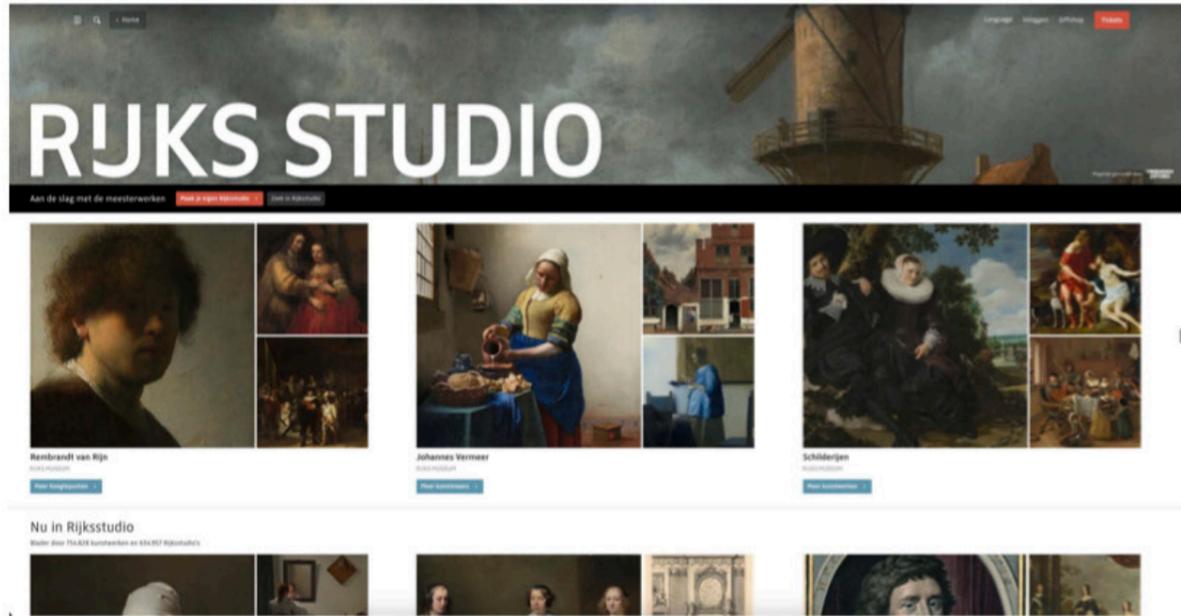


image / figure 1: Online collections of Rijksmuseum

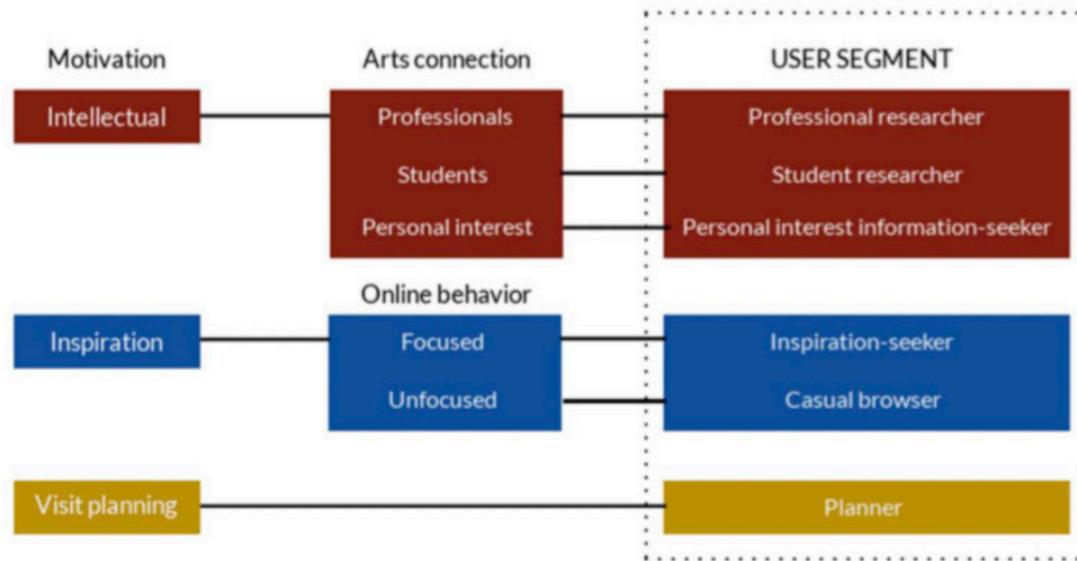


image / figure 2: Six segments of users of online collections (Villaespesa, 2019)

PROBLEM DEFINITION **

Limit and define the scope and solution space of your project to one that is manageable within one Master Graduation Project of 30 EC (= 20 full time weeks or 100 working days) and clearly indicate what issue(s) should be addressed in this project.

Rijksstudio, an online platform for open access to Rijksmuseum's digitized collections, enables visitors to view the recommended artworks on the homepage and search the artworks through metadata, such as artist name, genre, period, etc. These ways of access could be useful for visit planners and researchers, because they visit the collections with specific goals. Besides, there are also functions such as creating personal collections, sharing and liking the artwork. These functions are built for the main target group of Rijksstudio, the culture snackers, who like viewing pictures and sharing with friends. However, Rijksstudio misses one user segment: people who are seeking design inspiration, the creators. Current ways of access, such as searching and browsing, are limiting the possibilities for creators to explore online collections.

There should be a new way of access to Rijksmuseum's online collections that inspires creators by encouraging them to experiment with art. The role of the user should be transformed from a passive viewer to an active explorer.

ASSIGNMENT **

State in 2 or 3 sentences what you are going to research, design, create and / or generate, that will solve (part of) the issue(s) pointed out in "problem definition". Then illustrate this assignment by indicating what kind of solution you expect and / or aim to deliver, for instance: a product, a product-service combination, a strategy illustrated through product or product-service combination ideas, In case of a Specialisation and/or Annotation, make sure the assignment reflects this/these.

In this project, how creators use online collections to find inspiration will be studied. By using human-generated data combined with AI algorithms, new ways to access online collections will be experimented with. The final result will be an interactive way of access to online collections that inspires creators by encouraging them to experiment with art.

Research:

1. Background of online collections
2. An overview of existing experimental interfaces of online collections
3. Possible tools for prototyping
4. How creators find inspiration in creative collections?
5. To what extent does my design help creators find inspiration in online collections?

Design process:

In this project, I will follow a research through design approach. The research will go on in parallel with experimental prototyping. The insights gained from the research and evaluation of prototypes will be used for iterating the concept prototype.

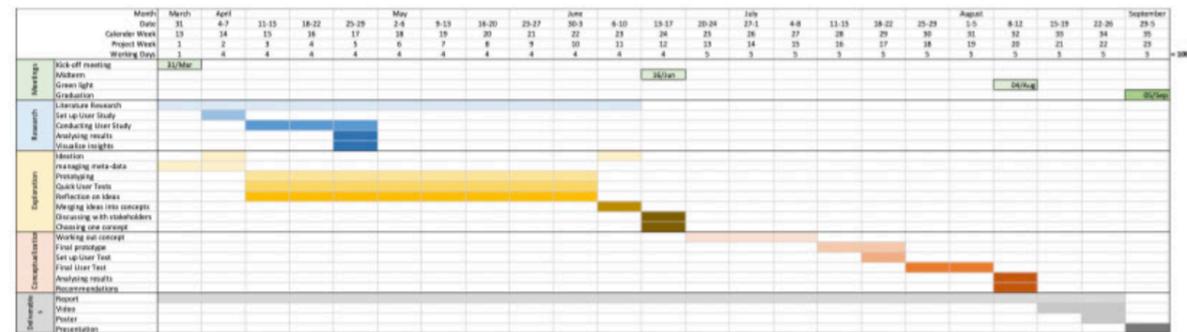
Expected final result:

1. An interactive web-based prototype that enables users to experience with
2. A video that explains the concept
3. A report

PLANNING AND APPROACH **

Include a Gantt Chart (replace the example below - more examples can be found in Manual 2) that shows the different phases of your project, deliverables you have in mind, meetings, and how you plan to spend your time. Please note that all activities should fit within the given net time of 30 EC = 20 full time weeks or 100 working days, and your planning should include a kick-off meeting, mid-term meeting, green light meeting and graduation ceremony. Illustrate your Gantt Chart by, for instance, explaining your approach, and please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any, for instance because of holidays or parallel activities.

start date 31 - 3 - 2022 end date 5 - 9 - 2022



Due to two unfinished elective courses this semester, I will work part-time for four days a week until the 11th project week (17 June). After that, I will work full-time for another 11 weeks. As shown in the Gantt chart, 100 working days will take me 23 weeks in total.

Before the Mid-term, research activities go in parallel with exploration activities. A user study will be conducted to define the target group and their needs. This will help me find out the desired interaction. At the same time, I will start with ideating and testing different possibilities. Every week I will come up with a new prototype. In order to understand how people experience different interactions, the prototype will be tested with fellow students. In total, 5-8 prototypes will be created and evaluated. In the 10th week, the week before the Mid-term, all the insights will be analyzed and visualized. Small ideas will be merged into design directions. These design directions will be presented to supervisors as well as the stakeholders for feedback.

After the Mid-term, I will take all the feedback into account and choose one design direction to work further. The final design will be worked out in detail and the final prototype will be built. The final concept will be tested with recruited participants before the green light meeting.

After the green light meeting, I will mainly work on the deliverables: finalizing the report, making the poster and video, and preparing the final presentation.

MOTIVATION AND PERSONAL AMBITIONS

Explain why you set up this project, what competences you want to prove and learn. For example: acquired competences from your MSc programme, the elective semester, extra-curricular activities (etc.) and point out the competences you have yet developed. Optionally, describe which personal learning ambitions you explicitly want to address in this project, on top of the learning objectives of the Graduation Project, such as: in depth knowledge a on specific subject, broadening your competences or experimenting with a specific tool and/or methodology, Stick to no more than five ambitions.

This project attracts me because I am interested in visual communication, especially in the combination of new technology and artwork. I like visiting museums in my spare time. Artworks give me a lot of inspiration for designing and drawing. This topic gives me a lot of opportunities. It can be a game, a virtual world, an interactive website, etc. This project will definitely contribute to my design portfolio and career path. Besides, I want to do something with website design and coding in the last project of my MSc programme. Since more and more companies require UI/UX designers to learn to code in Javascript/HTML, I want to improve my coding skill and learn new tools for prototyping interactive features. From ITD and VCD, I learned basic coding with p5js. I also experienced the whole redesign process of an existing app during UXAD. From the UXAD project, I learned to use different usability measurement tools and analyze the qualitative and quantitative data from the users. Furthermore, I am able to build interface prototypes in Figma and Protopie. During elective Interactive Audio Design, I learned to use sound effects to emphasize different actions, which will be useful for this project as well.

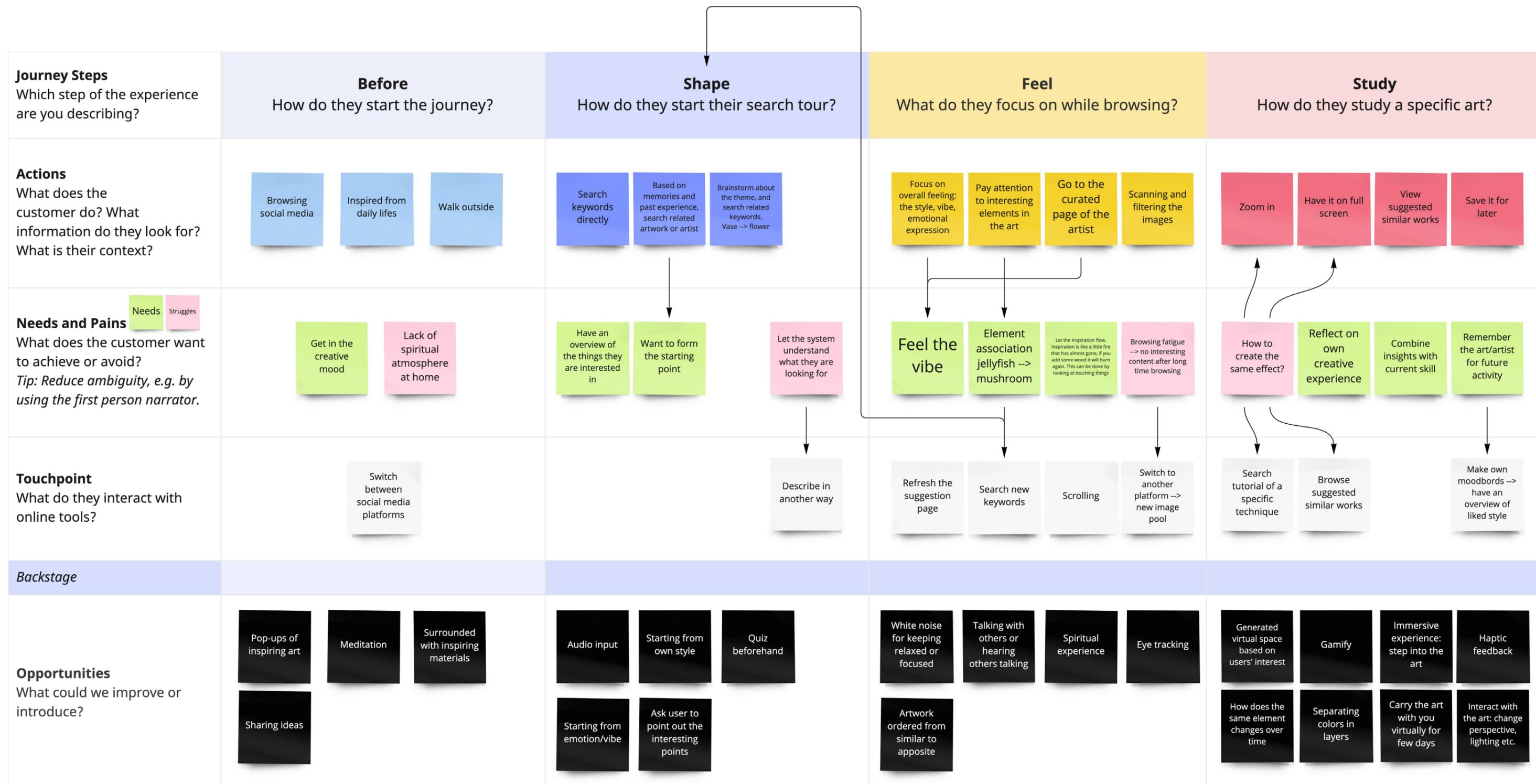
Personal learning goals:

- Learn how to use meta-data
- Experiment with different AI algorithms
- Learn new tools for prototyping
- Improve coding skills
- Learn to take the initiative during the whole process

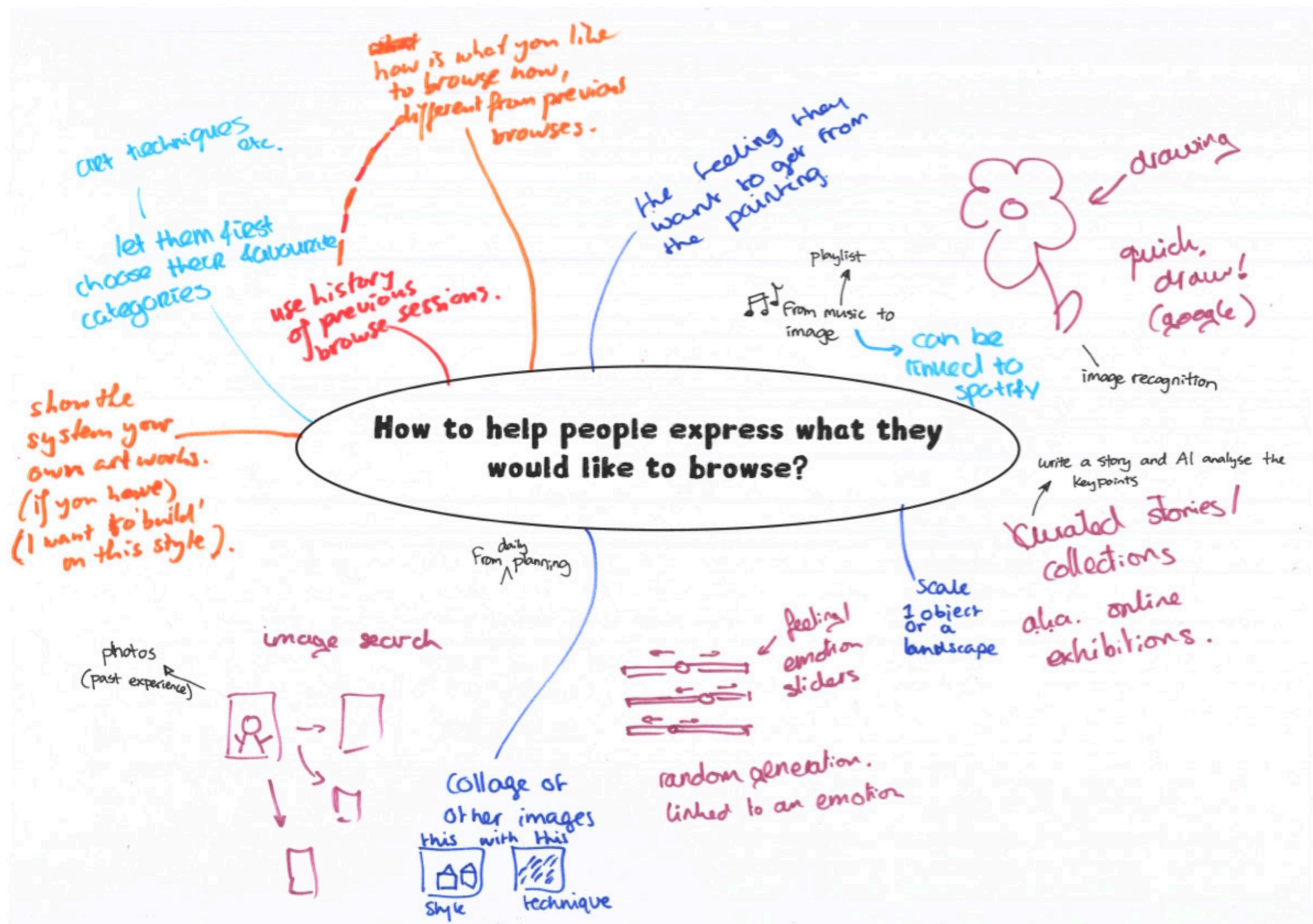
FINAL COMMENTS

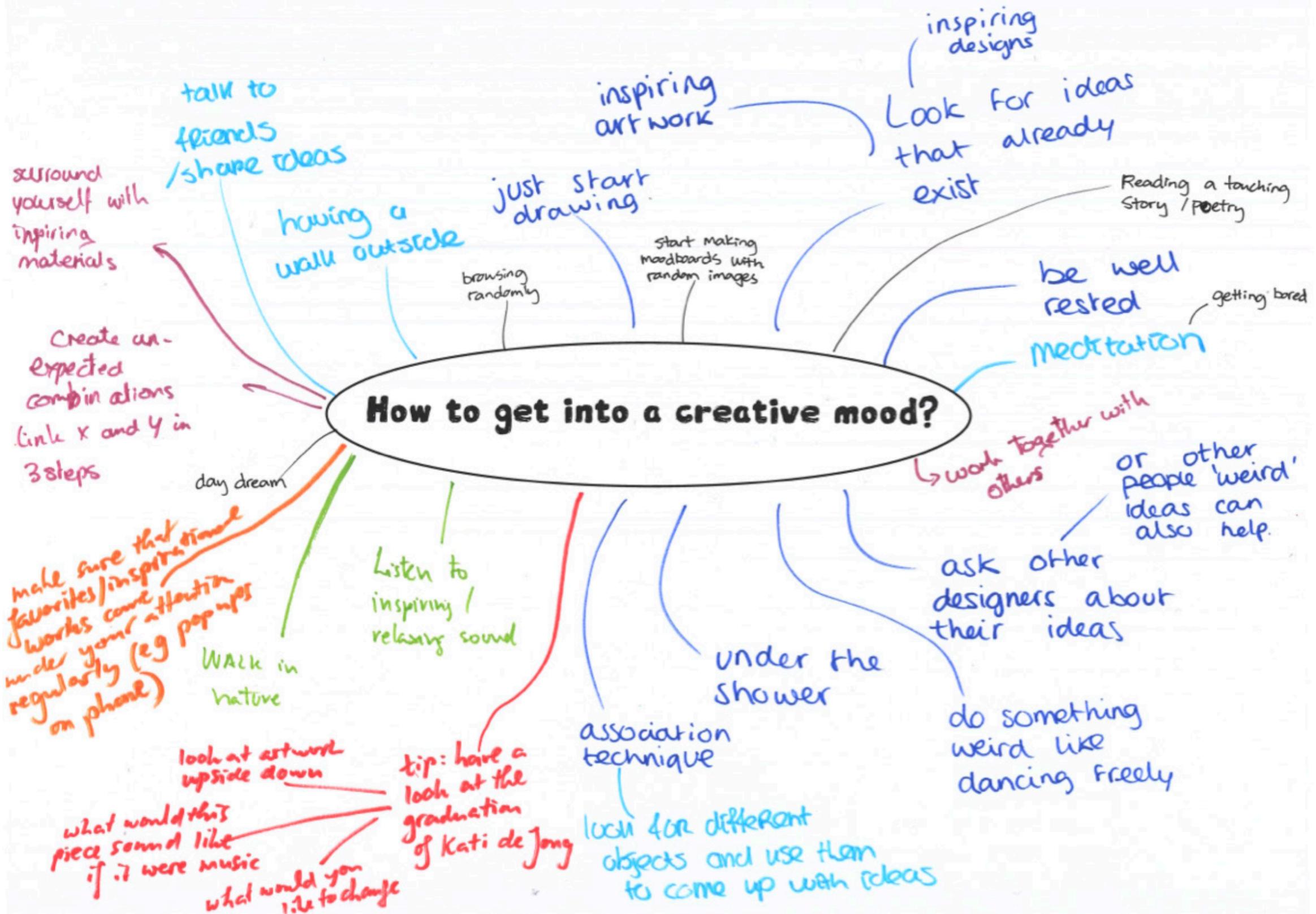
In case your project brief needs final comments, please add any information you think is relevant.

Appendix B. Interview notes of User Study



Appendix C. Brainstorm results





How to get into a creative mood?

inspiring art work

Look for ideas that already exist

be well rested

Meditation

work together with others

or other people 'weird' ideas can help

ask other designers about their ideas

do something weird like dancing freely

under the shower

association technique

look for different objects and use them to come up with ideas

listen to inspiring / relaxing sound

Walk in nature

day dream

talk to friends / share ideas

having a walk outside

just start drawing

start making moodboards with random images

browsing randomly

inspiring designs

Reading a touching story / poetry

getting bored

surround yourself with inspiring materials

Create un-expected combinations (link X and Y in 3 steps)

make sure that favorites/inspiration works come under your attention regularly (eg popups on phone)

look at artwork upside down

tip: have a look at the graduation of Kati de Jong

what would this piece sound like if it were music

what would you like to change

How to assist users to find their interests during browsing online collections?

watch out for lock-in effect, filter bubble, also surprises need to be added

pre-test
10 pairs and give preference.

can be random like you have for perfume or paintings

click on object of a artwork and show a artwork with a similar object in it



I like this

what do you like about the house?
- colours
- shape of house
- way of doing brushstrokes.

OFFER UNCONVENTIONAL FILTERS: GROUP COLLECTIONS BY LOOKS, FOR EXAMPLE

RECOMMENDATION SYSTEM

eye tracking on which image does he/she stay longer?



mouse tracking



AI learns user's browsing behavior

also see eye tracking pattern in NEMO scientia museum they have a installation that does this!

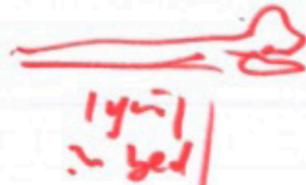
giving the user first a quiz quiz with for example art-directions
↳ show the user's knowledge about directions
↳ then say do you want to learn more about this direction

Step into the artwork.

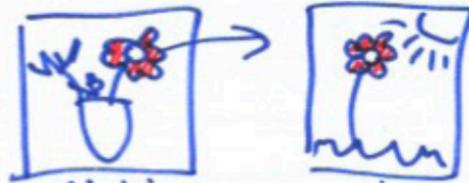


- look around freely
- moving background
- with soundscape

ART ceiling



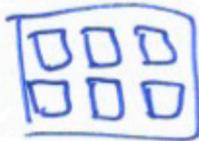
artworks in a storyline / context



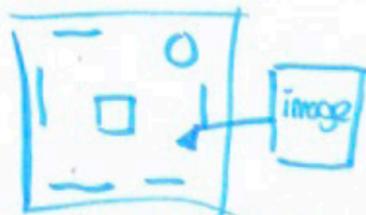
clicking on objects / parts of the artwork will direct you to other works with that object in it.

- Similar theme
- happens at the same time

instead of a page full with artworks in line

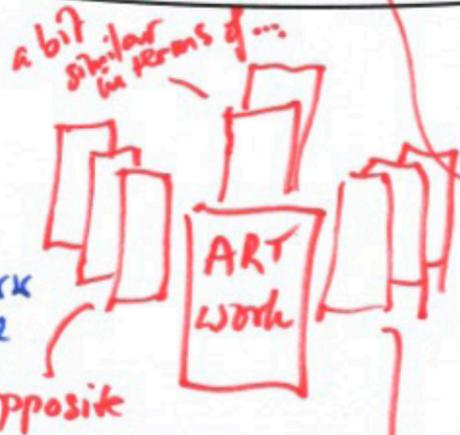


show how the artworks are placed in museum



map of museum
click on artworks & get more info / or walk through the museum online

not just the artwork but also the context of where it is placed (or was placed)



show and then physically browse to similar or different one

similar with respect to...

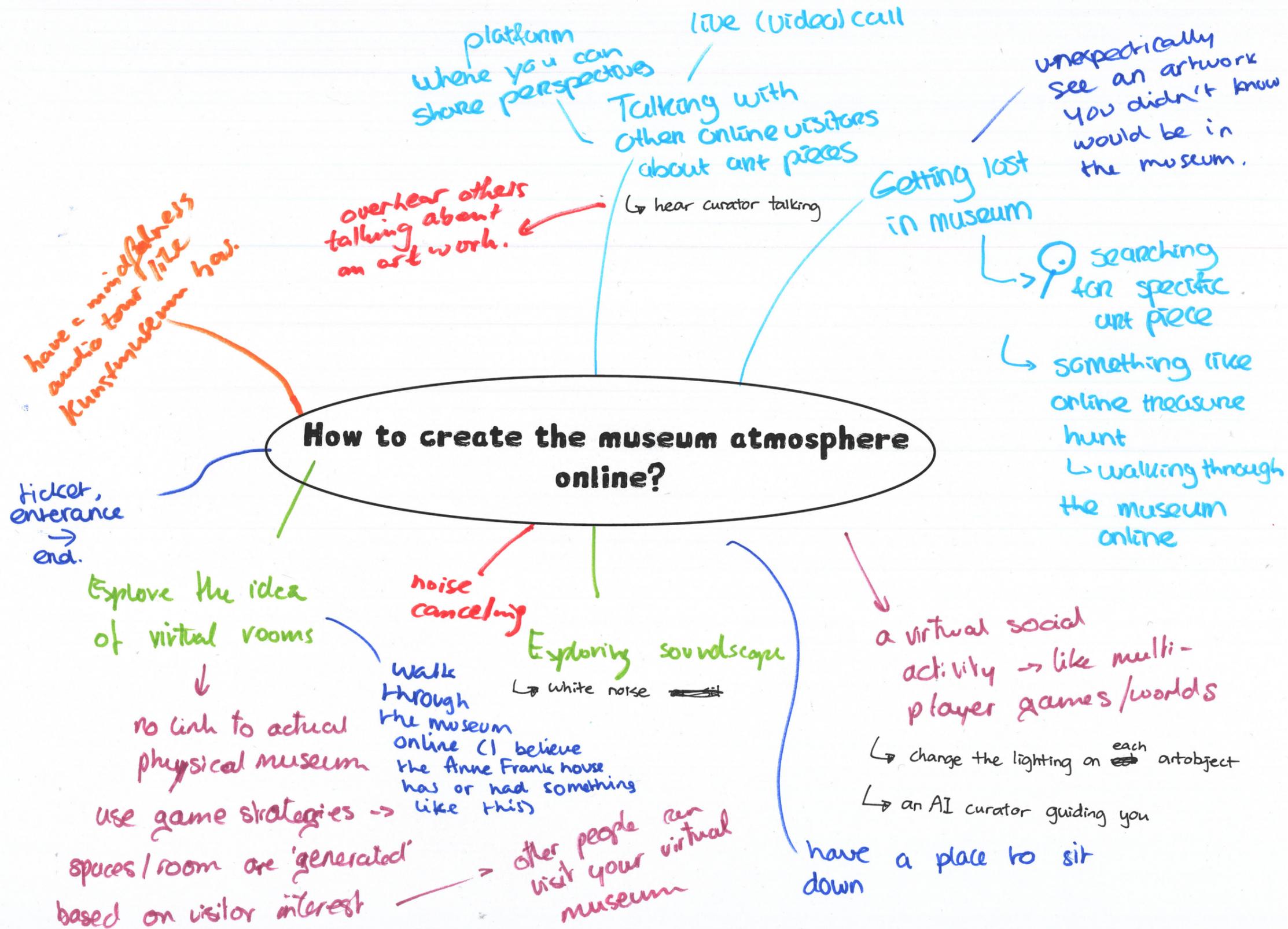
allows wandering around.

Find AN UNCONVENTIONAL WAY TO NAVIGATE THROUGH COLLECTIONS: VISUAL, SOUND, ETC.

↑ other attributes than just main color, but also style, material used, technique used, haptic experience

How to present artworks online in an attractive way?

How to create the museum atmosphere online?



Appendix D. Clusters of Quotes & insights from user test of quick prototypes

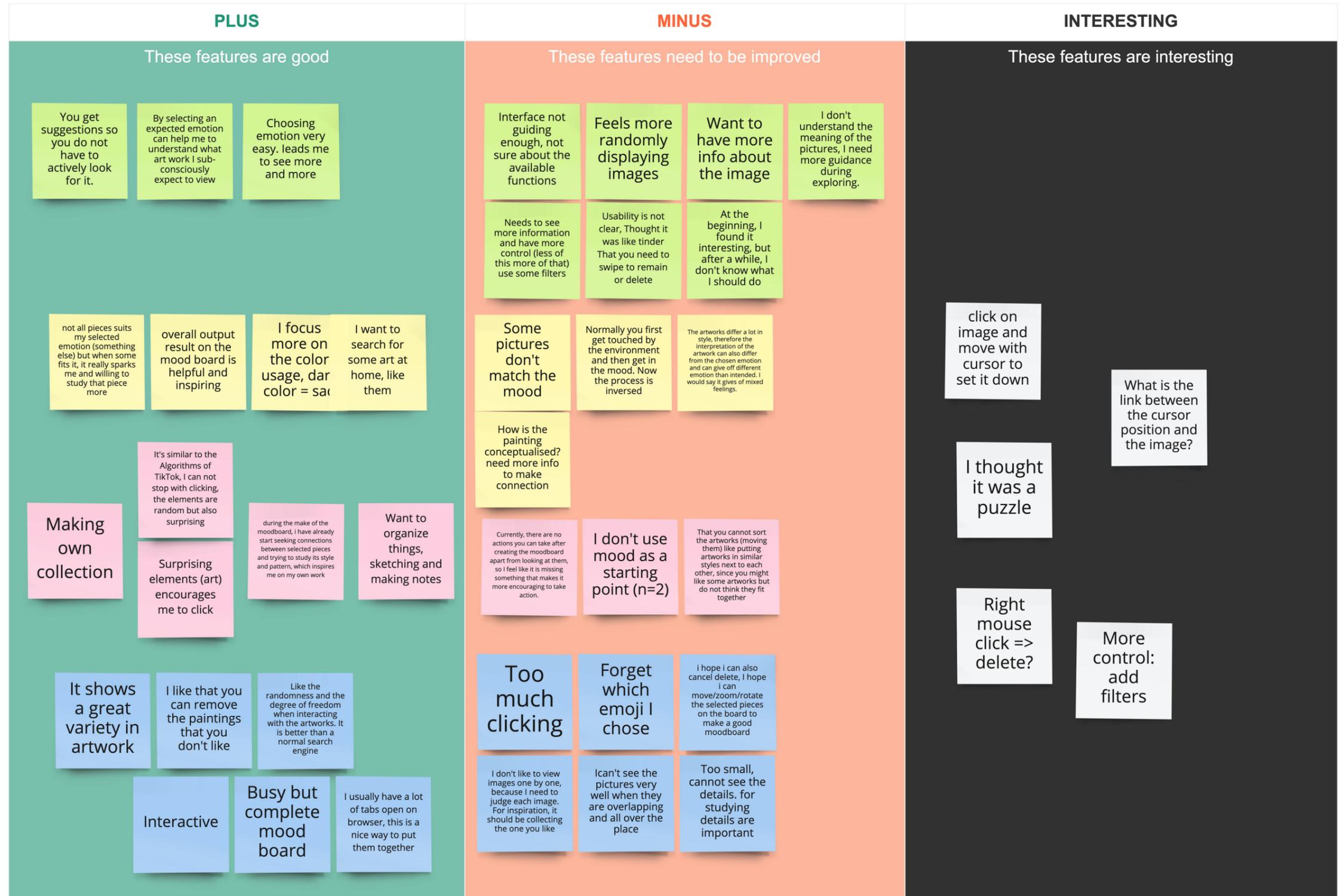
Guiding:
4.7

Resonating
4.6

Encouraging
5

Others

Moodboard



Mindmap

Guiding:
5.9

Resonating
4.9

Encouraging
5.1

Others

PLUS	MINUS	INTERESTING
<p>These features are good</p> <ul style="list-style-type: none"> it is nice to have real time reaction on my search it recommends related topics that I may want to have a look It already shows suggestions which you can look at when typing in a keyword you also get related keywords to search for themes you had not thought of before so it is quite leading. More clear connection between the input value and output results This way of searching fits my searching habits. I usually make a mind map during my design process. intuitive, I like the related search terms, you can endlessly roam through the collection Besides showing related words, it also shows images belonging to the word, which invite me to click on it. Link between verbal and visual most search results fits its label, some of them are interesting and attracts me to study further The artworks fit more together (in term of colour and style) with some deviation as some artworks do not fit the keywords, but overall there is some sort of mood created. some output images hit me, most of them are subjective Higher chance to get what I want to see because this helps me with divergent thinking Stimulate me to search further it does encourage me to explore different topics that shows up, even though they are not what I originally want to search I can chose more things from the same theme 	<p>These features need to be improved</p> <ul style="list-style-type: none"> Navigation more difficult, too much info and opportunities I already need to have a search term in mind, I need to know what I want to draw I'm missing a way to search more specifically. If I click on a specific image, I would like to see more images related to it. Displayed artworks themselves cannot move me, I would like to see derivative works Some images don't fit well in the category. less connection with emotion i hope i can collect the pieces i want during browsing Lose myself in it before getting to the creative idea if I want to search specific, I would like to have more specific results. Would like to highlight and save something for later 	<p>These features are interesting</p> <ul style="list-style-type: none"> Maybe it can be combined with the first one. I want to first collect images and then make a mood board Shuffle to refresh the page I would like to type in multiple words
<ul style="list-style-type: none"> 'Drag and drop' makes it more interactive It gives me more inspiration compared to the previous prototype due to the suggested words that are related to the keyword and the fact that the artworks have a more coherent theme Like the randomness and the degree of freedom when interacting with the artworks. It is better than a normal search engine Showing the images Interesting way of searching organized elements 	<ul style="list-style-type: none"> You cannot remove the artworks you do not like or keep some of them for your personal collection which you can look back on later for inspiration the screen is very dark, i didnt notice the ok button at first either Lack of information, such as loading status. Don't like the cropped images 	

Sketch to Search

Guiding:
4.3

Resonating
4.7

Encouraging
5.1

Others

PLUS	MINUS	INTERESTING
<p>These features are good</p> <p>Help me make my unclear ideas clear</p> <p>I like that there is keywords showing and i can filter it out. I think drawing reflects well my subconsciousness.</p> <p>I can find things related to what I was imagining in my head</p> <p>When your idea is difficult to describe with words, it can help you match your ideas with artworks.</p> <p>I don't need to translate my idea to words, which avoids semantic deviation</p>	<p>These features need to be improved</p> <p>You have to come up with a drawing so if you have no inspiration for a drawing, you might also not be able to get the inspiration you want, it feels less leading</p> <p>It seems more like a game because the system is guessing what you are drawing. If I want more accurate results, it does not help.</p> <p>less structured, random associations</p> <p>need to convert the verbal search term to a drawing, on laptop not optimal</p> <p>less control, the machine gives the label, it looks like a guess game, because I need to make my drawing understandable for machine</p>	<p>These features are interesting</p>
<p>Help me find related results more quickly</p> <p>some of the pieces are surprisingly out of my expectation but they are what I would like to study more, so they hit me well</p> <p>You can take a closer look at the artworks. If it does relate your drawing to the right theme, then it is more inspiring for looking at different styles of the drawing you made.</p>	<p>The artworks often do not correlate with the drawing making you relate less to it</p> <p>The artworks are quite different from each other therefore does not create a certain mood which I intended to find.</p> <p>The system is not smart enough to recognize my drawing. If I draw a smile, I would like to see smiling faces in different artworks.</p> <p>want to upload own sketch have control to search</p> <p>output differs too much from my drawing</p>	<p>Add colors</p>
<p>drawing is an interesting start to search for art, and some of the results attracts me to study further.</p> <p>i can study the art work further by clicking it to zoom in</p> <p>Maybe because you are already creating something, by creating more drawings to find inspiration might also inspire you to make an actual artwork.</p> <p>Usually making the first step is difficult, but this prototype encourages me to draw something.</p> <p>More surprising results because Doodling itself is not accurate, it is also a way of diverging</p> <p>unexpected artworks can be inspring</p> <p>drawing is a good way to start a search</p> <p>I can draw something fun</p> <p>Better than prototype 2 because it gives you more abstract results.</p> <p>Drawing as search input is more interactive than typing in words. It gives me the chance to express my thoughts.</p>	<p>Some feelings can only be expressed by colors instead of lines</p> <p>I cannot collect it or edit it somewhere, or make notes</p> <p>I don't know to which collection the painting belongs</p> <p>lead to design fixation? Converge to less directions</p> <p>drawing with touchpad is a bit hard</p> <p>my drawing is ugly but somehow the painting matched</p> <p>The drawings do look end up with the right keyword/theme which might make you feel upset as the system cannot recognise what you drew</p> <p>The drawing canvas is too small</p> <p>Now it only generates nouns. It will be great if it can recognize the stroke or patterns I use.</p> <p>The system cannot understand the feeling I have drawn with messy lines</p>	

Style Analyser

Guiding:
4.6

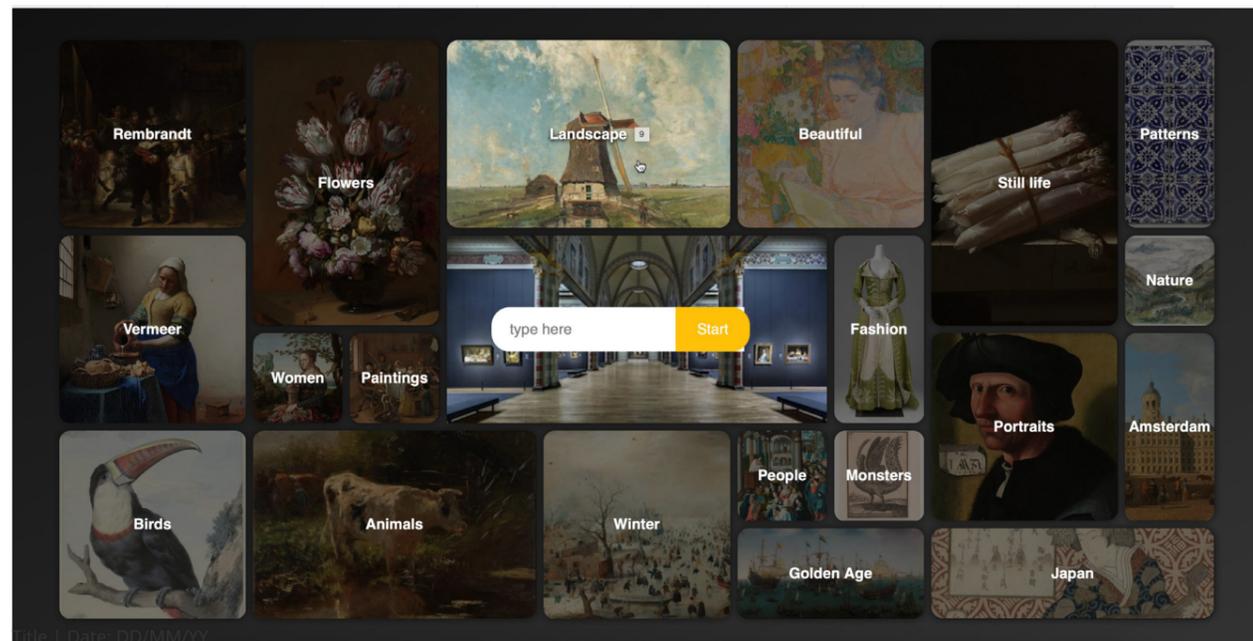
Resonating
4.6

Encouraging
4.3

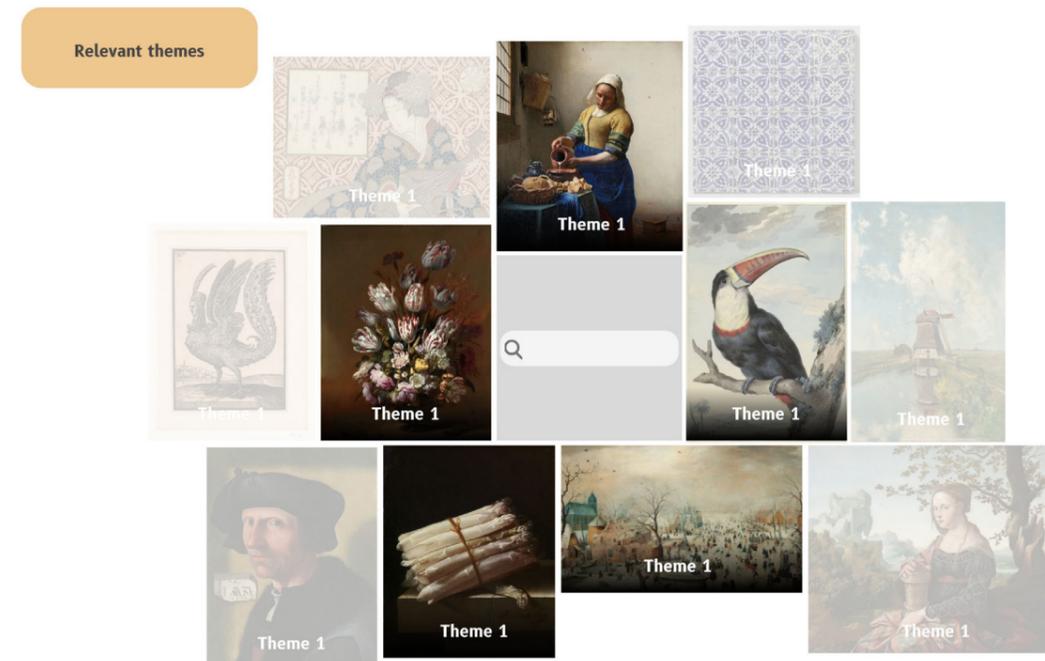
Others

	PLUS	MINUS	INTERESTING
	<p>These features are good</p> <ul style="list-style-type: none"> it is really interesting to view both the similar and opposite style of my work at the same time The similar styles are what I would like to see. Just like Pinterest, it leads me to the works I might like. During this process I keep asking myself what I want and narrowing down the direction Opposite styles redirect the attention, to other possible directions I learn about styles/movements <p>personal learning process</p> <ul style="list-style-type: none"> the results of the similar work makes me have a review on my art style, the opposite results attracts me to study them in detail and even have a try on that style The opposite style does as it makes you wonder what your artwork could have been in a different style. Uploading my work and getting suggestions for it feels personal Searching by images may generate more accurate results 	<p>These features need to be improved</p> <ul style="list-style-type: none"> the process is not easy to start (have to pick one of my work) You need to have an artwork available for the system to find 'your style', or you need to find an artwork (which is not yours) that you want to upload I dont know any of the styles that are displayed It seems more like assessing my work rather than seeking inspiration. <ul style="list-style-type: none"> the styles of the painting dont overlap with the image input Displayed artworks can not stimulate my creativity. I can not feel the difference between styles. The opposite style is not meaningful to me. the output didnt match very well How will it work with sketch? how to make connections color theme structure 	<p>These features are interesting</p> <ul style="list-style-type: none"> I want to have a 'collect' function. I would like to get similar works in other categories, such as color, stroke, and object. Maybe it helps me with reflecting my work, but for me it's meant for the later stage when I have my work half-finished, then I can use this tool to see how I can improve it. But it doesn't help me for the begin phase. Maybe you can redesign it for all the design stages. I want to upload my favorite pieces, so that it can provide me similar works
	<ul style="list-style-type: none"> It could encourage you to try out a different style I can get the desired results more quickly from the similar styles It encourages me to take a step back and compare my work with the output results, have a nice review on what kind of style I prefer more and what else I should give it a try I would like to study more about the specific artist/movement 	<ul style="list-style-type: none"> Opposite styles reduces efficiency, they are ineffective information It gives me suggestions on how I can improve my work. This is not encouraging, but more like criticising my work. i dont really like the styles in the output of paintings give me a balance 	
	<ul style="list-style-type: none"> i like that i can view both opposite and similar style at the same time I can choose cute images that I like Nice to see different styles next to each other Style movement detection is more interesting than the content detection of the work. 	<ul style="list-style-type: none"> i would like to collect some works, if there is any text labels on the opposite and similar style, would also be helpful for me to identify my current style. The similar style does not always match and the fact that you need to have an artwork ready. Less interactive, want to organize them cognitive bias I want to see the text label of the style, and know more about the technique and medium 	

Appendix E. Peer Review Feedback for different interface ideas



PLUS These features are good	MINUS These features need to be improved	INTERESTING These features are interesting
<ul style="list-style-type: none"> Dark masks make words more visible Box size = relevance weight Drag to search box interactive 	<ul style="list-style-type: none"> Only look at the large boxes Too much info happen at the same time Words not always fit in the small box No image for the search input Difficult navigation <ul style="list-style-type: none"> Explore one theme more Use a word as search input Cropped images Only one image for one theme, judge the word based on one image 	<ul style="list-style-type: none"> Grid layout nice



Title | Date: DD/MM/YY

PLUS These features are good	MINUS These features need to be improved	INTERESTING These features are interesting
<ul style="list-style-type: none"> Simple Clear relevance hierarchy uncropped images Same size for all words Image for search word available 	<ul style="list-style-type: none"> Too many blank spaces Words less visible One more action to search again Need more difference on hover over one image or hover over the whole layer Only one image for one theme 	<ul style="list-style-type: none"> Information hierarchy clearly differentiated



Theme 1



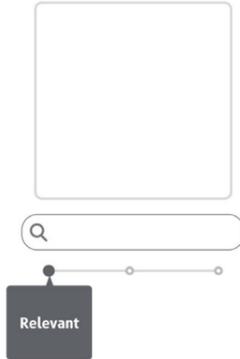
Theme 1



Theme 1



Theme 1



Get inspired by art collections

Search bar: Type something | Relevance weight slider | Star icon

Word labels: Word, Word, Word, Word, Word

Title | Date: DD/MM/YY

PLUS	MINUS	INTERESTING
<p>These features are good</p> <ul style="list-style-type: none"> More control for search due to adjustable relevance weight More images for theme preview Search bar and corresponding image always visible 	<p>These features need to be improved</p> <ul style="list-style-type: none"> More action to see all the themes Too many empty space Some pictures get cropped Some pictures get cropped 	<p>These features are interesting</p> <ul style="list-style-type: none"> Shuffle function

Title | Date: DD/MM/YY

PLUS	MINUS	INTERESTING
<p>These features are good</p> <ul style="list-style-type: none"> More control for search due to adjustable relevance weight More images for theme preview Search bar and corresponding image always visible No need to pop up to view images under one theme 	<p>These features need to be improved</p> <ul style="list-style-type: none"> More action to see all the themes Too crowded misleading 	<p>These features are interesting</p> <ul style="list-style-type: none"> Shuffle function next to the word

Appendix F. Detailed actions in each scenario

Header	Home button	Undo/redo button	Adjust the relatedness	Open collections	Search bar	Website logo
Search results page	Displaying artworks of the input keyword and its related words in sections	Collect button	Shuffle button for replacing one section	Get more images of the tag		
Information Page	Displaying metadata	Zoom-in/out	Full screen mode	Get similar works		
Collection Pop-up window	Preview	Download				

Appendix G. Instruction for the usability test

Thank you for participating in this usability test. From now, I will work from a script to make sure that my instructions to everyone are the same.

During the session, I will ask you to perform several tasks. As you perform these tasks, please do whatever you would do in normal circumstances. I encourage you to think out loud while performing the tasks. Just tell me whatever is going through your mind. Please know that I'm not testing you and there is no wrong answer. By performing the tasks you will help me understand what works, and what does not work within this system.

After all the tasks, you will be asked to answer five questions and fill in a short questionnaire. The whole session will take about 20 minutes. I would like to take some pictures during testing. Are you okay with that?

Do you have any questions before we begin?

Before we start with the first task, please answer the **first two questions**:

1. Are you familiar with online image collections such as Pinterest, museum websites, Behance etc.?
2. Are you familiar with my previous prototype Mindmap?

Scenario:

Please imagine you're a hobby artist who would like to make a drawing. You want to get inspired by museum online collections.

Tasks:

[Task 1 - Detail page]

1. You like the drawing of the bird on the homepage and you want to have this drawing in full-screen mode so that you can study the details.
Are there things that you think can be improved for this step?
2. After studying the drawing in detail, you want to know which drawing technique is used for it. You want to see more examples of this technique.
Are there things that you think can be improved for this step?
3. After browsing for a while you think that the styles of these artworks differ too much. Actually, you want to see more artwork like the bird drawing.
Are there things that you think can be improved for this step?
4. You collect three pieces of art you like on this page.
Are there things that you think can be improved for this step?
5. You want to get back to the page with five themes.
Are there things that you think can be improved for this step?

[Task 2 - Mindmap]

1. You want to draw a beautiful dress. Please use this system to get inspired.
Are there things that you think can be improved for this step?
2. You're not satisfied with these themes. You want the system to give you more surprising results of 'dress'.
Are there things that you think can be improved for this step?
3. You don't like the last theme 'retro' and want to delete it
Are there things that you think can be improved for this step?
4. Oops, it was a mistake. You want to get the previous theme back. Please fix it.
Are there things that you think can be improved for this step?
5. You want to get more recommended themes for the second theme 'modern'.
Are there things that you think can be improved for this step?

[Task 3 - Image collection]

1. You want to take a look at your image collection.
Are there things that you think can be improved for this step?

Interview questions after all the tasks:

1. How did you experience navigating through the website in general?
- Was it easy or difficult? What was easy?
2. To what extent did the system fit your preferences and needs?
- Were all needed functions available?
3. Did you receive feedback when using the website?
- Do you feel that you have used the website correctly?
4. Did you understand all the buttons in the interfaces?
5. What do you think about the style of this website?

**The System Usability Scale
Standard Version**

Strongly disagree **Strongly agree**

1 2 3 4 5

1	I think that I would like to use this system.		<input type="radio"/>				
2	I found the system unnecessarily complex.		<input type="radio"/>				
3	I thought the system was easy to use.		<input type="radio"/>				
4	I think that I would need the support of a technical person to be able to use this system.		<input type="radio"/>				
5	I found the various functions in the system were well integrated.		<input type="radio"/>				
6	I thought there was too much inconsistency in this system.		<input type="radio"/>				
7	I would imagine that most people would learn to use this system very quickly.		<input type="radio"/>				
8	I found the system very cumbersome to use.		<input type="radio"/>				
9	I felt very confident using the system.		<input type="radio"/>				
10	I needed to learn a lot of things before I could get going with this system.		<input type="radio"/>				

Strongly disagree Disagree Somewhat disagree Neither agree nor disagree Somewhat agree Agree Strongly agree

1. Everything goes together on this site.	①	②	③	④	⑤	⑥	⑦
2. The layout is pleasantly varied.	①	②	③	④	⑤	⑥	⑦
3. The color composition is attractive.	①	②	③	④	⑤	⑥	⑦
4. The layout appears professionally designed.	①	②	③	④	⑤	⑥	⑦

Appendix H. Interview notes of usability test

1.1 Full-screen

- Double-click on the bird section
- First tried to click on "+" 3
- Click on the image to get to the full-screen mode directly 7
- Don't know how to exit the full-screen

7 participants clicked on the image directly to get to the full-screen mode

Advice:

- Double click on the preview [2nd stage] to get to the full-screen mode
- The changed bird drawing position makes me confused, hope to have an animation that shows other works gathering together
- in the full-screen mode show uncropped image in maximal size

1.2 technique

- The brush technique is unclear, thought it should be watercolor 3
- Cannot distinguish medium and technique

1.3 similar works 3 fails

- Search through the metadata 2
- Click on watercolor 2
- Click on tags-bird 3
- Click on drawing
- Not sure what similar means: similar styles? other birds?
- the back button on the similar page is misleading 3
- Cannot find the 'similar work' button directly due to the color and placement 6

Advice:

- similar works can be placed in the bottom center, showing some parts of the images so that users know that it's a scrollable page
- expect the expand icon more info for it
- similar button right under the metadata

1.4 collect

- like that it can collect directly while hovering
- first want to click on the image, but found out later that hovering over can collect images as well.
- Want to see the collected icon while the mouse leaves 2
- the collect star on the right also gets colored when I have collected art
- show the number of collected art on the star icon
- pop-up confirmation

1.5 back to the home page

- didn't use/notice the home button 8
- Click on the logo 6
- didn't understand the delete icon on the expanded section, close what?
- Click on the header to get back
- didn't notice other functions in the heading
- home button not clear
- not sure how many steps I have taken, so I thought I can get to the homepage directly by clicking on the back arrow
- thought home button will lead to the homepage of the browser
- personal page

2.1 search dress

- miss a title of related search terms
- need more info for the layout
- maybe the dress section in the middle
- understand the content on page 4
- artworks which contain dress
- thought there is a specific order of the content 4
- relevance from high to low
- narrowed to diverging
- from reality to artistic

2.2 surprising 4 fails

- click on less related themes first, and then try the button, not sure what related/surprising themes mean
- Click on the shuffle, don't know there to change them all, because it's not clearly stated that there are more than these five words
- Click the shuffle icon of the dress
- don't want to click on the filter
- search dress again
- want to get the same results back
- what does themes mean? 2
- maybe only normal and weird search
- surprising -> inspiring
- surprising seems subjective and related seems objective, these two words are not at the same level
- I have other definitions of surprising, the results I get are not as expected
- click the dress section again

Advice:

- maybe add a change logo next to the filter
- Images are the most eye-catching part + the hover-over interactions. After typing in 'dress' I don't look at the heading anymore. The texts in the heading are not obvious.
- Drop down menu is not optimal, don't know that you have more options 2
- filter needs to be in the same hierarchy with the content
- maybe change to the toggle button
- Add a window or background color for the drop down menu

2.3 shuffle

- shuffle button but clear. 4
- Is it a shuffle of the word or for the images?
- shuffle icon = random
- sharing?
- randomly play
- cross something
- subconsciously search the delete button on the right top corner, delete the one and appear a new one on the right

Advice:

- maybe use words
- maybe a confirmation request for shuffling

2.4 undo

- click on shuffle again to get back 2
- want to use the back button of browser or right mouse click
- due to the back button of the browser, hard to notice the undo button
- undo button is too far away
- I don't dare click on it because I'm not sure if it will go back to the previous page or the home page
-
- Advice
- maybe undo button directly under shuffle
- left and right arrow in next to the word on each section
- undo button next to the logo on the left side

2.5 new input

- first click on the modern section 2
- didn't understand what happens 3
- why jumping to the left
- didn't notice that the search term is on the left 2
- not sure when to adjust the relatedness
- don't understand what the appearing question mark means
- thought it should be expand
- think it was page-turning
- 'dress' disappears. Since modern is the second level search of 'dress', it will be better to have dress+modern in the search bar
- maybe add a refresh icon behind the modern underline
- the search icon while hovering makes me want to click on it 3
- when I hover over the section, I would not necessarily hover over the word
- need more visual distinctions between the search term and the related themes 3
- a larger proportion
- need an animation to demonstrate the relation between these words. For example, search word leads the other words
- adjust the transparency
- different fonts for the search words and output
- make the distance between search word and related words larger
- cannot distinguish the pages of search term + related terms and five random terms

3.1 view collections

-

Others:

- I like the overview page. Technique and similar works are the two most used functions for me. What will happen if I search for a technique?
- Is vertical reading a problem?
- Scroll down on a column to get more images for the theme, because want to quickly look at images and highlight a few

Navigating

- Navigating need to learn a little bit 3
- the supporting functions such as undo are mixed up with the special functions such as the filter.
- maybe need an info button for instructions
- Easy
- because there are fewer page jumps
- minimal amounts of options
- not complex

Functions

- Miss the function of Making groups for collections 4
- Cannot see other works of the same artist
- Cannot see artist info, art movements, or related artists
- Scroll down directly to get similar works instead of clicking on a button
- Want to export the collection
- surprise elements may be stronger if there're more themes
- variety of things nice
- how to define similar? style, elements or technique similar?
- Need shuffle for all, maybe a hanging hook [an app for changing the background]
- scroll down to see more images on the home page
- want to have more preview images, don't want to click on the section
- 'animals' too large which covers the image
- add some descriptions on the hover-over shadows of the image
- left-right scroll to view more images

Feedback

- Change new search word not clear
- Needs more animations
- Search word section is not obvious
- Not sure if I have pressed search

Buttons

- shuffle icon
- related-surprising drop-down
- placement of similar works
- undo button should not be in the heading because it seems like the back button for the whole page.
- buttons on the top right corner not remarkable
- back button is not clear
- back to the home page?
- undo collection?

Style

- Maybe dark themes mode
- conservative style
- pretty and simple, nice it's less distracting
- retro style, which goes together with classic artworks
- nice style looks like a leaflet
- display in columns is a novel way
- elegant style, prefer simple design
- want to have a more bright page, maybe larger distance between sections [more white space]

Appendix I. Instruction for the final user test

Thank you for participating in this user test. My project is about designing a tool that helps beginner or hobby artists seek inspiration in museum online collections. There are millions of artworks online free for exploring, my goal is to make these resources valuable for more people.

Before we start, I would like to know more about you and your creative experience.

1. What do you create?
2. How often do you create art?
3. Do you use online image collections for finding inspiration?
4. If yes, which websites/platforms do you use?
5. Are you interested in museum collections?
6. Please shortly explain your answer.

Scenario + Introduction:

Now imagine you just took a walk outside, and you come back. You have an idea to make something about a farm. You opened the ArtMind website and would like to get inspired by museum collections.

ArtMind is a website that connects to the database of the Rijksmuseum. It suggests different categories of artworks to users by conducting contextual searches on their input. It is designed to help users diverge their ideas during inspirational process. In addition, users can bookmark their favourite works while browsing the collections.

Please think out loud while using the website, just tell me what is going through your mind. You can stop whenever you feel ready to start creating. You don't need to create the art right now, but it would be nice if you can explain your ideas or sketch it out for me. After that, I have five questions and a short questionnaire for you. The whole session will take about 40 minutes.

During testing, I'd like to take photographs, screen and audio recordings. Please fill in this form if you agree with that.

Consent Form

I am voluntarily taking part in a research study conducted by Shunqi Tang for the purposes of user research about inspiration seeking. This interview session is part of a master graduation project of Design for Interaction at the Delft University of Technology. I understand that my participation will be recorded on digital audio, video and that I will be photographed.

I understand that data and information I share today will be handled confidentially and only my first name will be used as a reference to my participation.

I understand that the audio recordings and photographs will not be used for any commercial purposes whatsoever, and that the recordings, videos and photographs will be destroyed six months after the conduction of the study. The audio recordings, video material and photographs may be part of information presented at professional conferences.

Please check one box:

- I hereby accept that my face may be recognizable in documentation of this study.
- I want to have my face blurred in documentation of this study.

I understand that this research is conducted independently from Rijksmuseum and therefore I will not reach out to Rijksmuseum if I have any concerns or questions left. I can always contact Shunqi Tang.

With signing this consent form, I agree that I have read it and understand the purpose of the study and my participation in it.

Signature: _____

Name: _____

Date: _____

Questions after the interview:

1. Could you describe your inspirational journey with the website ArtMind?

Small tips for it is that you can compare it with how you usually find inspiration on other websites. For example, the surprisingness, the efficiency for searching

2. Please rate the following statements and explain your answers with examples.

This concept guides me through the process of seeking inspiration in museum online collections. *

1 2 3 4 5 6 7
Strongly Disagree ○ ○ ○ ○ ○ ○ ○ Strongly Agree

This concept helps me gradually build up my imaginary scenes. *

1 2 3 4 5 6 7
Strongly Disagree ○ ○ ○ ○ ○ ○ ○ Strongly Agree

This concept encourages me to take action after exploring art collections. *

1 2 3 4 5 6 7
Strongly Disagree ○ ○ ○ ○ ○ ○ ○ Strongly Agree

3. What did you like about this website?

4. What didn't you like about this website?

Assessment of ArtMind

With the help of the word pairs please enter what you consider the most appropriate description for **ArtMind**.

Please click one item in every line.

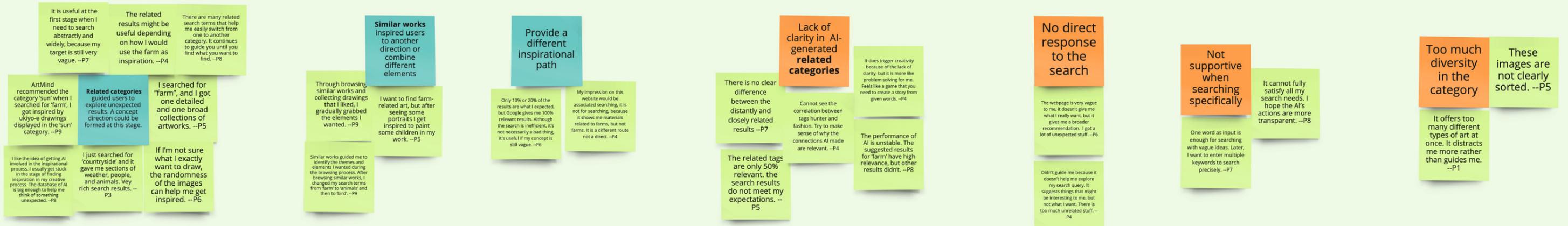
simple*	<input type="radio"/>	complicated						
ugly*	<input type="radio"/>	attractive						
practical*	<input type="radio"/>	impractical						
stylish*	<input type="radio"/>	tacky						
predictable*	<input type="radio"/>	unpredictable						
cheap*	<input type="radio"/>	premium						
unimaginative*	<input type="radio"/>	creative						
good*	<input type="radio"/>	bad						
confusing*	<input type="radio"/>	clearly structured						
dull*	<input type="radio"/>	captivating						

*required field

Back

Continue

Appendix J. Quotes & Insights from final user test



Guiding:
4.8

Resonating
4,1

Encouraging
5,6

Others

PLUS

These features are good

Related categories guided users to explore unexpected results. A concept direction could be formed at this stage.

Similar works inspired users to another direction or combine different elements

Provide a different inspirational path

ArtMind provided users with an overall impression of the topics

Come up with unexpected combinations

Help with finding a direction and stimulate further exploration on other platform

Personal collections stimulate comparison and combination of the artworks

High quality of the database

The columns look like the walls of an art exhibition.

The search results page is more clear than other websites have. --P7

The refresh function is not directly understandable for me. Once I figured it out, I found it interesting and very original. It helped me switch inspirations

Like the switch, and the categories on the page are very straightforward.

I like the style of the website and the way of displaying artwork. It feels like changing pages in a book. It gives me a reliable feeling.

I see things didn't order well, I have tolerance for uninteresting things. It is logical to expect that not everything resonates. --P4

The collection function is good, I don't need to download the image or open a new tab for it. --P8

Neutral color makes everything coherent

MINUS

These features need to be improved

Lack of clarity in AI-generated related categories

No direct response to the search

Not supportive when searching specifically

Too much diversity in the category

Lack of style-related recommendations

Difficult to build up a desired feeling due to low relevance of similar works

Interruption of the flow

Limitation of the database

Difficulty in expressing the desired feeling

Losing the initial intention

The masks on the images hinder the experience

I didn't click on the other four tags, because in the farm section the relevancy of the farm is already very low. I didn't know what I could expect from the other four categories.

Showing more recommended categories on the homepage.

"Is this button for refreshing the images in the section?"

INTERESTING

These features are interesting

I feel that the tags on the side are very convenient, you can switch between categories easily. It gave me some nature-related tags which help me analyze the details of a farm.

It will be nice if I have more options under this 'landscape' tab, for example the object type and time period. This will help me filter out uninterested works.

I want to give accuracy percentages to ai, speak with algorithms. It would be nice if the results are on point. --P4

Lack of interaction with AI

AI should be more involved in searching. For example, it can ask me extended questions about my search and refine my search according to my answers. --P8

I think you can divide this website into two sections: one for recommending artwork specially for you, and another for random searching. --P5

"Can I search with multiple words like creating AI prompts?" --P4

It would be better if there is a style quiz to identify my favorite styles. --P2

"I hope that the adjustable button works on similar works. Closely related option for only showing the artworks with the same object type, just like the recommendations of Pinterest. And the distantly-related option for showing diverse artworks just like ArtMind now does."

I hope to see relevant images in the first rows, and then scroll down to see the less relevant ones. --P5

I assume that these similar images below have some labels in common with the one above. I want to see their labels displayed in the upper left corner of the image. Because for you as the designer it is clear why these artworks are related to the image above, but I don't understand the relation between these images. --P8

I hope there are works from other countries and other exhibitions, especially from Modern Art Galleries. I will appreciate the diversity of works.

Scroll vertically feels natural, but it should not have infinite amounts. I expect to have a button at the end to click to explore more.



Shunqi Tang

Master Thesis
Design for Interaction