

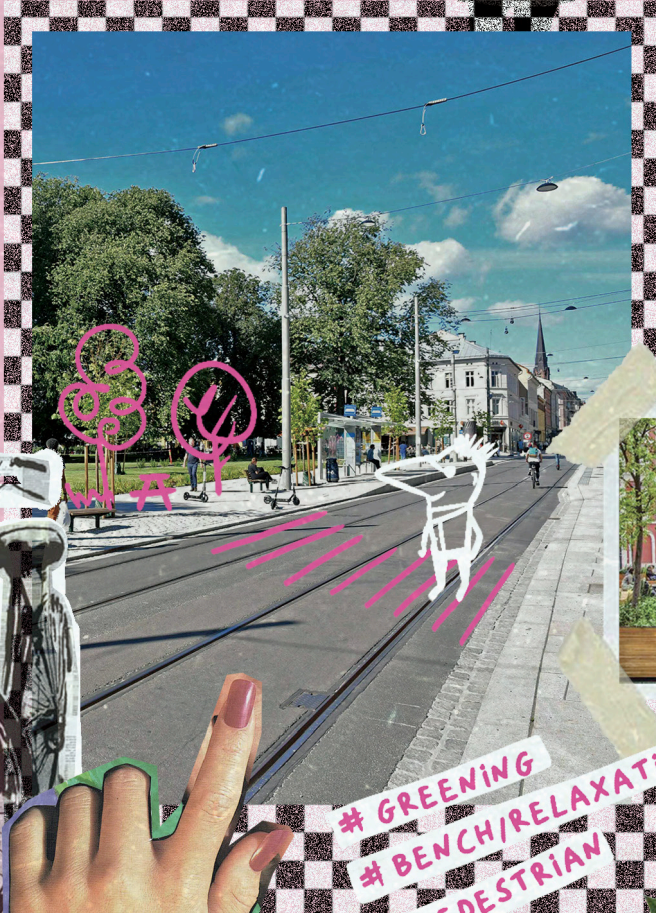
city

maker

IF NOT YOU  
WHO?  
IF NOT NOW  
WHEN?



USE  
YOUR  
VOICE



# GREENING  
# BENCH/RELAXATION  
# PEDESTRIAN



# CityMaker

Exploring digital communication tools for citizen participation in the early city planning process

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Xiyu Hu

Field of Expertise:

Interaction Design

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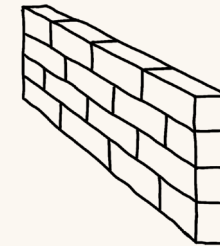
This project has been approved by NSD  
- The Norwegian Center for Research Data

All content is authored by Xiyu Hu, unless specified otherwise.

“Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody.”

— Jane Jacobs, *The Death and Life of Great American Cities*

**Architects**



**Users**

I completed the bachelor’s degree of architecture right before studying at AHO. During those studies, we were taught to design for the people by considering the scales, the function, the experience in the space etc. These are the key elements of architecture design and urban design. At that time, I was asking myself “what is good architecture design?” Does the designed space meet these requirements? Is that a place where people can enjoy themselves? How do we decide what is good from bad?

Now when I am studying interaction design at AHO, the term called “user-centered” is one of the most important principals embeded in our works. Instantly, it ignited my thoughts - users are the key point in architecture design as well! However, we rarely talked to our users before. I realized that when I was studying architecture, I didn’t know what users wanted or what they thought of, only after the program had been built out.

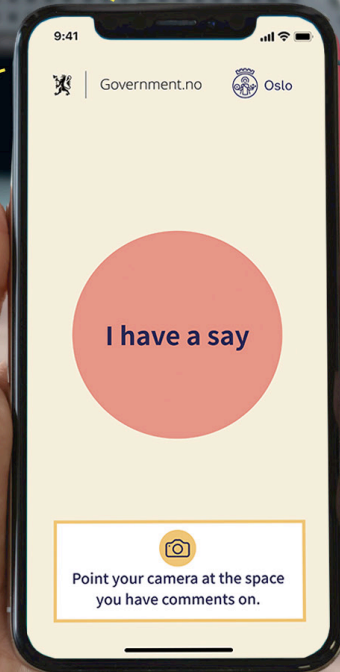
I believe the city belongs to everyone. However, for citizens, urban design is like a black box. We do not know what designers are doing to the city. So I am questioning: “How can the public participate to create a better city together?” Here is the starting point where I want to spend my last student period on, using the interaction design knowledge I have learnt to explore the unsolved confusion that I have been struggling with for a long time.

Sukkerbiten

I want a vibrant waterfront park where I can dip into the water or drink beers with friends.



Beach



Cafe&Bar

# Introduction

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CityMaker is an experimental design diploma project aiming to explore possible improvements for citizen participation, in the early city planning process, me as an interaction designer.

There is a broad consensus among city designers about the optimal design features of public urban spaces for people, but the residents of the urban environment have been neglected in the process. The city is not only managed by the powerful politicians, designed by the architects, but also co-owned by all people living in the city. They all have rights to express their opinions on the public space. It is time we address the needs of people so they can participate as fully as possible in society.

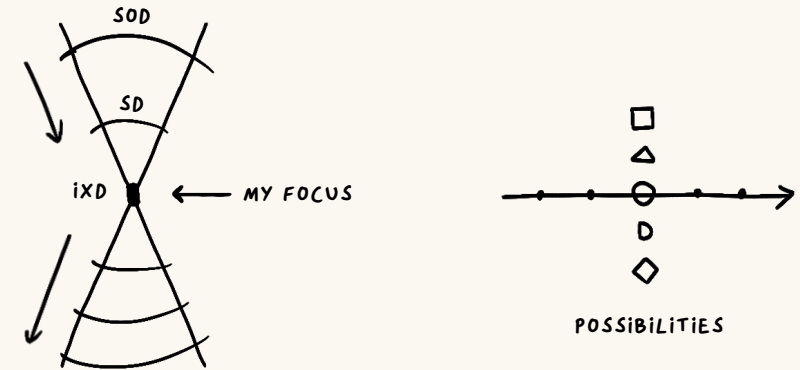
Citizen participation would help but is not an easy work. We still have lots of challenges in today's society. Why don't most people participate? What can they participate in? How can they participate? These are the questions I will try to answer in this project.

This project is designed for two target groups and tests four concepts. Firstly, I started with a user-centered perspective. I explored different interactive ways for people to initiate proposals, which are simple, straight forward, and time saving. Then, the text, image and drawing as a format of data is collected from people. The second target group are the experts working for the city, how would they use the data for designing? I showcased applicable situations in use.

The design project lifts crowdsourcing data to a higher place, which would be significantly valuable for the experts in the city to evaluate and learn from. The project is explored at small, medium, and large scales, and evaluated for how applicable they are in both the short and long run.

The project is proposed to work the best at small scales to improve environmental quality in the near future, but could also provide new possibilities for far future urban development.

This ideal situation won't be realized in one or two days, but could be a very valuable thinking around how the future participatory city could be.



## Interaction Design

The theme of urban planning issue is not just one single issue alone. It is a complex system that relates politics, democracy, information, bureaucracy, physically and digitally, and so on. I have done my research on understanding the current system and analyzing existing services, but my deliverables only focus on the screen interaction design. Therefore, other parts in the planning process are not optimized in my design works.

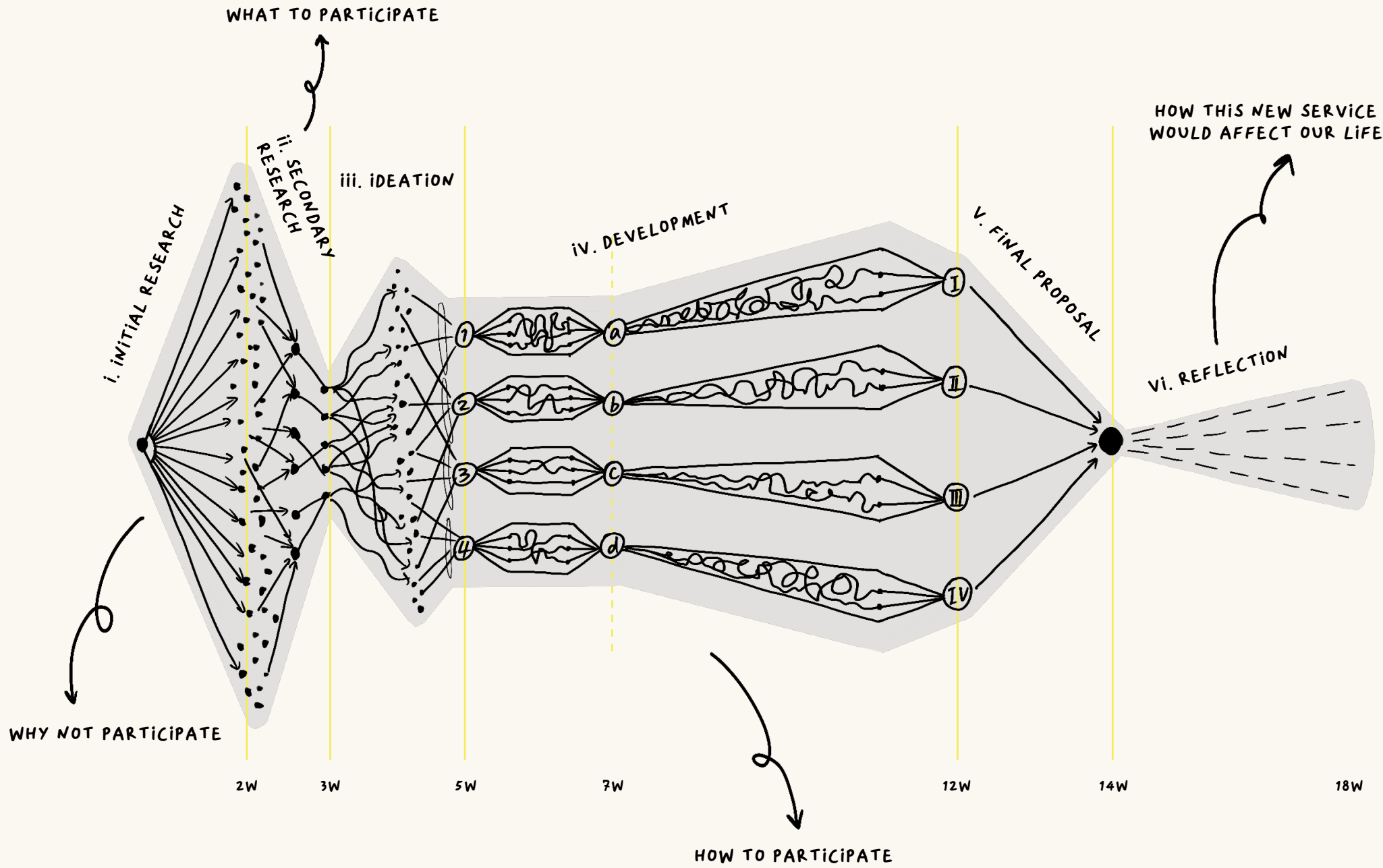
## Possibility-Driven

This project is an attempt to explore approaches to the future participatory city. It does not aim to solve the problem by a single super solution, but breaks up the problem to try to look for tiny breakthroughs and test out how applicable they are. The project is designed under an ideal circumstance, focusing on methods from interaction design. They may not work in current situation, but I hope it will influence a part of the whole urban planning ecosystem.

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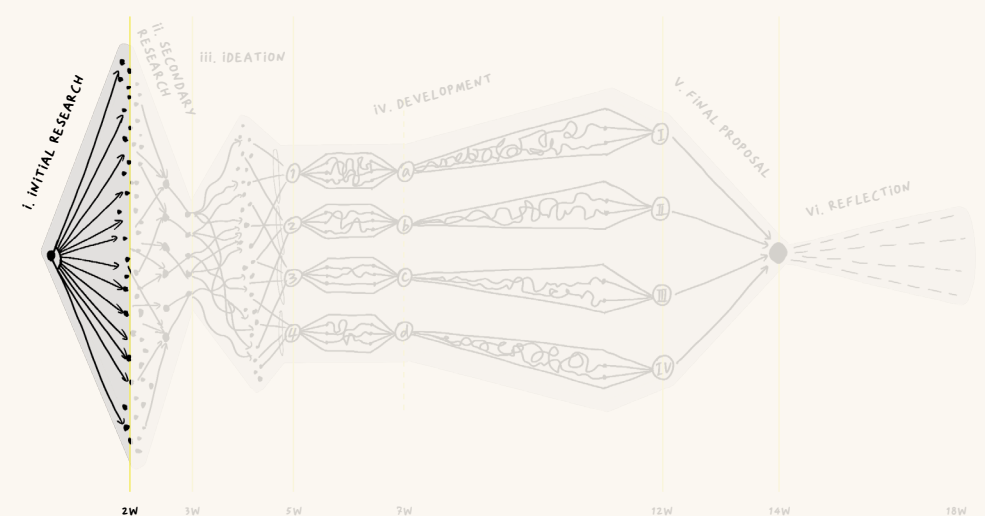




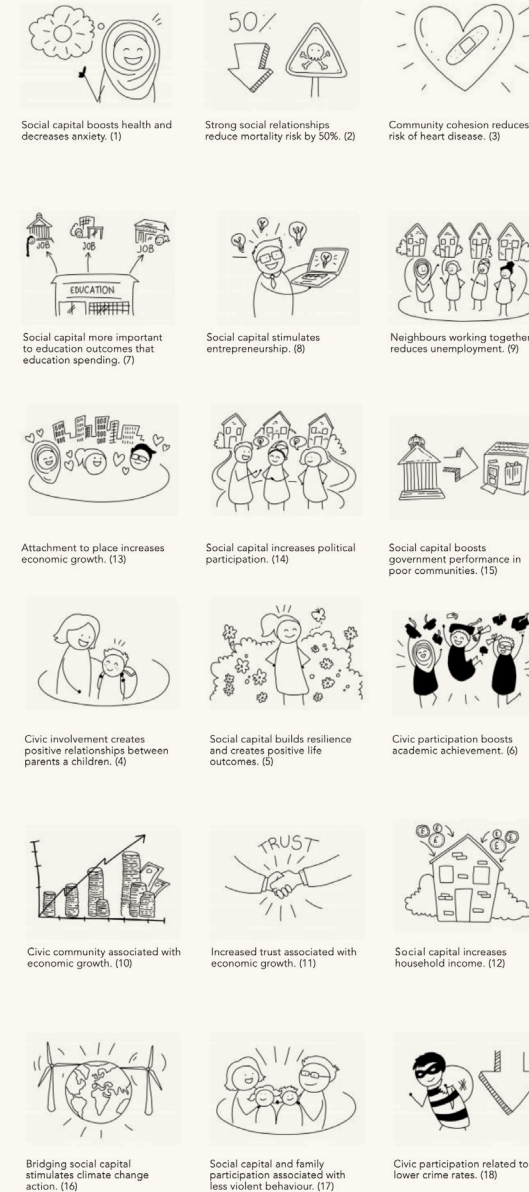
# I. Initial Research

Why Participation Really Matters  
Status Quo  
Why Participation Is Challenging  
Possible Intervention  
“HMW” Questions

The first chapter outlines the system, topic, context and challenges from a broad scope. It starts with desk research and talking to people to get insights. It zooms out to get an overview of the whole system.



# Why Participation Really Matters



## Participatory City

Participatory city is needed in our society. It creates a great number of benefits in a long run to the community, to make the neighborhoods sustainable in environment, society and economy. The community is made up of many independent person or family that not only brings individual benefits, but also collective values, in different ways, in different scales.

The illustration (Right) shows some examples of the benefits of increased social capital (connections with neighbors). For instance, increasing trust and political participation, attachment to place, economic growth, building resilience and creating positive life outcomes, and so much more.



# “Make cities and human settlements inclusive, safe, resilient and sustainable”

The Sustainable Development Goals are set up by United Nations to be “A blueprint to achieve a better and more sustainable future for all by 2030”, which are the agreed goals all over the world. The goals are identified as global issues that should be a priority in human development.

“Inclusive and sustainable urbanization” is one of the outcome targets. Obviously, in this case, inclusive urbanization must mean that people should be included from urban politics, space, markets, and services, included on fair terms and given a say in the process of determining these terms. Ultimately, this means supporting the gradual realization of human rights.

United Nations. *Sustainable Development Goal 11*. SDGS.UN.ORG.  
<https://sdgs.un.org/goals/goal11>

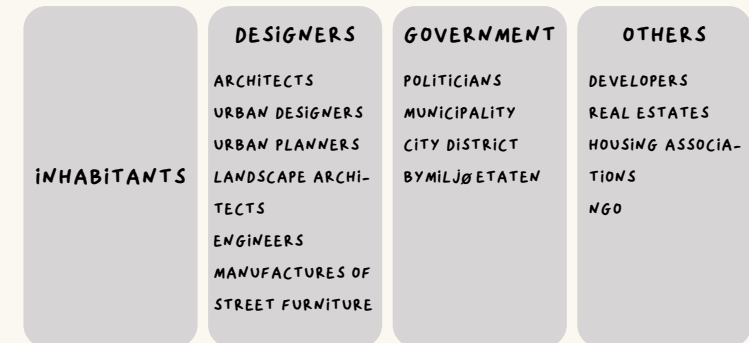
# Status Quo

In order to know how it works in today’s system, I mapped out various stakeholders connected in the urban planning system, specifically in Norwegian context.

I conducted a few unstructured in-depth one-on-one expert interviews with people working in the public sectors or private organizations helping the city development. The interview questions were changed each time according to my interest.

At the same time, I sent out user questionnaires to the young people in Oslo, to empathize with them and to understand why they didn’t participate.

## Stakeholders



## In-Depth Expert Interviews

Through talking with people working in different sectors, I got to know their challenges and wishes when they work with the city and inhabitants. Sometimes, I can feel their frustration to the rooted bureaucracy and the eagerness for change.



Jan Robert Johnsen

**#visitløkka**  
Grünerløkka kultur- og næringsforening



Andreas Fadum Haugstad

 Oslo  
ByKuben

NO PARTICIPATORY DEVELOPMENT AT ALL! THE LADDER IN YOUR PRESENTATION, IT IS RIGHT AT THE BOTTOM, BASICALLY JUST POKING YOUR EYES.

I DO NOT KNOW HOW MANY PLATFORMS THE MUNICIPALITY HAS FOR THE PEOPLE. YOU NEVER KNOW WHERE TO FIND THE INFORMATION. I STRUGGLED IN MY WORK TO FIND THE RIGHT INFORMATION, RIGHT PERSON AT THE RIGHT TIME.

MY NEIGHBORHOOD IS FULL OF A LOT OF SMART PEOPLE, BUT NO ONE KNOWS HOW TO DO THIS EXCEPT ME.

MAYBE SOMETIMES THE PROBLEM IS IN THE MUNICIPALITY, YOU ALWAYS HAVE THE RULES, INDICATORS YOU HAVE TO ACHIEVE. MAYBE YOUR BUDGET IS GEARED TOWARDS THE GOAL. IF YOU PROVIDE THE SERVICE OUTSIDE THE GOALS, THEN THERE IS NO REWARD. SOMETIMES THERE IS TOO MUCH ATTENTION ON MONITORING ONE GOAL, BECAUSE THE GOALS ARE PRE-DEFINED TOWARDS TO IDEAS OR SOLUTION.

BEING LIKE A PROTAGONIST, IN ORDER TO IMPROVE SOMETHING FOR A BETTER COMMON GOOD, IMPROVE MY NEIGHBORHOOD OR SOMETHING, THAT IS MUCH MORE RARE.



Mads Pålsrud



TO FIND OUT WHAT PEOPLE WISH, THAT IS WHY PARTICIPATION IS IMPORTANT.

DIFFERENT PARTS OF THE CITY RUN PUBLIC SPACES. THE OWNERSHIP OF THE MUNICIPALITY IS VERY COMPLEX. MANY DEPARTMENTS DEAL WITH PUBLIC SPACE TOGETHER, SO IT IS VERY CONFUSING.

IT HAS TO BE TRUSTWORTHY. THE MORE PEOPLE BEHIND IT, THE EASIER TO MAKE IT HAPPEN. THIS IS WHAT IS HAPPENING TODAY. BUT MAYBE NOT SO MANY CITIZENS WERE INVOLVED IN THE PROCESS, BECAUSE THEY DON'T HAVE A CLEAR STRUCTURE.

Photo by Mads Pålsrud



Tabea Jurine Glahs



Bydel Grünerløkka

ON EVERY STAGE, IT'S VERY IMPORTANT FOR PEOPLE TO FEEL BEING SEEN, BEING HEARD. AND WE HAVE PROACTIVE MESSAGES NOW IN THE CITY, SO PEOPLE GET MESSAGES ABOUT THINGS ON THEIR PHONES. BUT THEN THEY CANNOT REPLY, THEY CANNOT ASK QUESTIONS. I THINK THAT'S A BAD EXAMPLE.

ONE THING YOU REALLY NEED TO ENSURE IS THAT YOU INVOLVE THEM BY REPRESENTATION OF THE DEMOGRAPHICS.

BUT WHEN IT COMES BACK TO WHEN YOU GET THOUSANDS OF COMMENTS, IT BECOMES REALLY HARD TO GO THROUGH ALL THE INFORMATION AND TO MAKE AN INFORMED DECISION.

Photo by Tabea Jurine Glahs



Maria Nørregaard



Oslo

Bydel Alna

(AlnaInvolver <https://alnainvolverer.no/nb-NO/>)

A THING THAT WORKED WELL IS THE COLLECTION OF DATA. IT BECOMES VERY TRANSPARENT, EVERYONE CAN SEE WHAT HAS HAPPENED AND WHAT WILL HAPPEN FROM NOW ON. AND FOR US, IT'S LESS WORK DURING THE REPORTING.

THE BROAD GROUP IS FROM 20 TO 50, AND THE GROUP THAT PEAKS IS 30 TO 40 YEARS OLD WHICH ARE PARENTS HAVE SMALL KIDS. AND WE SEE THAT AGE GROUP NORMALLY DOESN'T PARTICIPATE MUCH IN PHYSICAL LAYER, BUT WHEN IT IS DIGITAL, THOSE WERE THE MOST ACTIVE GROUP.

ON THE ONE HAND, I THINK THE EARLIER WE GET PEOPLE INVOLVED, THE MORE IMPACT THEY CAN HAVE. ON THE OTHER HAND, IT MIGHT BE SO LONG TIME AGO THAT IT'S HARD TO REMEMBER WHAT YOU ACTUALLY PARTICIPATED IN.

## User Questionnaire

**Citizen participation in the city planning process**

Hi, I am a diploma student from The Oslo School of Architecture and Design. This questionnaire is part of my diploma project, which is about collecting the residents' opinions on urban public space where they live. Here the results will be used for getting to know the status quo, the engagement level, and the communication tools. It will take you 2 minutes. Appreciate your time.

Have you ever been informed by the city/city district/community that what the future city development will be like?

Yes  
 No

(If Yes) In what way? (Ex. Website, message, physical information board, face-to-face talk, etc.) And how did you feel?

Long answer text

Have you ever given the city/city district/community suggestions, feedbacks or complaints?

Yes  
 No

(If Yes) In what way? (Ex. Hearing, council meeting, website, email, face-to-face talk, etc.) And how did you feel?

Long answer text

(If No) Why you didn't speak out your voice?

Long answer text

Do you know any website or application where you can share your thoughts about the urban public space? If yes, please write them down, and what do you think of those tools?

Long answer text

(See Appendix C)

I handed out digital forms to the young people living in Oslo. I initially intended to include teenagers, but since everything was closed during Covid, I did not find a way to reach out the youth under 18.

In the end, I got 54 valid responses back. Half of them have been informed of the city future plan. They said they were interested, curious and happy for the change that makes the city alive and better. They felt nice to be informed. Some wished they would communicate the plans earlier so residents could have a real chance to engage. But among all participants, only around 10% have previously suggested thoughts to the city using the existing system.



## Information Channel

Digital:	Digital + Physical:	Physical:
Kommune website	Advertisement	Exhibition
Social media	News	Lecture
Bymiljøetaten online	Social network	Notice board
Email invitation	Magazine	Poster
Planinnsyn map		Flyer
		Protest

## Feedback Channel

QR-code survey	Local debate	Face-to-face talk
Email	Protest	Sign appeal
Plan og bygningsetaten		

## Why Don't People Participate?

i HAVE NO CONTROL OVER.

NO ONE WOULD LISTEN.

MY OPINION  
WOULDN'T MAKE  
ANY DIFFERENCE.

i DON'T KNOW WHAT THE  
PLAN IS, SO i CANNOT  
COMPLAIN WHEN i HAVE NO  
IDEA WHAT IS GOING ON.

IT IS TOO LATE TO  
MAKE ANY IMPACT.

i DON'T KNOW WHERE TO  
SEND THE FEEDBACK,  
WHO TO CONTACT, HOW  
TO COMMUNICATE OR  
WHEN IS THE RIGHT  
TIME...

TRUST THE EDUCATED  
PEOPLE THAT PROTEST  
ON MY BEHALF.

NO SUITABLE PLATFORM TO  
ENGAGE IN THIS DISCUSSION.

i'VE NEVER BEEN ASKED  
FOR MY OPINION.

NOT MY RESPONSIBILITY

NOTHING TO SAY

i HAVEN'T  
THOUGHT ABOUT IT  
AS A POSSIBILITY.

NOT A BIG DEAL

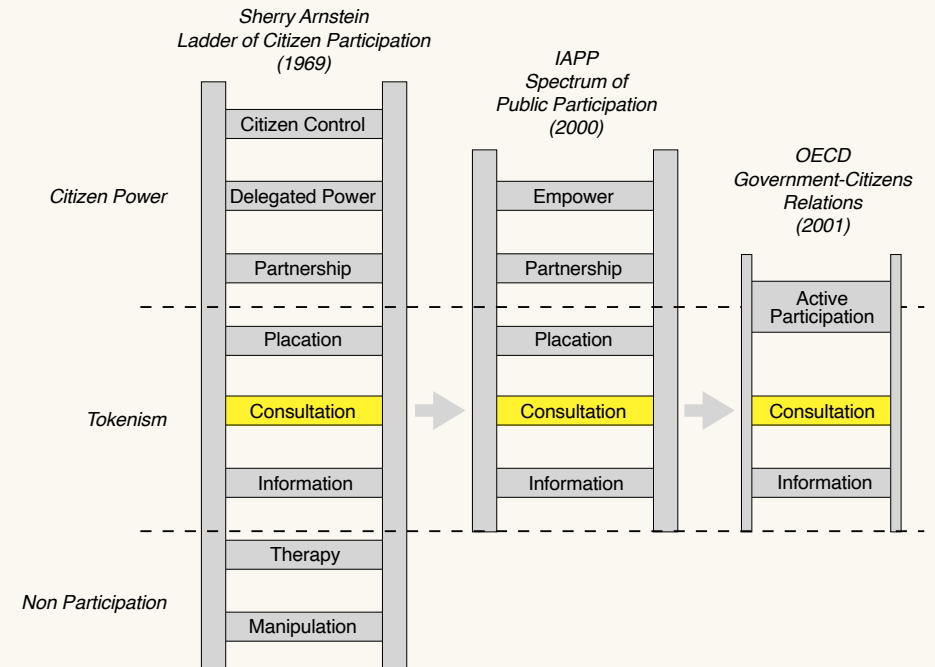


## Participation Ladder

According to the different versions of the participation ladder (Right), at present, we are at the degree of non-participation and tokenism. Most people are silent or powerless. The municipality holds the power to decide. However, in Nordic countries, the government actually wants to empower people to a higher level. Where can we reach in the near future?

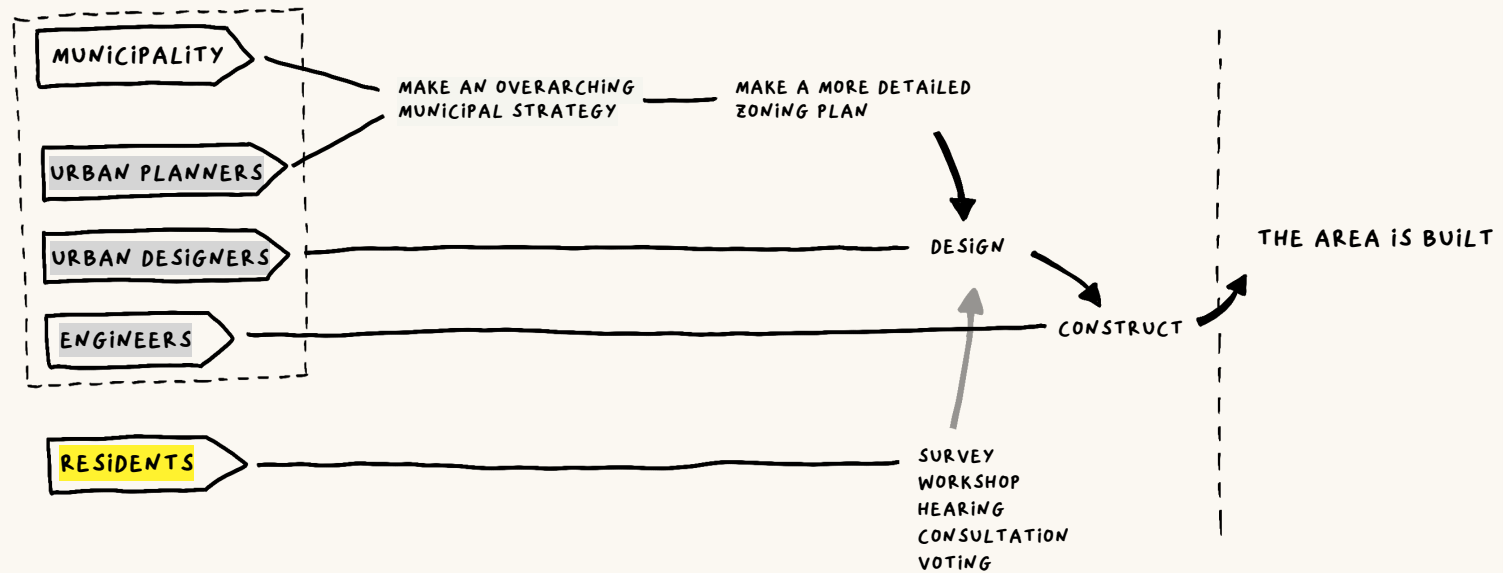


Updating the municipal urban planning system through citizen consultation 2017. (2017). [Photograph]. Uhp.org. <https://www.uhph.org/en/contest/winners/updates-municipal-urban-planning-system-through-citizen-consultation-2017>



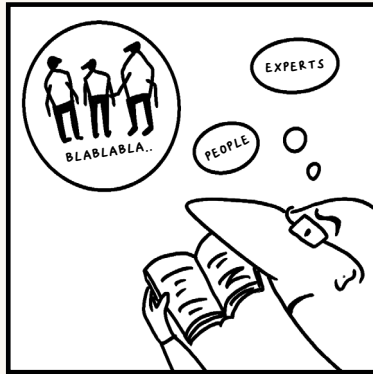
Martin, P. P. (2010). *Las alas de Leo: La participación ciudadana del siglo XX*. Bubok - ISBN: 978-84-614-9140-7. [https://www.researchgate.net/publication/277064455\\_Las\\_alas\\_de\\_Leo\\_La\\_participacion\\_ciudadana\\_del\\_siglo\\_XX](https://www.researchgate.net/publication/277064455_Las_alas_de_Leo_La_participacion_ciudadana_del_siglo_XX)

## Map of City Planning Process

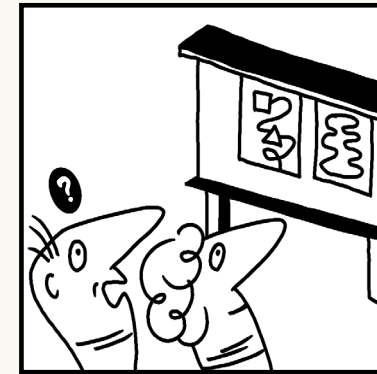


This is a simplified version of the current city planning process. At first, the municipality and city planning experts work together to set an overarching strategy from all aspects, and then develop a more detailed zoning plan. After handing it over to city designers to design the streets, squares, parks, buildings etc, the engineers help to construct. Finally, this area is built! The residents' role in this process is at the comparatively late stage, where they join in activities like workshops, hearings, and consultations.

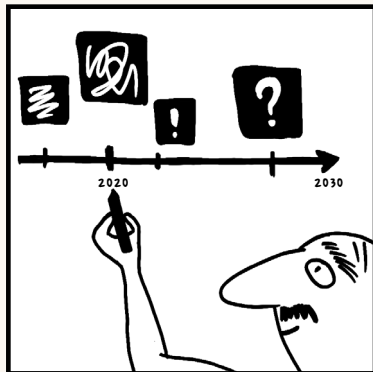
# Why Participation Is Challenging



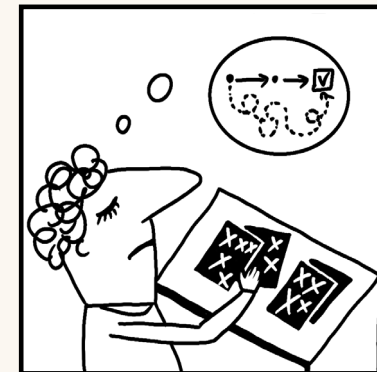
1. THE CITY FINDS IT INEFFICIENT AND TIME CONSUMING, SO DO THE PEOPLE, SO THEY RELY ON EXPERTS IN THE FIELD



3. THE PUBLIC ONLY KNOW LIMITED NUMBERS OF INFORMATION CHANNELS, AND EVEN FEWER CONTACT CHANNELS

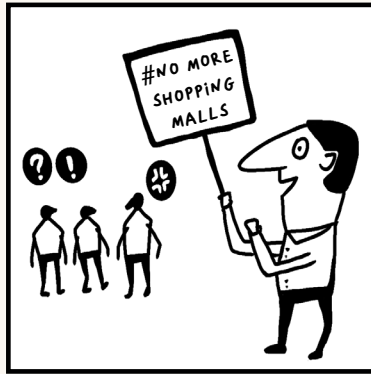


2. PEOPLE ARE CURIOUS AND HAPPY FOR THE CHANGE, BUT THEY DO NOT KNOW WHAT THE FUTURE PLAN IS, THEREFORE THEY DO NOT KNOW WHAT TO SAY

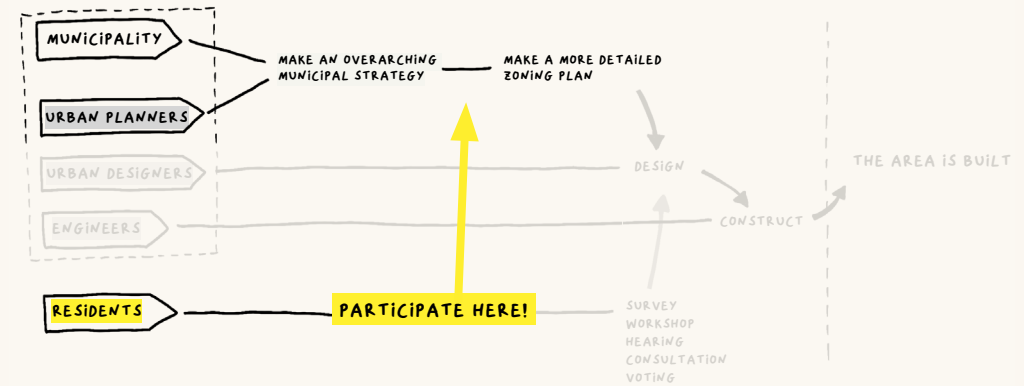


4. PARTICIPATION OFTEN STARTS TOO LATE, USUALLY EITHER OBJECTIONS TOWARDS THE CHANGE DELAYING THE PROCESS, OR PEOPLE BEING NEGATIVE THAT THEY HAVE NO POWER TO AFFECT.

# Possible Intervention



5. PUBLIC MEETINGS WHICH MEAN ONLY THE MOST EXTROVERTED RESIDENTS SPEAK OUT, DOESN'T REALLY CAPTURE THE AVERAGE RESIDENTS' VOICE



Since the consultation at the late stage doesn't give people a strong feeling of participation or power, what if the participation happens before the municipality has made a concrete decision? Early participation could be a strong start, and we provide opportunities for them to really make some impacts of the future plan. The public could also join a little later, after the strategic plan has been made to have an more informed overview of what the city wants as well. Then, they can suggest future needs, future use, rather than commenting on final design solutions or objections where it can feel like there is less possibility to change.



6. IT IS DIFFICULT FOR THE MUNICIPALITY TO INTERPRET PUBLIC CONTRIBUTIONS INTO SPECIFIC PLANS

# "HMW" Questions

## MIND CHANGE

HMW INDICATE PEOPLE THAT NO MATTER HOW SMALL IDEAS, WE WOULD LIKE TO HEAR

HMW ADDRESS SHARED PUBLIC SPACES HAVE SHARED RIGHTS

HMW ENCOURAGE THEM TO SPEAK, EVEN THOUGH THEY ARE NOT PROFESSIONALS

HMW DEAL WITH INDIVIDUALISM IN NORDICS

HMW ENCOURAGE THEM TO SUPPORT SUGGESTION/IDEA/ FEEDBACK

HMW DIVIDE BIG STRUCTURES INTO SMALL PIECES THAT RELATE TO INDIVIDUALS

HMW LET PEOPLE INVEST ATTENTION TO OUTDOOR PUBLIC ENVIRONMENT

HMW LET PEOPLE EMPATHIZE AND RELATE TO THEMSELVES

HMW LEAD PEOPLE TO HAVE THE CONCEPT OF COLLECTIVE CONCERN

HMW CHANGE ATTITUDE, BOTH PEOPLE AND MUNICIPALITY

HMW LEAD PEOPLE TO DESIGN THE CITY LIKE THEY DESIGN THEIR OWN HOUSE

HMW LOWER THE THRESHOLD WITHIN THE MUNICIPALITY TO ACCEPT OPINIONS

HMW TELL THEM WHAT THEIR RIGHTS OR RESPONSIBILITIES ARE AS NORWEGIAN

HMW INCREASE THE SENSE OF PROTAGONIST

HMW LET PEOPLE TRUST THEMSELVES OF MAKING IMPACTS

HMW RAISE THEIR AWARENESS OF DOING SOMETHING ABOUT THE CITY

## PITCH

HMW REACH OUT SERVICES TO PEOPLE

HMW ATTRACT PEOPLE TO PARTICIPATE

HMW MAKE A WRAPPING TO CATCH USERS' ATTENTION

HMW PUBLISH THE PLAN AROUND THEM

## INFORMATION

HMW MAKE IT TRANSPARENT AND INCLUSIVE

HMW GIVE PEOPLE A REASON WHY THE CITY WILL CHANGE LIKE THIS

HMW PUBLISH RELEVANT INFORMATION TO THE PUBLIC

HMW INFORM PEOPLE THE CITY PLANS IN DIFFERENT WAYS

HMW TRANSPARENT MUNICIPAL GOAL TO THE PUBLIC, OPEN TOWARDS THEIR NEEDS

## RESPONSIBILITY

HMW GET FUND TO COMPLETE A SELF-INITIATED PROJECT

HMW KNOW WHO IS RESPONSIBLE FOR WHAT, AT DIFFERENT DECISION-MAKING STAGE

HMW DEFINE WHO IS RESPONSIBLE FOR MAINTENANCE

## COMMUNICATION

HMW GUIDE THE PEOPLE HOW AND WHERE TO SPEAK OUT

HMW DESIGN THE MUNICIPAL WEBSITE USER-FRIENDLY OR ENGAGING

HMW ENGAGE PEOPLE TO INTERACT WITH EACH OTHER

HMW BUILD THE COMMUNICATION AROUND IT

HMW GUIDE THE PEOPLE WHEN, HOW AND WHERE TO SPEAK OUT

HMW KNOW WHAT IS IMPORTANT FOR PEOPLE WHEN IT COMES TO INVOLVEMENT

HMW PROVIDE A SUITABLE PLATFORM TO ENGAGE IN THE DISCUSSION

HMW ALIGN PEOPLE'S COLLECTIVE WILL WITH MUNICIPALITY'S PREDEFINED GOAL

HMW GIVE PEOPLE A POSITIVE FEELING THAT THEY ARE HEARD, WE CARE ABOUT THEM

HMW INVOLVE THEM INTO THE DIALOGUE

HMW INDICATE PEOPLE THAT THEY DO HAVE CONTROL OVER IT

HMW BUILD GOOD RELATIONSHIP BETWEEN CITIZENS AND POLITICIANS

HMW COLLECT THEIR OPINIONS ON THE PROJECT TOO FAR AHEAD

HMW ENGAGE PEOPLE TO COMPLAIN AND SUGGEST

HMW COMMUNICATE THE PLANS EARLIER AND GIVE RESIDENTS A REAL CHANCE TO ENGAGE

HMW LET PLANNERS KNOW PEOPLE'S VIEW

HMW ENGAGE PEOPLE TO INITIATE POSSIBILITY TO CHANGE URBAN SPACE

HMW SHOW PEOPLE WHAT THEY CAN DO

## OTHERS

HMW ITERATE THE CITY LIKE A PRODUCT

HMW INCREASE PEOPLE'S IMPACTS ON THE PROJECT

HMW ACTIVATE THE COMMUNITY, INTERACTIVITY, AND CO-CREATE

## TIMESCALE

HMW VISUALIZE CONSEQUENCE IN A LONG RUN

HMW CHANGE THE CITY IN A SLOW PACE, BUT STILL KEEP CHANGING

HMW BE AWARE OF TIMESCALE, SOMETHING HAPPENS IN THE FUTURE

HMW COLLECT THEIR OPINIONS ON THE PROJECT TOO FAR AHEAD

## Mind Change

We are now at the turning point to build the new relationship between the government and the public. HMW encourage people to propose proactively? HMW open up the conservative mind within the government?

## Pitch

We have already made lots of efforts on creating new services, but how to distribute this new service to the public is not easy at all. Democratic participation works more well when more people are engaged.

## Information

Transparent information is a key step right before participation. What information can be published? What information is valuable? How to visualize the information that could be easily understood by average people?

## Responsibility

City planning is a complex system. Both the process and stakeholders differ each time from program to program affecting accountability. If citizens know who, where, and when to contact, they could engage more thoroughly.

## Communication

Building the dialogue between the municipality and the public would help to understand each other's need. It is something missing so far, so HMW involve them into the discussion and communicate in the common language?

## Timescale

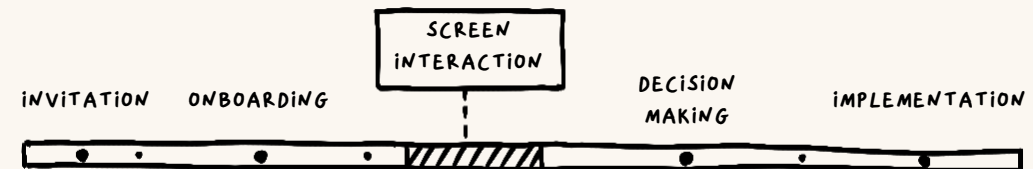
Urban development often lasts a few years or up to 20 years, which is a very long process. During the period, people's needs are also changing at the same time, then HMW guide them to consider the timescale factor?

# To sum up - How might we build the communication to bridge the public and the municipality to have a common vision?

“HMW” (how might we) questions are short questions extracted from challenges, which could stimulate ideation. I have been writing them down as many as possible during the interviews and the user survey. Next, to categorize them by different topics.

As you can see, categories are sorted by different parts of the service journey. Some are service-oriented, others are technical or political. They are the key challenges in the system and should be prioritized in my project. If I try to cover all the aspects, it would be too much for this project. Therefore, I chose the communication as my focus area, where digitalization would help to give it a real chance to break through, also to use my designerly skills as an interaction designer.

→ My focus area

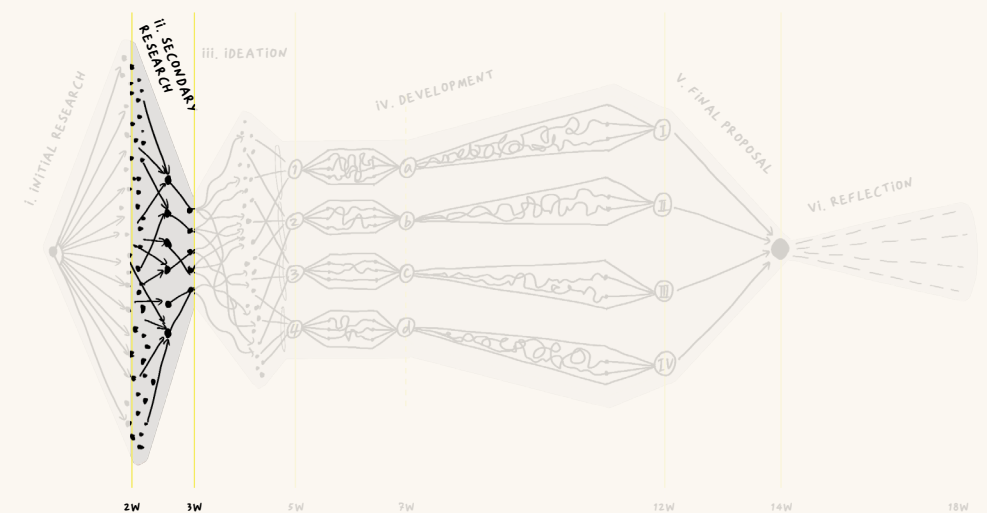


# II. Secondary Research

“Can We” Questions  
Case Studies  
Opportunities  
Refined Brief



Once the project is narrowed down by a more specific “HMW” question, here is the following research to dig deeper. By learning from previous inspiring cases, the direction of the proposal is clearer.



# “Can We” Questions

<b>YES OR NO</b>	<b>IDEAS</b>	<b>BROWSE</b>	<b>CONSEQUENCE</b>
CAN WE KNOW PEOPLE'S NEGATIVE OR POSITIVE ATTITUDE	CAN WE DESIGN THE KOMMUNE WEBSITE EASY TO NAVIGATE	CAN WE SEE EACH OTHER'S INPUTS	CAN WE VISUALISE BOTH POSITIVE AND NEGATIVE CONSEQUENCES OF THE FEEDBACK
CAN WE NOT ONLY INVOLVE PEOPLE TO COMPLAIN, BUT ALSO SUPPORT	CAN WE ENGAGE PEOPLE TO INITIATE POSSIBILITY LIKE GAME	CAN WE SUPPORT EACH OTHER'S INPUTS OR DISAGREE	
	CAN WE EASILY GUIDE PEOPLE TO VISUALISE THEIR ABSTRACT IDEA IN THE EARLY STAGE		
	CAN WE DESIGN THE PROPOSAL PROCESS IN A FUN AND SIMPLE WAY		
<b>RESPONSE</b>	<b>PROCESS DATA</b>		
CAN WE GIVE THEM FEEDBACK, THANK THEM AFTER THEY PROPOSE	CAN WE TRANSLATE THEIR INPUTS INTO DESIGN LANGUAGE		
	CAN WE PROCESS THEIR INPUTS INTO INSIGHTS		
	CAN WE PROCESS THEIR INPUTS INTO BIG DATA		
	CAN WE GIVE THE PUBLIC'S INPUTS TO PLANNERS FOR DESIGN		

I answered “Can We” questions to those “HMW” questions as possible directions to the challenges. For instance, can we easily guide people to visualize their abstract idea in a fun and low-threshold way? Can we process their inputs into insights and share to everyone?

# Case Studies

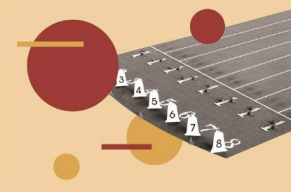
lovdata.no

**Lov om planlegging og byggesaksbehandling (plan- og bygningsloven) - Kapittel 5. Medvirkning i planleggingen1 - Lovdata**

Kapittel 5. Medvirkning i planleggingen1

minsak.no

**Minsak.no**



www.ks.no


**Kom i gang med innbyggermedvirkning - KS**

lovdata.no

**Lov om kommuner og fylkeskommuner (kommuneloven) - Kapittel 12. Innbyggerdeltakelse - Lovdata**


Kapittel 12. Innbyggerdeltakelse

www.regjeringe...




**§ 39 a: Innbyggjarinitiativ - generell klargjøring**

Sak 03/ 4042. Ein kommune ønskte at departementet skulle kome med ei klargjøring av innhaldet i kommunelova § 39a, då denne paragrafen vart oppfatta som noko uklår. Kjerneinnhaldet i initiativretten er at innbyggjarane i kommunen har høve til å ...



www.ks.no


**Samskapende sosial innovasjon - KS**



magasin.oslo.kommune.no

**Medvirkning - nødvendig når byen bygges!**


Hvordan kan brukerinteresser best ivaretas i en bymessig utvikling av byen?



magasin.oslo.kommune.no

**Medvirkning er nøkkelen til bedre byutvikling**


- Folks lokalkunnskap er nøkkelen politikerne trenger til å ta gode avgjørelser, sier Hanna E. Marcussen.



magasin.oslo.kommune.no

**Bedre medvirkning? Ja takk!**

Alle ønsker medvirkning i Oslos byutvikling. Nå jobber kommunen med en egen handlingsplan for medvirkning, og bak Slottet forsøker en privat utbygger å gå nye veier.




placesjournal.org

**Sidewalk Toronto: Post-It Note City**

A visit to the smart-city-in-progress at Sidewalk Toronto prompts questions about what it means to “participate” in civic design.

www.stedskapingskolen.no

**Hjem | Stedskapingskolen**



omastadi.hel.fi

**OmaStadi**


OmaStadi on Helsingin tapa toteuttaa osallistuvaa budjetointia. Helsingin käyttäjä 8,9 miljoonaa euroa kaupunkilaisten ideoiden toteuttamiseen. Ideoista kehitetään yhdessä ehdotuksia, joista kaupunkilaiset äänestävät ja kaupunki toteuttaa eniten ääniä saa...

www.participatorycity.org

**The Illustrated Guide — Participatory City**

varaamo.hel.fi

**Varaamo**




nye.obos.no

**Nabohjelp**


Trenger du drill, kattedpass eller kanskje tips til en god frisørsalong? Spør naboen i Nabohjelp, da vel! Appen er gratis og åpen for alle.

budgetparticipat...



**Budget Participatif - Paris**

Site du Budget Participatif de la Mairie de Paris

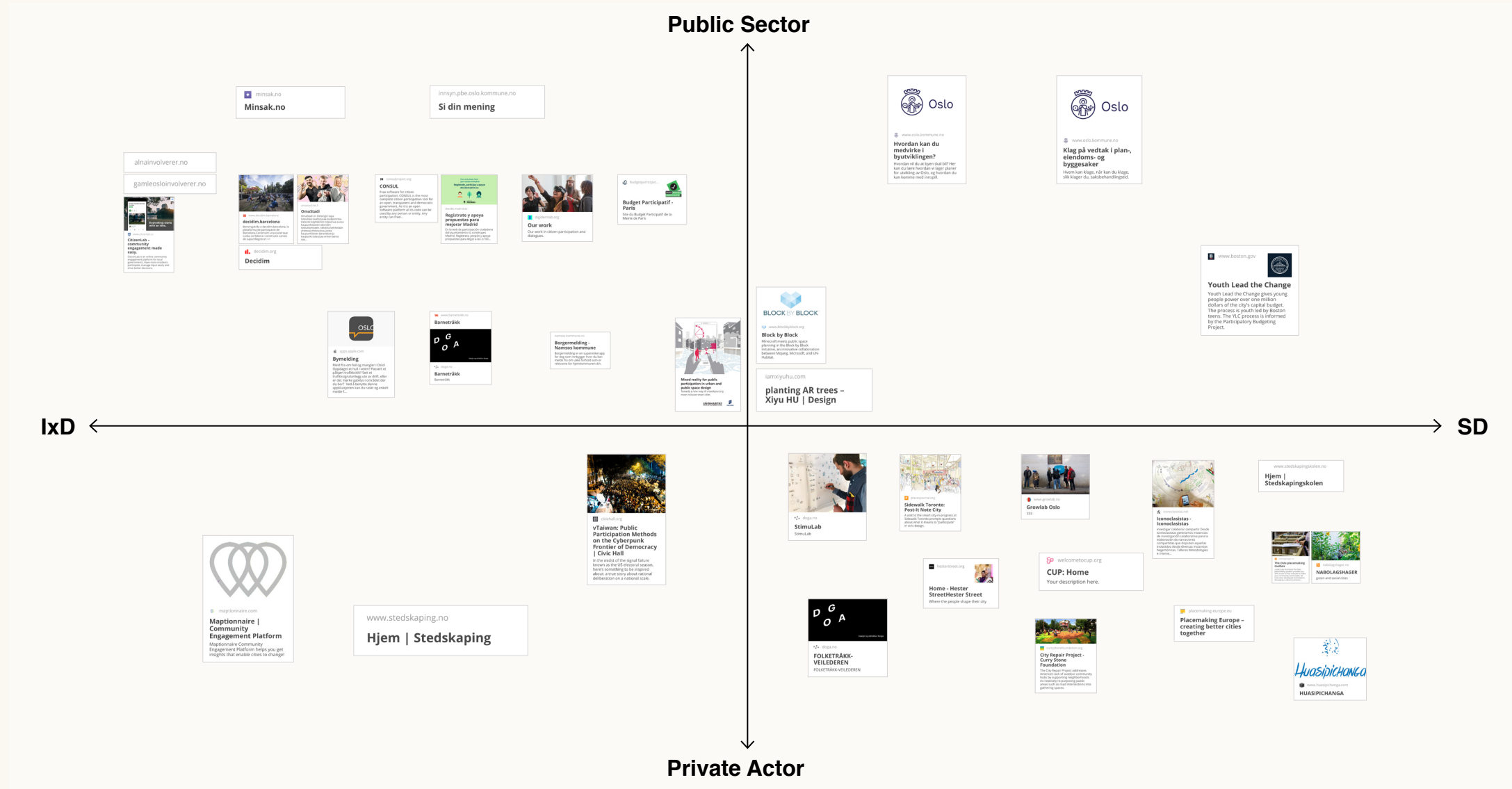


doga.no

**StimuLab**

StimuLab

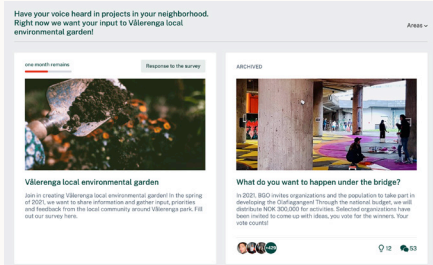




- + Transparent information
- + Digital participation
- Too technical interface
- Basically only text

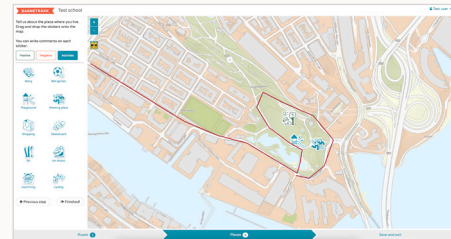
Public Sector

- + Different types or projects
- + Both physical and digital events
- Narrowed questions
- Basically only text



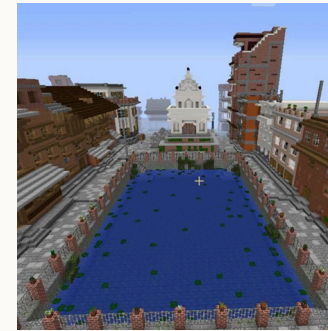
GamleOsloInvolver  
AlnaInvolver

Say your opinion



Barnetråkk

- + Draw on the map
- + Categorized stickers
- + Emotional comment
- Not open for advise

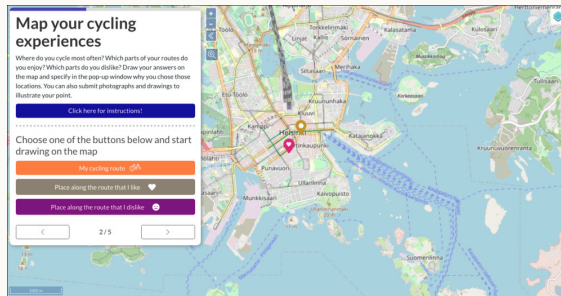


BlockByBlock

- + Good visualization
- + Gamification
- + Models
- Artificial
- Not popular for all

IxD ←

→ SD



Maptionnaire

- + Map based survey
- + Draw on the map
- + Emotional comment
- Not proactive
- Narrowed questions

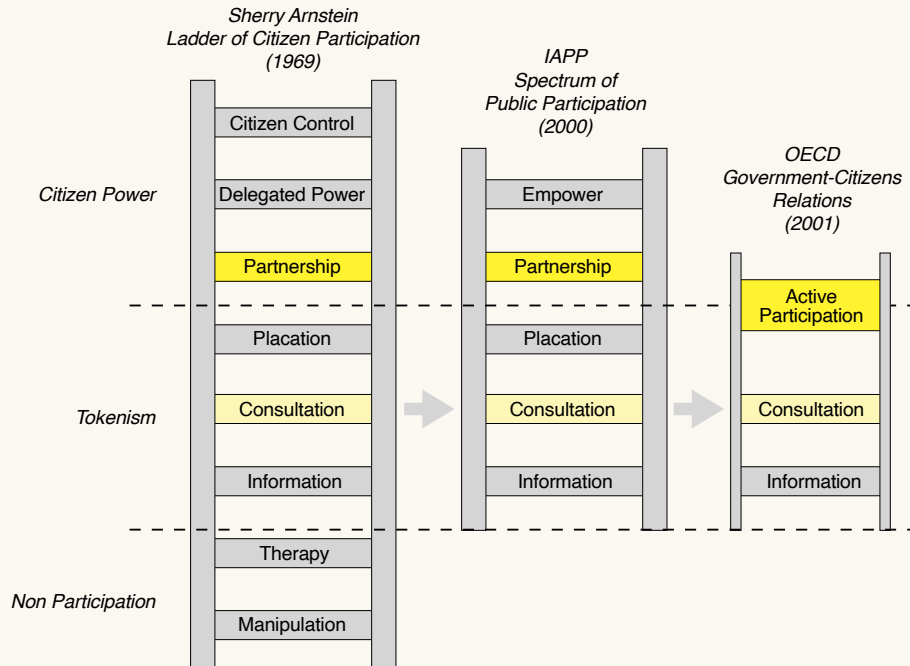


GrowLab

- + User centered
- + Engaging
- Physical presence

Private Actor

# Opportunities



I was questioning where can we reach in the near future from the stage of consultation (Page32)? My ambition is the people and the government will have a win-win partnership where people can be really involved and they make decisions together.

## 1. Open Questions

One of the old ways of consultations is to show the city plan and ask residents whether they agree. It is like a yes or no question. In fact, we want to figure out the deep reason behind it. If they say no, why do they disagree? What future use and future needs do they want? We could ask them about abstract needs instead of asking for a detailed design solution.

## 2. Common Concerns

Usually proactive replies from consultations are the objections or complaints towards the change. These are negative emotions. Is it possible that earlier involvement of the public could perhaps increase support for the city's plan?

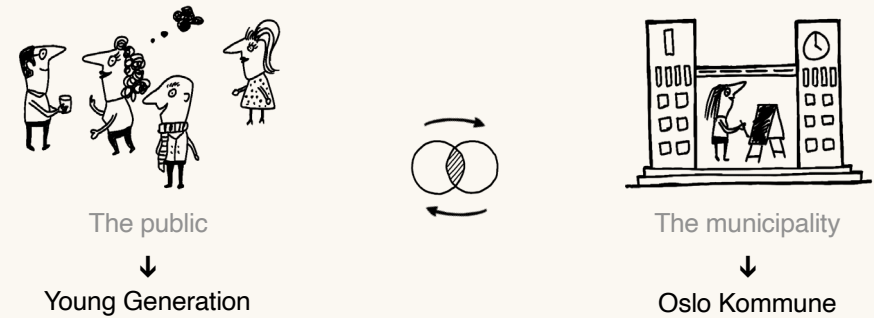
## 3. Low-Threshold

Many AR or VR tools out there are helpful but do not involve average people, because they require devices and structured guidelines. The new solutions need to be low tech and low barrier, so that everyone can easily participate through a few simple steps.

# Refined Brief

I am going to explore the possibilities of the digital communication tools to bridge the public with the municipality, for people to share thoughts and collect concerns engagingly, in the early urban planning process.

## Target Groups and Pilot Groups



My target groups are the public and the municipality. What I mean by municipality here includes politicians, urban planners, urban designers, data scientists and so on in general. For my diploma project, I will pilot it among young adults in Oslo as a starting point.

Choosing the young generation is because I try to engage with those groups that are typically not involved in hearings and consultations. The middle-aged people are the most active group. The teenager around 13-18 are still in school. They are involved through school. But when you are at 19, early 20s, there is no one who speaks for you. Another reason is they are born with digital products, and have more open, inclusive mind for the use of digital media.

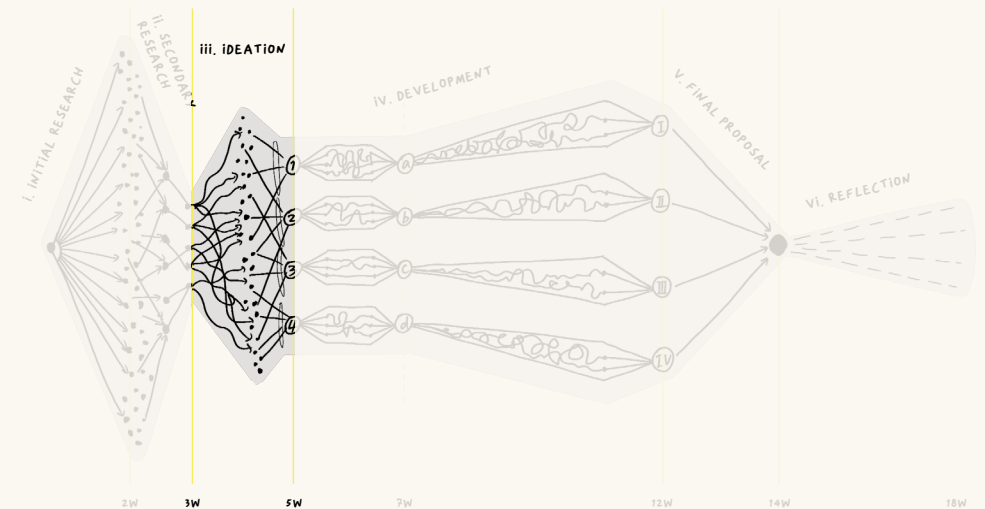


### III.

# Ideation

Possibility-Driven Task  
Second Evaluation  
Chosen Direction

After refining the task, it frames the rough direction for the project. The ideation phase is where I came up with a great amount of exciting concepts. Through well structured brainstorming and evaluation, four ideas were selected at the end.



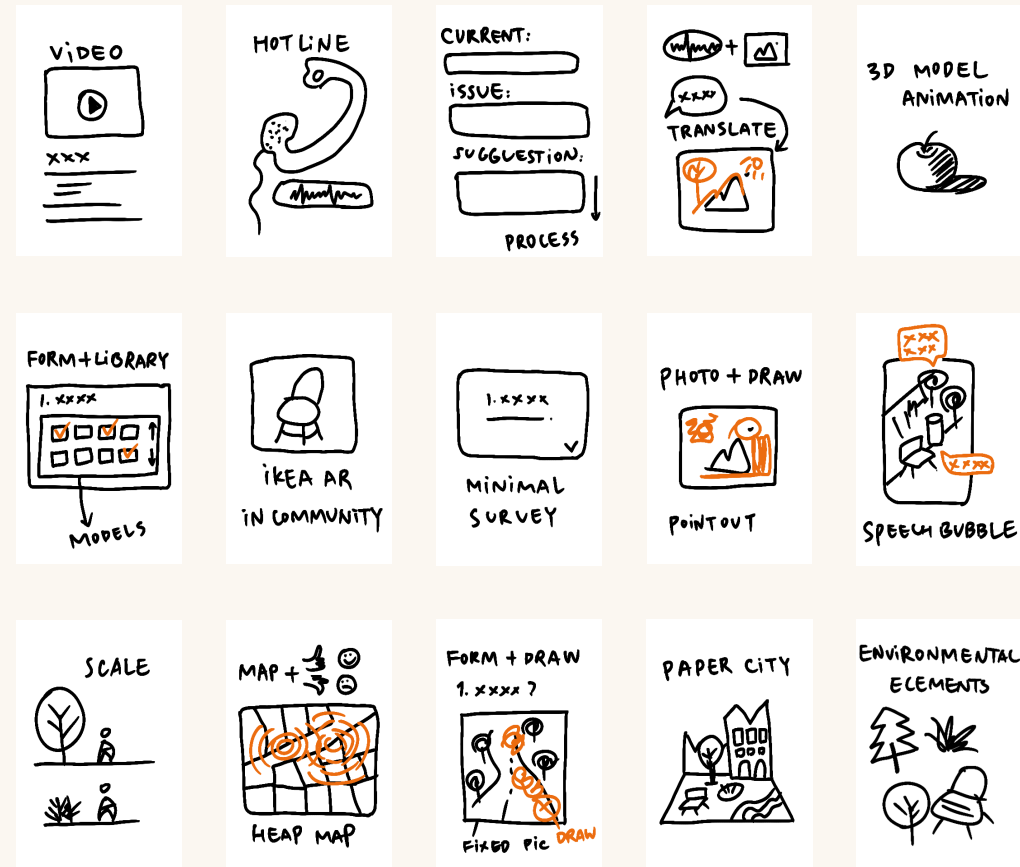
# Possibility-Driven Task

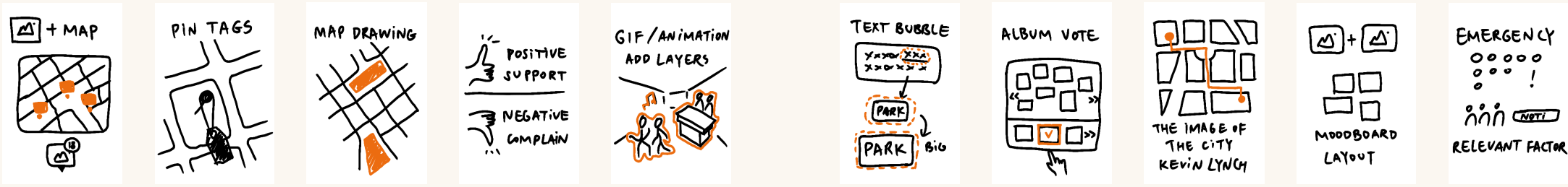
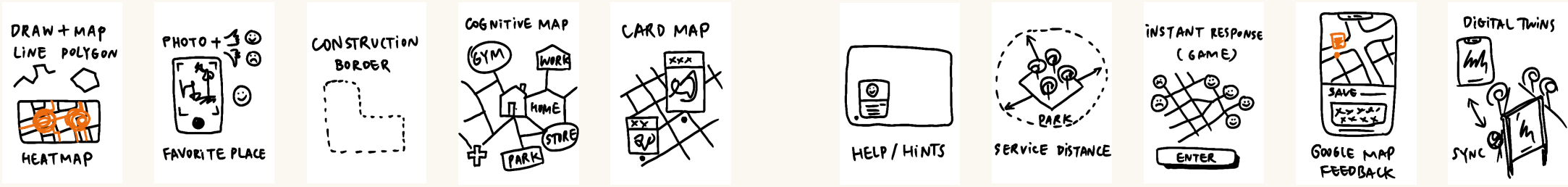
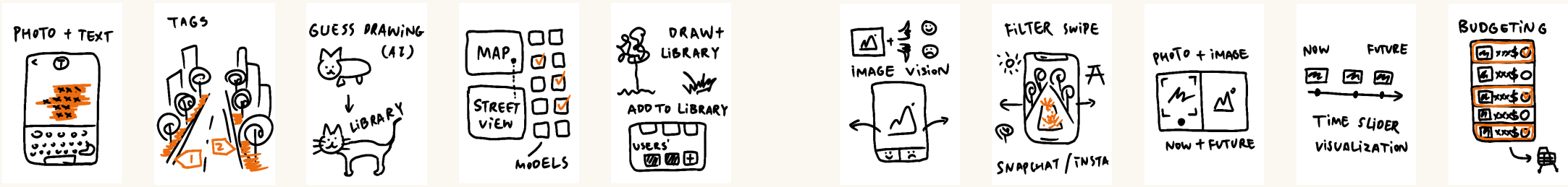
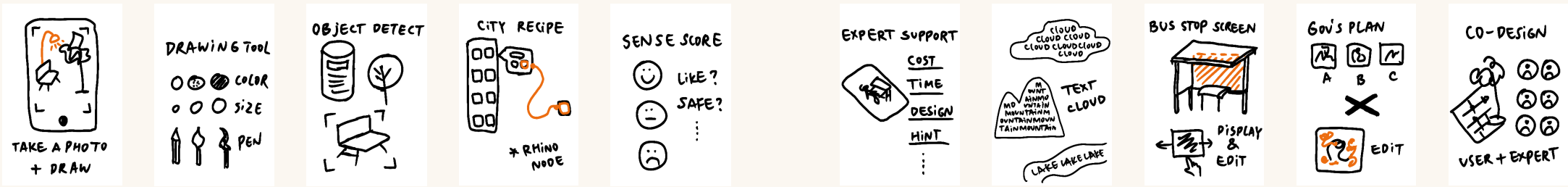
## Brainstorming

Crazy 8 is one way of brainstorming. I tried to sketch out as many ideas as I can within limited time for each grid, to pursue the possibility. It disregards the details of design, so I can concentrate on the concept itself.

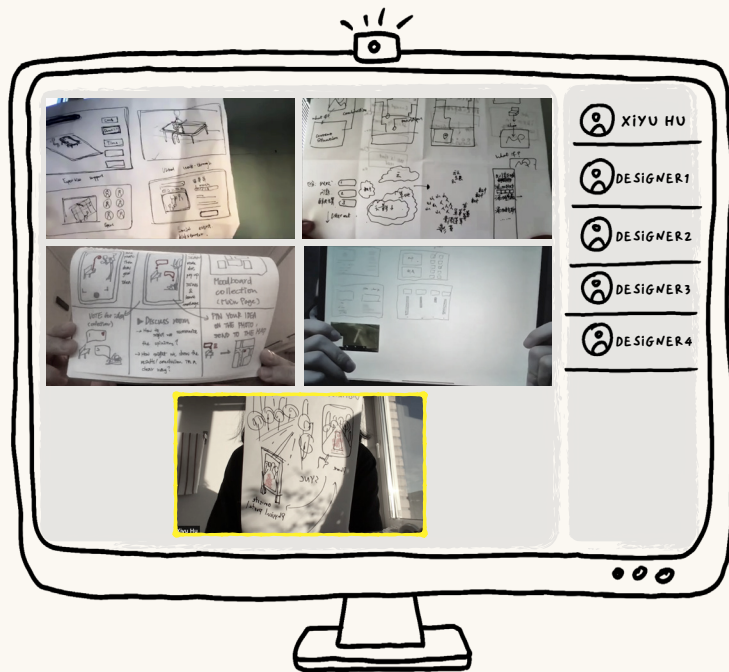


I prepared myself a 7-day possibility-driven task, which contains a 3-day Crazy 8 to brainstorm, 1-day workshop ideating with other designers, and 3-day evaluation to filter all the concepts. In this way, I could immerse myself into a highly productive creative thinking in this period.

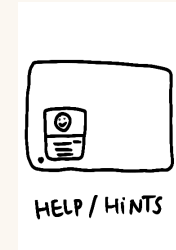
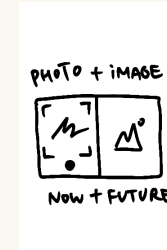




## Remote Ideation Workshop



New concepts:



Mutual concepts:



After ideating alone, I conducted a co-design workshop with other designers. I did not show them my concepts in order to see some fresh eyes, and also see if we have mutual concepts. Then, I analyzed the validation of new concepts and paid more attention to the common ones, because they are mostly intuitive and easy to be understood.



# Clustering Ideas

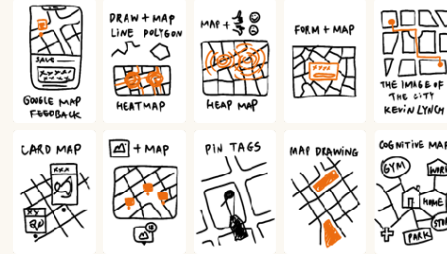
## MEDIA



## PLAYFUL TEXT



## MAP-BASED



## FUTURE



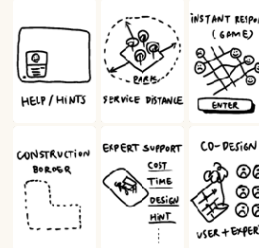
## FORM TEMPLATE



## PHOTO COMMENT



## HINTS AND FEEDBACK



## AI



## YES OR NO



## HAND-DRAWING



## PREVIEW



## MOODBOARD



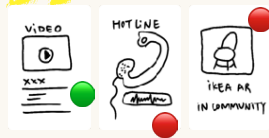
## LIBRARY



I have sketched out many ideas. It is time to look for the patterns. I found they are based on all kinds of media, for example, text, image, drawing, video, sound, map and so on. Some are the combination of two, some can be shown at different steps. Various media mean various interactive experience with the screen, so it is great to test them out.

# Concept Evaluation

## MEDIA



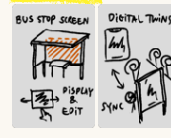
## PLAYFUL TEXT



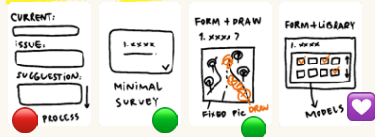
## MAP-BASED



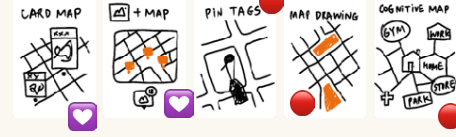
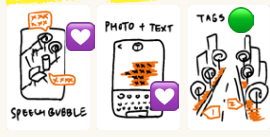
## FUTURE



## FORM TEMPLATE



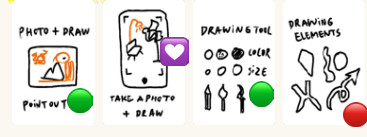
## PHOTO COMMENT



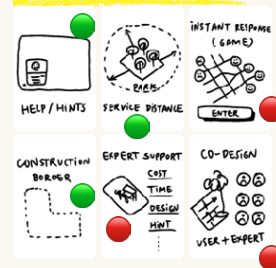
## YES OR NO



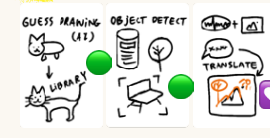
## HAND-DRAWING



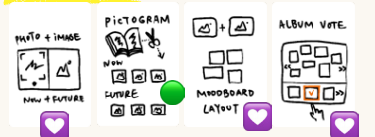
## HINTS AND FEEDBACK



## AI



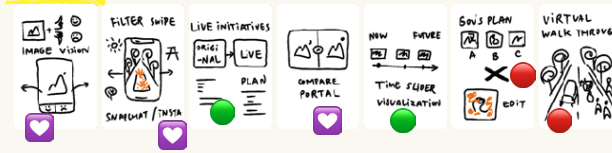
## MOODBOARD



## LIBRARY



## PREVIEW



My favorite, most likely can be developed as new features



Relevant and good

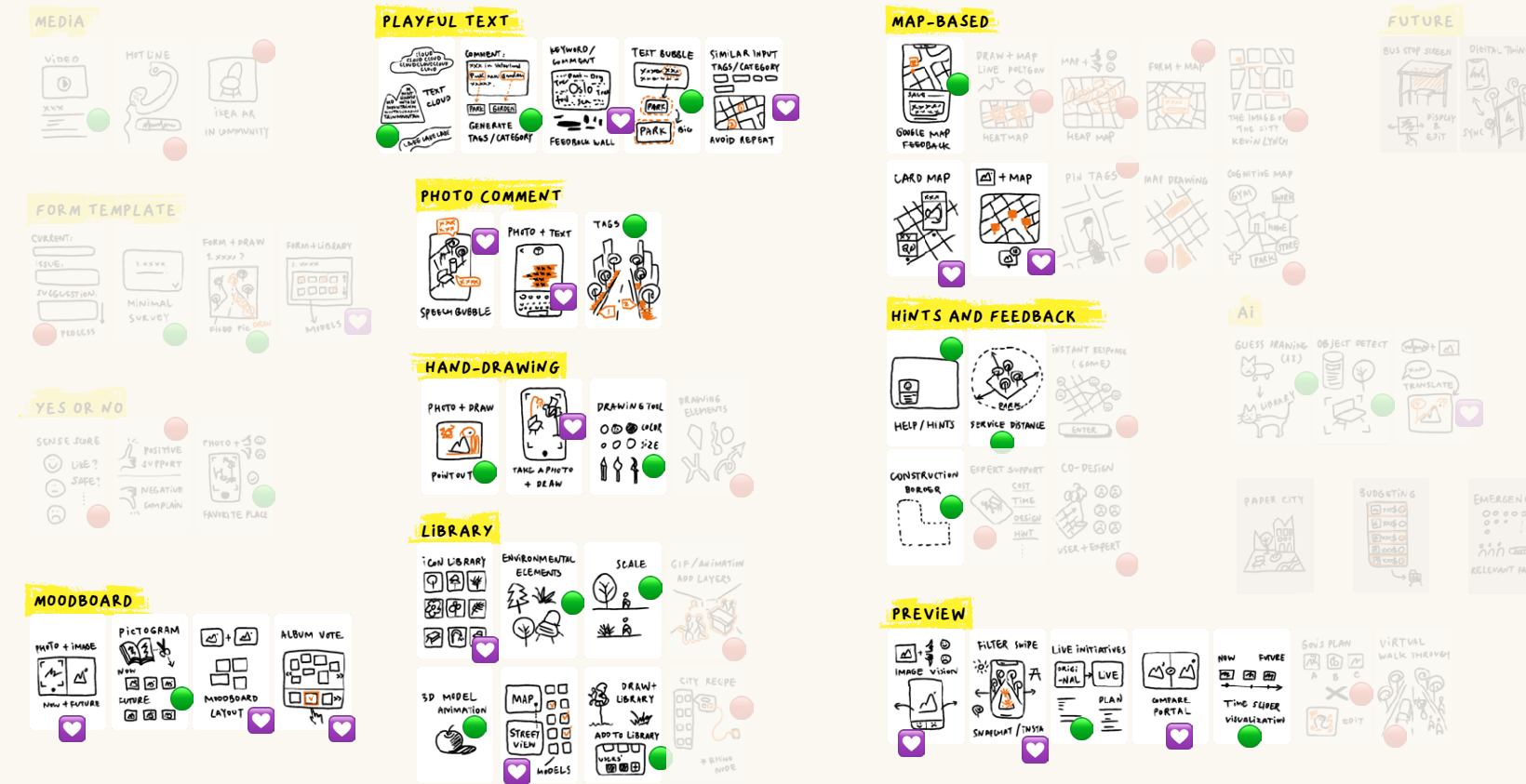


Relevant but a bit far away from the goal

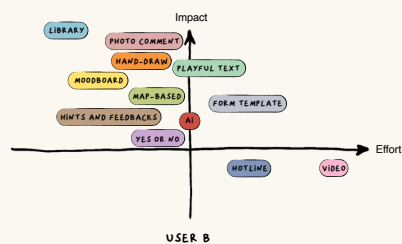
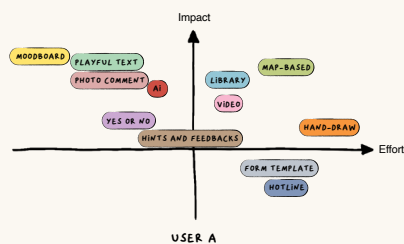


Irrelevant

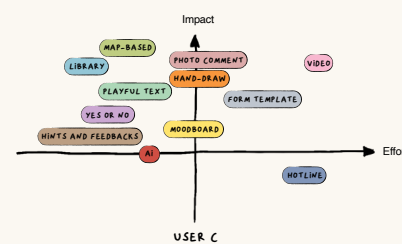
Before the ideation phase, I have already defined the project brief and opportunities as the rules to the game for evaluating concepts. According to them, it is easier for myself to select the ideas. Even though this is a possibility-driven project, I do not have enough time to showcase all the possibilities, so this walk through would help me to prioritize.



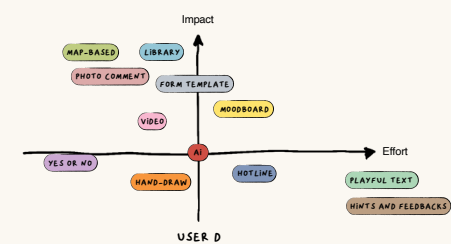
Not only evaluated by myself, I also did a few short informal user interviews to assess ideas roughly from a different view. I asked them to put the categories into the impact/effort axis, meaning how much effort they make to propose a suggestion and how understandable the suggestion is. Obviously, the ideas on the top left are the best, while the right bottom are the no-go. As a result, these ideas are kept to be developed.



USER B



USER C



USER D

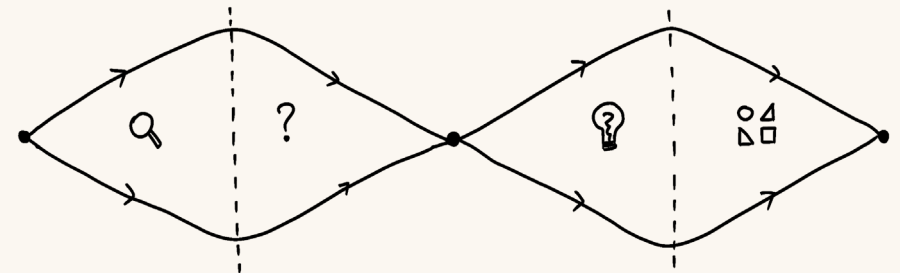
# Second Evaluation



After the one-week task, I felt there was something missing. I suddenly realized I only paid attention to the user end, but dismissed the other group - the city experts. Therefore, I spent three more days to evaluate for the second time, from the experts' point of view. What information would be valuable for them to learn from?

## Urban Design Methods

I recalled my experiences in architecture school and how we design the city and talked to architects casually, in order to summarize the general urban design process and methods. Within the process, what user data and inspirations are needed for them?



### RESEARCH + ANALYSIS

HISTORY  
ECONOMICS  
CULTURE  
ONSITE OBSERVATION  
SURVEY  
PEOPLE'S ACTIVITY  
GREEN/BLUE SYSTEM  
TRANSPORTATION  
TOPOGRAPHY  
FUNCTIONALITY  
CONNECTION  
LAYOUT  
...

### STRATEGY

MAIN CHALLENGES  
VISION  
PLAN  
...

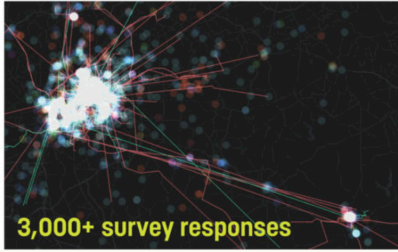
### INSPIRATIONS

COMPETITIONS  
OFFICE PROJECTS  
PHOTOGRAPHIES  
PINTEREST  
MAGAZINES  
BLOGS  
E.G. DEZEEN,  
ARCHDAILY  
...

### PRESENTATION

SITE PLAN  
DIAGRAM  
TECHNICAL DRAWINGS  
RENDERINGS  
PERSPECTIVES  
MODELS  
...

MYCAMPUS SURVEY



3,000+ survey responses

4,000+ comments

"Lullwater is by far Emory's best-kept secret...I take walks around the lake there on my lunch break or after work"

"Cox bridge is definitely more of the heart of campus"

"Good location, not a great building. Needs to fit theme of campus."

"Please make green space and pedestrian areas a priority."

"The circle is important as a traffic calming measure for cars... but it does create some confusion, and visibility is poor on the northwest side as pedestrians join the intersection"

"I wish that the university engaged the Quad more"

"No sidewalks! Unable to walk to work or get exercise on lunch breaks"

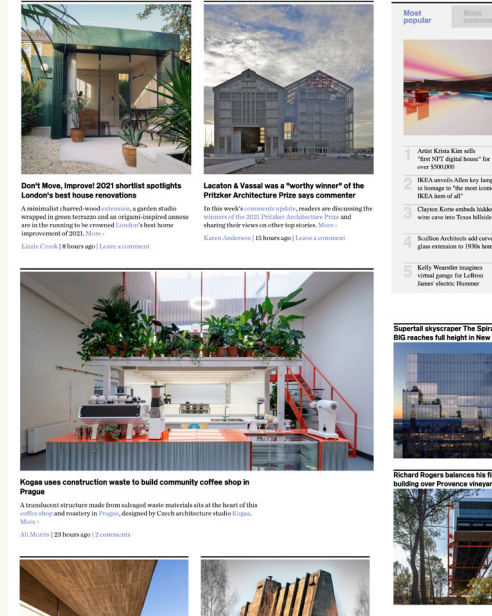
SURVEY  
PEOPLE'S ACTIVITY



PHOTOGRAPHIES  
OFFICE PROJECTS



de  
zeen

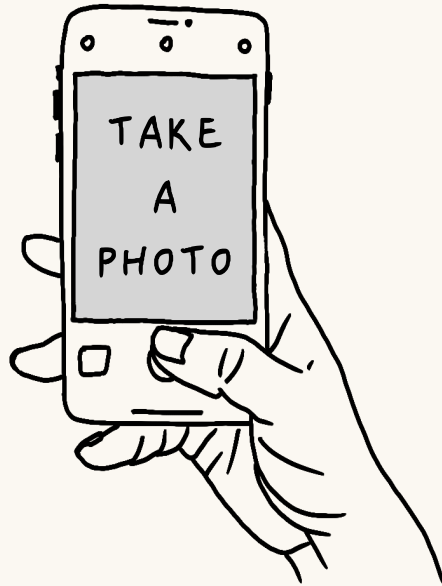


COMPETITIONS  
MAGAZINES  
BLOGS



PINTEREST

## Medium



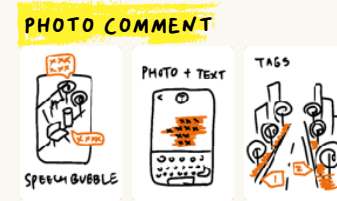
All the notions I designed start with immersing yourself in the real 3D world, and taking a photo to frame input for feedback. This is a good way to communicate with the environment. You can sit on the bench in a park and design for the neighborhood in real time.

Considering the on-site experience, the user end is based on the mobile phone screen, while the experts process data on PC.



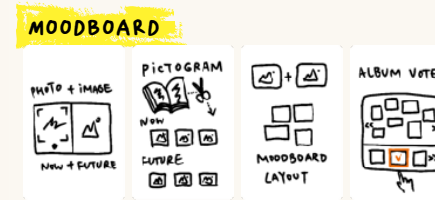
## 1. Photo Comment

Leave comments on top of the photo



## 2. Moodboard

Upload reference images which match your intention



## 3. Hand-Drawing

Simply hand-draw your idea

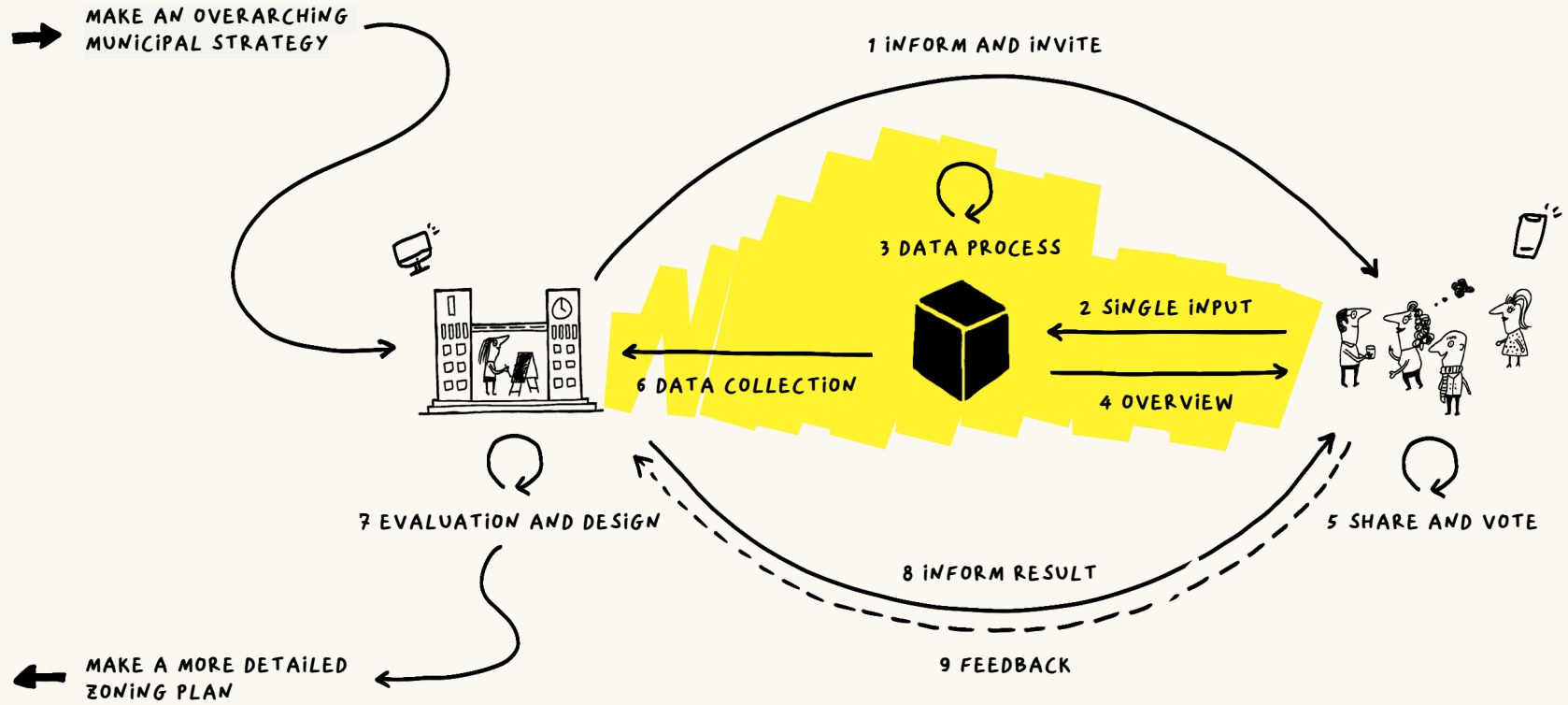


## 4. Collage Library

Select activity stickers from the premade collage library



# New Model



This new model is the whole information flow. My design outcome focuses on the highlighted part.

Once the new communication tools are intergrated in the system, it would change the information flow. The future mechanism could be after the city has decided the strategic plan, they inform and invite people to advise. The tool is a data hub between people and the municipality, processing single inputs and transferring data back and forth. Next, depending on people's votes and city's evaluation, they can together make an agreement on the following zoning plan.

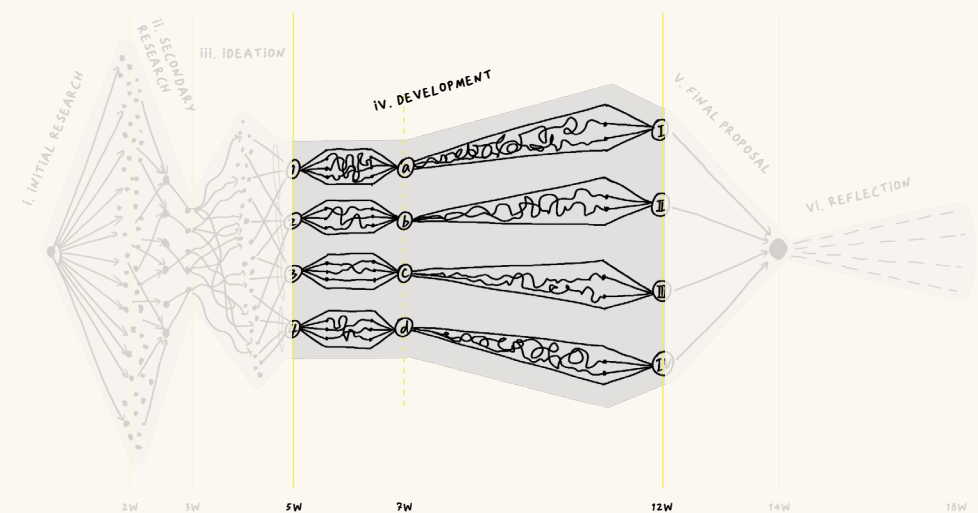




# IV. Development

## User Journey Iteration Process

This chapter briefly shows three steps of concept development. From enriching the user journey, sketching out wireframes, to two rounds of iterations after user testing.



# User Journey

## Wireframe

### 1. Photo Comment



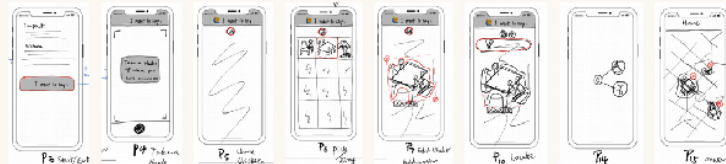
### 2. Moodboard



### 3. Hand-Drawing



### 4. Collage Library

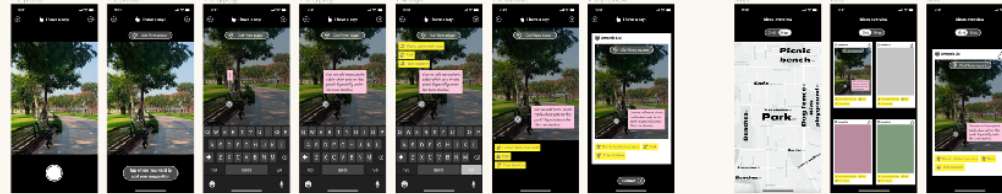


# Iteration Process

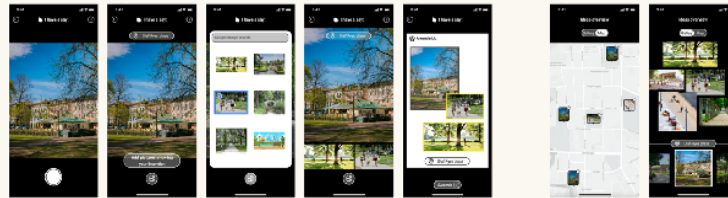
## 1st Round



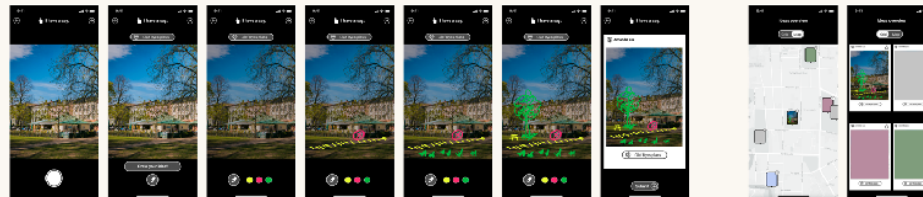
### 1. Photo Comment



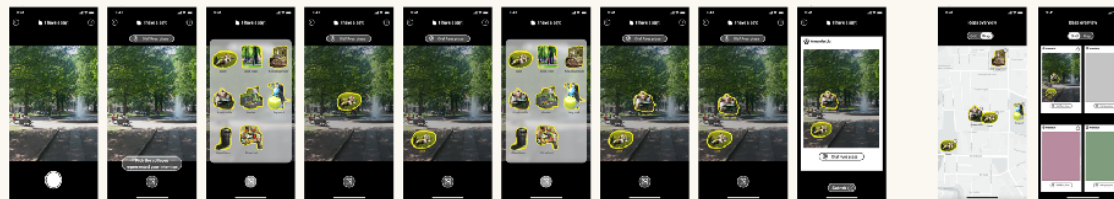
### 2. Moodboard



### 3. Hand-Drawing

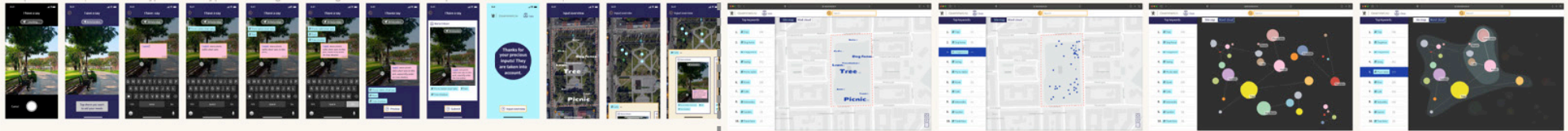


### 4. Collage Library

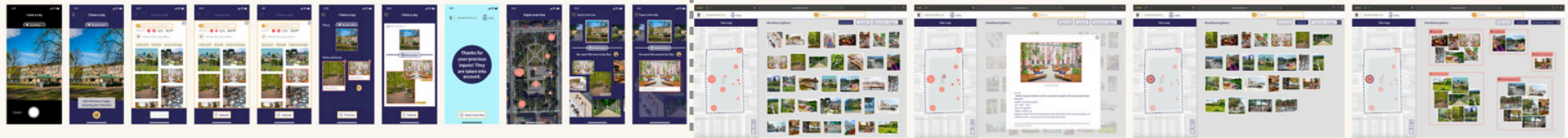




1. Photo Comment



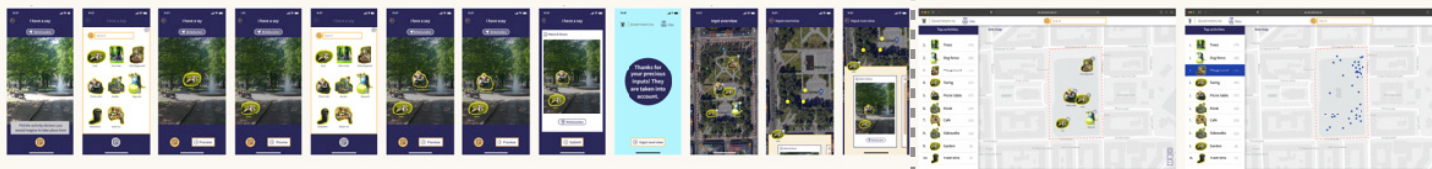
2. Moodboard



3. Hand-Drawing



4. Collage Library





I had two rounds of iterations and two rounds of user testing after each iterative development.

The first rough prototype was mainly designed for the people. I did a quick test among six young adults living in Oslo, to figure out if the concepts and features work.

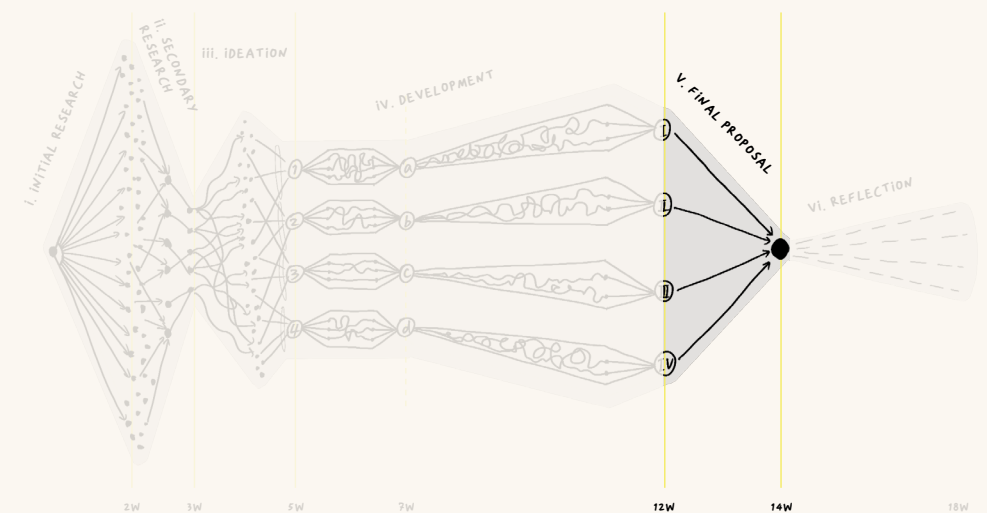
Since the first testing went well, all the user data and interactions are valuable. I added interfaces for the experts for the second round of iteration, as well as improvements on the people's end. I brought it back to those young adults who have tested it before and the five experts I have interviewed in the beginning. I got really thorough feedback on the innovation of user experience and data process.



# V. Final Proposal

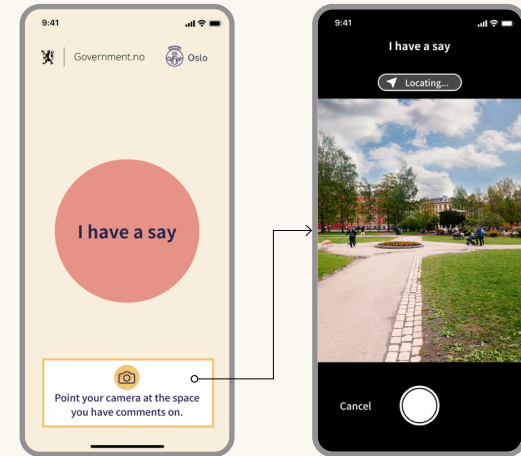
Mock-Ups  
Fit-In Scenarios  
Overall Feedback  
Value of This Proposal

Showcased here are my design outcomes. How my design work would be used in possibly applicable scenarios, and what my contributions bring to the realm.



# Mock-Ups

Here I will showcase the prototypes for both the user end on the smartphone and expert end on the PC. And explain the new features in main interfaces following the flow. These prototypes are Mid-Fi so far.



For four different parallel concepts, they have the same starting point. The first step is you get informed by the government. Point your camera at the space you have comments on, and take a photo on the spot.

**See interactive prototypes here:**

<https://bit.ly/3v6v2JM>

# 1. Photo Comment

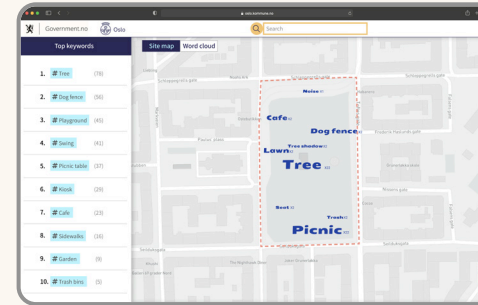


After taking a photo, tap where you want to add your needs on top of the photo.

The comment box pops up indicating to write what you want and character limits.

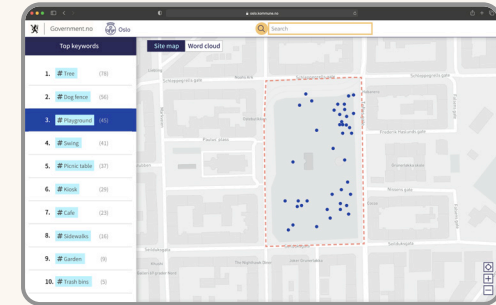
It generates keywords while you are typing, using semantic analysis (Machine Learning).

Once you have done your input, it creates a post to publish.



## Site Map

This is the home page for the expert end. You can see the top keywords ranking list on the left, and where these reviews are distributed on the site map on the right.



## Heat Map

By clicking the word in the ranking list or on the site map, you will land on the heat map of where this word was mentioned.

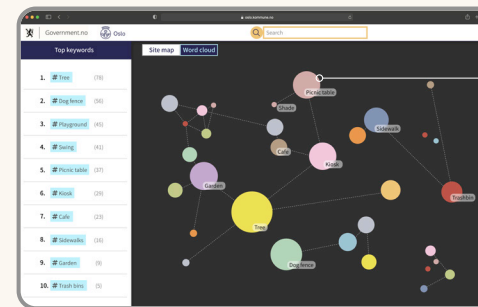


You will get the response after sharing an input. You could also go to check all inputs for this program.

This keyword map is a new way of visualizing the information. The word size shows the noted frequency.

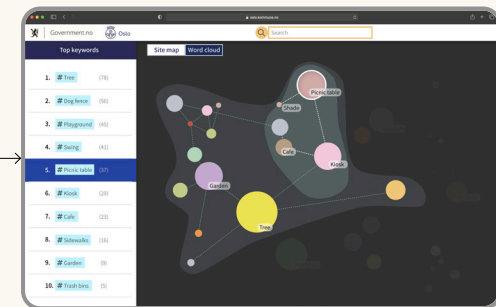
And where the word is located after clicking to see the details.

Browse up the overlaid panel, you will get to see each post where the word shown up.



## Word Cloud

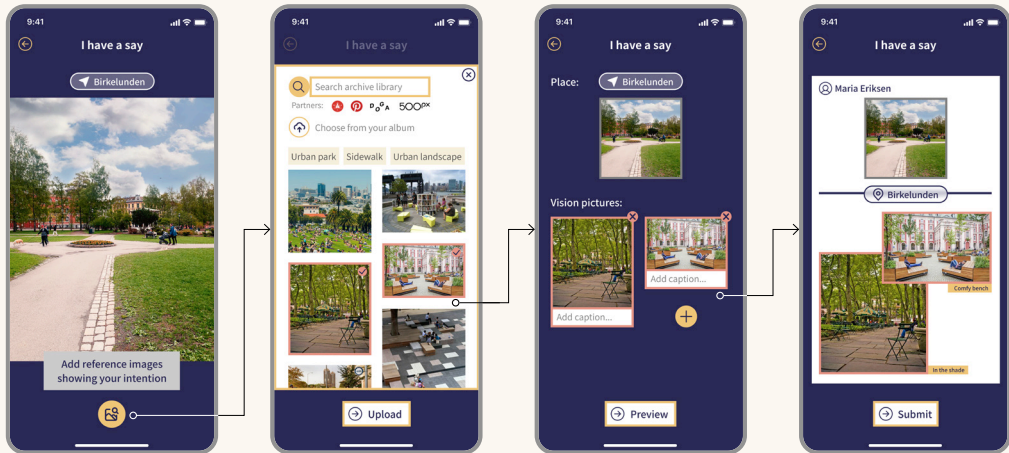
The word cloud is a new AI feature which utilize the Natural Language Processing technology. It displays the connection, interlinks, and semantic context between each word in users' comments.



When researching on one specific word, the graph changes the responsive information. The lighter background color means closer word family, while the darker one is further away but still relevant. Faded out background are irrelevant words.



## 2. Moodboard

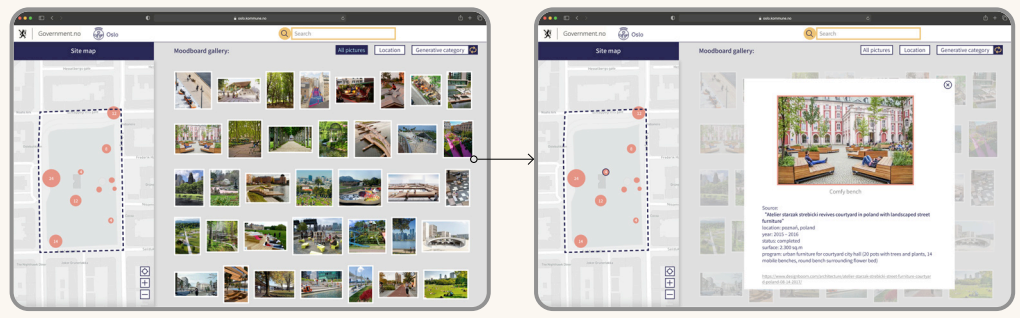


Add reference images showing your intention to compare with today's photo.

The images are from professional architecture associations, Pinterest, and photography websites.

Choose multiple vision pictures and you can also add a short caption to explain your intention.

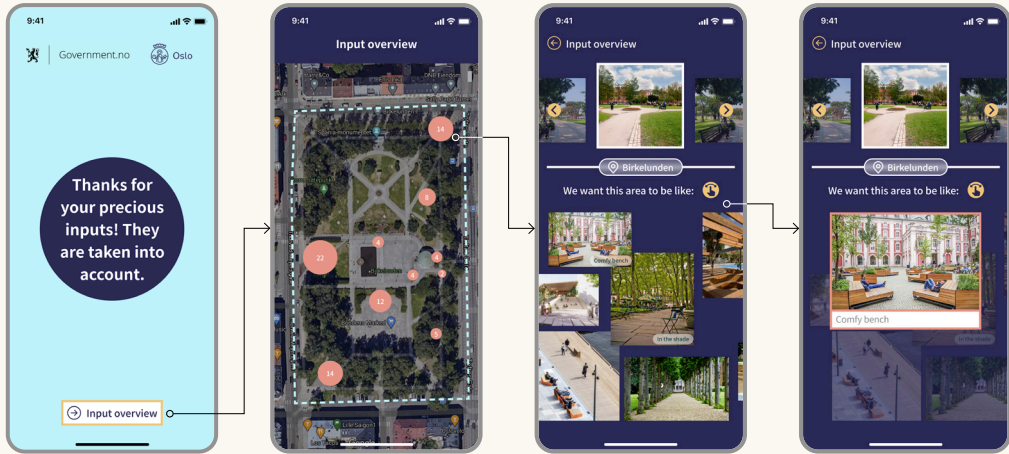
Once you have done your input, it creates a post to publish.



### Moodboard Gallery

All the reference images for this program are shown here. Browse them one by one, or search by location on the map.

If you find anything interesting, go to check more information about this picture. It will tell you where this picture is from, which project it is part of, and where you could learn from this project afterwards.



You will get the response after sharing an input. You could also go to check all inputs for this program.

The overview map displays how many people left comments in this area.

Scroll the upper section, it can change locations. Scroll the bottom, look through all the images that others posted.

Click one of them and zoom in to see the picture and captions.



### Generative Category

The image gallery is filtered by location where the public chose the pictures.

Generative category is the most exciting new feature. Unsupervised Learning helps it to group images by looking for different characteristics each time, can be inspiring for designers.

### 3. Hand-Drawing

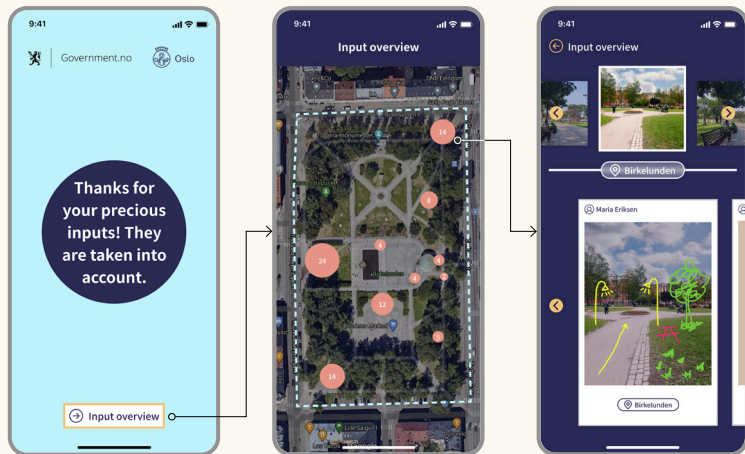


Draw your idea quickly! Just simple doodles, arrows, or highlights etc.

The pen only contains one stroke with three basic colors, so you do not need to over-think it.

Here is the space to draw out your idea.

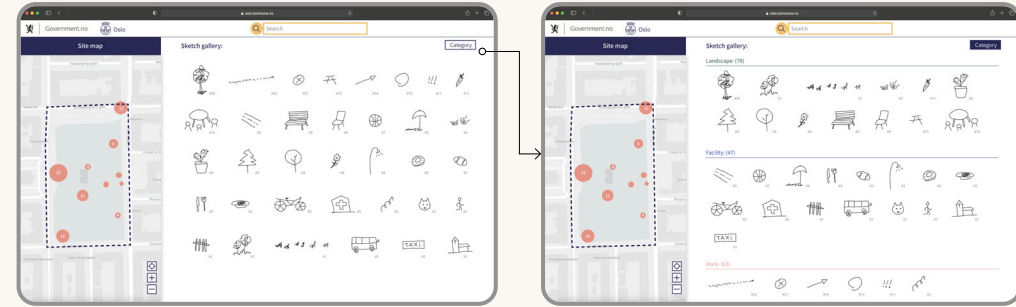
Once you have done your input, it creates a post to publish.



You will get the response after sharing an input. You could also go to check all inputs for this program.

This map shows how many people drew in this area.

Scroll the upper section to change locations. Scroll the bottom to see others' drawing.

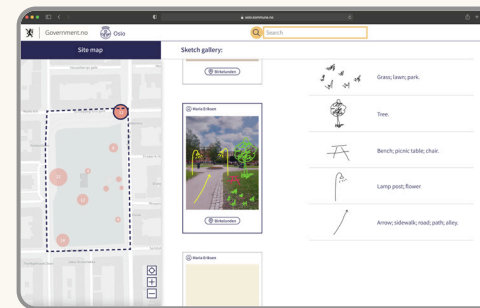


#### Sketch Gallery

Hand-drawing is the type of data that is hard to be processed, so Sketch-RNN might help to understand it and categorize it. Firstly, it groups the similar styles of drawing.

#### Category

Secondly, they are categorized by guessing the meaning. This technology does not work very accurately, therefore I keep some flexibilities in the interface to sort them by generic categories manually, like landscape, facilities and marks.



#### Sketch Guessing

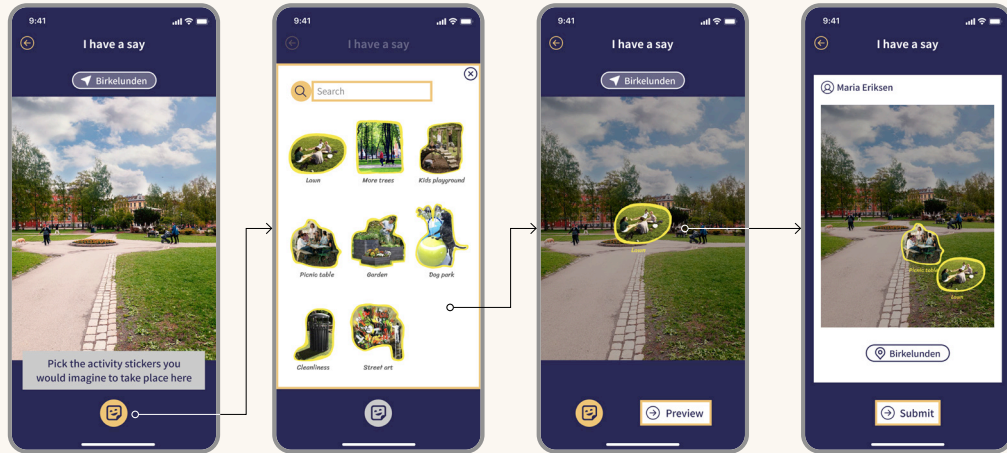
The machine helps to translate the information and will save a lot of time. When you go through each post, it tries to guess what the drawing means. This step is fundamental for categorizing.

## 4. Collage Library

User End



Expert End

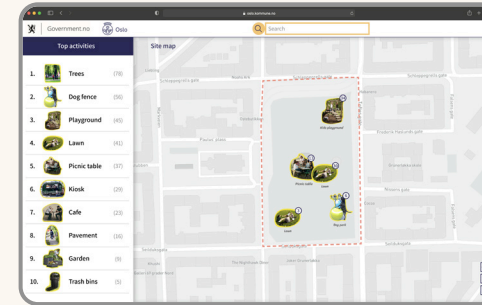


Pick the activity stickers you would imagine to take place here.

The stickers are cropped from photos of people doing various activities that imply functionalities.

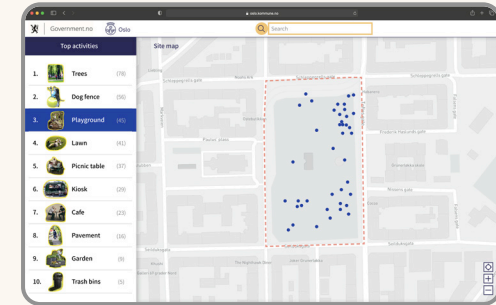
The size of the sticker is fixed, but you can drag it to where you want.

Once you have done your input, it creates a post to publish.



Site Map

The top activities ranking list are on the left, and correspondingly, where these activities are wanted on the site map on the right.



Heat Map

By clicking the word in the ranking list or on the site map, you will land on the heatmap of where this activity was mentioned.



You will get the response after sharing an input. You could also go to check all inputs for this program.

The stickers picked are placed on the map with the number indicating popularity.

And where the function is located after clicking to see the details.

Browse up the overlaid panel, you will get to see each post where the stickers were shown up.

# Fit-In Scenarios

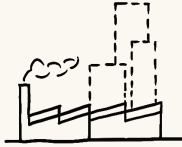
S

Quality Upgrade



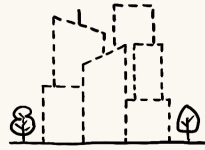
M

Redevelopment



L

New Development



Along the design process, I realized that the urban planning programs differ so much from one to the other. Some of the four tools might work for all kinds of programs, while others are only applicable for specific types. After exploring the interactive ways of participation, here is the conclusion for the adoption in context.

	1. Photo Comment	2. Moodboard	3. Hand-Drawing	4. Collage Library
S	★	✓	★	★
M	★	★	✗	✓
L	✓	★	✗	★

At the final round of the user testing, I asked each of my users to fill in this matrix after playing around the prototypes. I summarized their answers to conclude how suitable each tool is for the three types of scenarios. While the hand-drawing tool is limited to only small scales, others can work well under different situations.

# Small

S

## Quality Upgrade



Small scale programs aim to upgrade the environmental quality. They are usually in one part of the area that has been built many years ago and require fixing small problems, such as parks, streets, playgrounds, exercise places, sidewalks and gardens in the community.

(Photos on the right page) The examples show Olaf Ryes plass, St.Hanshaugen in Oslo. But it is general in use and could also work for other community programs all over the world.

I spent most time on scale S, because this has the most potential and would be the first to implement. A large number of cities have older areas, so there will be plenty of small renovation programs instead of large new district development. It is easier and more relevant as a development tool in the near future.



Olaf Ryes plass, Oslo



Streets in the neighborhood



Thorvald meyers gate, Oslo



Streets in the neighborhood

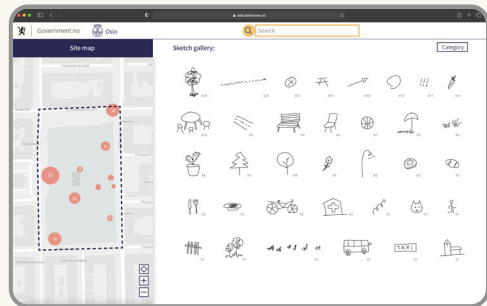


St. Hanshaugen, Oslo

	1. Photo Comment	2. Moodboard	3. Hand-Drawing	4. Collage Library
S	★	✓	★	★

Due to the familiarity with the built-environment and the specific questions asked by the city, it is so much easier for users to express their suggestion and even visualize it. All tools can be used in this scenario. The prototypes I have developed are based on scale S, because people can easily relate and imagine the new experience.

**S3** ★ (See page 98-99)



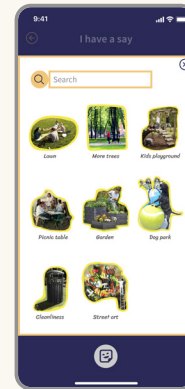
Even though it is often the case that hand-drawing is a little demanding and has higher barrier, it works surprisingly well for scale S. Usually you need to write one or two sentences to explain the modification, but in this way you can just highlight it within two seconds. It is very visual and understandable.

**S1** ★ (See page 94-95)



This is a variation of the conventional participation form but in a more trendy and intuitive communication way. By starting with "I want", the comment box guides them to write down their thoughts.

**S4** ★ (See page 100-101)



Activity and use is the key to bringing vibrance to the community. Things like sitting on the greenfield, exercising, planting in the garden etc. usually happen in the neighborhoods. Through picking from a selection of stickers showing different activities, they can convey their environmental needs.

**S2** ✓ (See page 96-97)

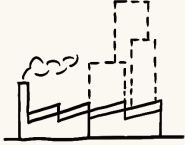


Moodboard generally works at small scale because people know it is a vision. The only concern is that the meaning of the reference images might be too broad and misunderstood unless the intention is also specified. Unless the program requires a big change, it is hard to achieve the vision in the images.

## Medium

### M

#### Redevelopment



Medium size programs are at the scale of districts and neighborhoods, intended to boost the whole area or change functions like turning industrial sites into residences.

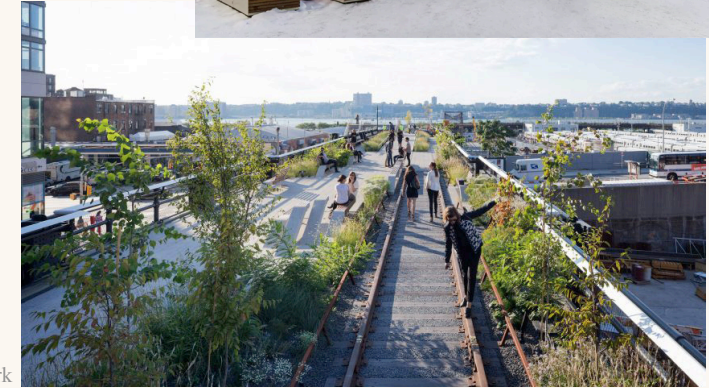
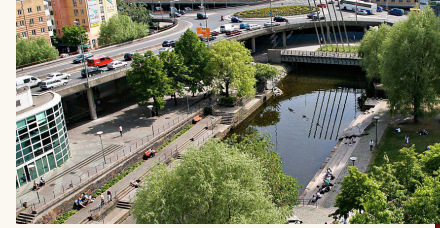
(Photos on the right page) For example, Tøyen and Grønland are running the neighborhood boost program to lift the environment and safety there. They are the perfect places to pilot these tools. Økern, Hasle and Løren are post-industrial sites, recently fully renovated into residential areas. Places like Filipstad and Vippetangen were industrial harbors, the city of Oslo is considering to redevelop them. High Line Park in New York is also an example. It was redesigned as a vibrant public park from industrial heritage.

What tools can be used for the transition period?

Tøyen, Oslo



Grønland, Oslo



High Line, New York

Økern, Oslo



Filipstad, Oslo



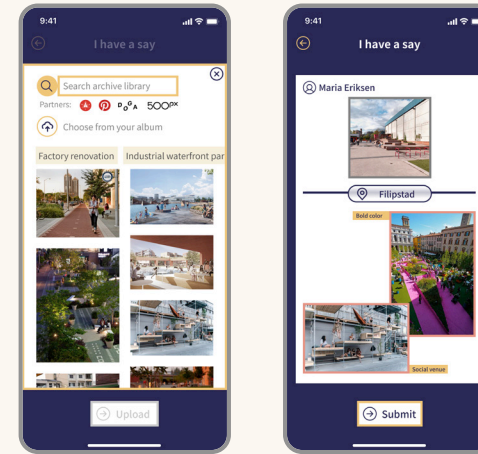
	1. Photo Comment	2. Moodboard	3. Hand-Drawing	4. Collage Library
<b>M</b>	★	★	✗	✔

**M1** ★



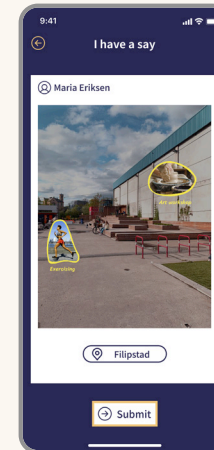
This tool is very straightforward and intuitive. Text description works the best for M programs. Neither too specific questions, nor too broad to phrase the sentence.

**M2** ★



Moodboard is perfect for broader context. It has enough space and flexibility to renovate the area. The image collection can be pre-defined each time according to the strategic plan.

**M4** ✔



The collage library fits the scale M as well. If there are more or different activities happening at bigger scales, we could always update the stickers.

**M3** ✗

At this scale, hand-drawing one does not completely fail but is hard to maintain consistency with every user. M is between S and L. It is half open with rough boundary, so most likely some users would prefer to point out, while others would draw the solution.



# Large

## L

### New Development



The large scale is when the city wants to develop a completely new area on empty plots. There is no significant existing residential, commercial, or industrial use. It is usually on the waterfront, close to the forest or rock, or at the border of the city. The L programs are brand new, open for different ideas.

This is where we are struggling to involve people today. Because of the large scale, it is usually too late for them to participate after the plan has been defined.

(Photos on the right page) For example, the undergoing Oslo Fjord City plan is asking people’s opinion, but in a conventional way. In addition, many Asian cities, such as Mainland China, Hong Kong and Seoul are rapidly developing without public participation, so there would be great potentials to adopt tools.



Fjord city, Oslo

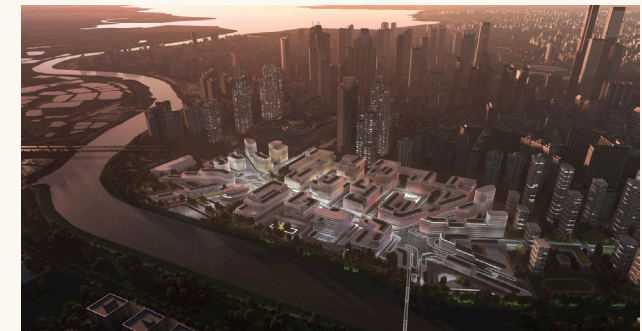
**FJORDBYEN OSLO**  
Oslo er i kraftig endring. Store områder langs Oslos sjofront skal frigjøres til byutvikling med vekt på bolig-, nærings- og kulturbygg, rekreasjon og åpne, offentlig tilgjengelige byrom. Det rettes et særlig fokus på miljøvennlige og bærekraftige løsninger. Noen områder er allerede utviklet mens andre er under bygging. Atter andre er under planlegging og vil ikke være i endring før om mange år.  
Aktiviser delområdene med musepekeren, klikk for å gå til nettside om utviklingen i delområdet.



Grønlikaia, Oslo



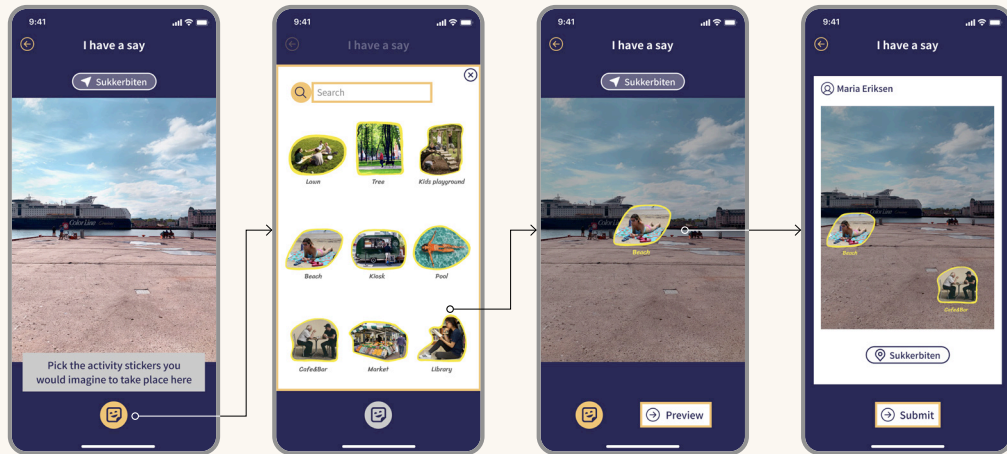
Sukkerbiten, Oslo



Huanggang Port Area, Shenzhen

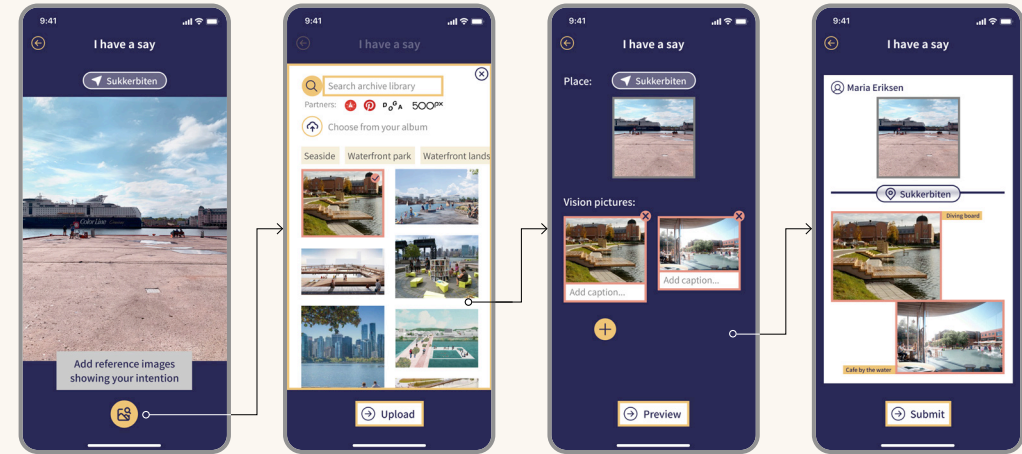
	1. Photo Comment	2. Moodboard	3. Hand-Drawing	4. Collage Library
L	✓	★	✗	★

#### L4 ★



Collage Library is an exciting tool to be used in L projects. Some activities I mentioned in scale S maybe happening everywhere, some are only taking place in particular places. For new developments, we could change the sticker collection in order to fit the programs. For example, reading books in the library, a new stall market, waterfront parks etc.

#### L2 ★



Reference images are also a good way to visualize your future vision about this new area. It conveys a kind of feeling, vibe and atmosphere of this place without thinking about the details. It could define the style of the new development.

#### L1 ✓

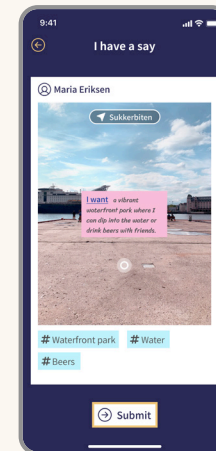


Photo Comment works for any types of program, because the core data is text which is completely flexible. People could express what functionality they want here at the timescale of a few years.

#### L3 ✗

Hand-drawing will not work for new empty plots, because the question is too broad to draw simple doodles. Some people might do not know what to draw, or some probably take a long time to draw the shape of the building, which is unnecessary at this stage.

# Overall Feedback

I THINK THE MOOD BOARD FUNCTION WOULD BE REALLY POWERFUL.

- CITIZEN A

I THOUGHT IT WAS ONE APP THAT HAS THESE FOUR DIFFERENT FUNCTIONS SO YOU CAN CHOOSE AT FIRST.

- CITIZEN C

I REALLY LIKE THE DRAWING ONE. REALLY COOL AND FUN FOR CREATIVITY, I WOULD LOVE TO DRAW MYSELF. I KNOW NOT FOR EVERYONE, BUT I THINK IT IS COOL TO HAVE THAT SIMPLE OPTIONS TO DRAW.

- CITIZEN B

I REALLY LIKE THE VERY INTUITIVE, VERY SIMPLE INTERFACES. YOU PLANNED TO USE ON THE SMART PHONE. THAT IS VERY COOL! IT FITS THE YOUTH, BECAUSE THEY DO NOT HAVE TOO MUCH PATIENCE. THE ALNA INVOLVER WE HAVE TESTED SHOWS THE OPPOSITE. IF IT IS NOT INTUITIVE ENOUGH, TOO HIGH BARRIERS, THEN YOU EXCLUDE YOUNG PEOPLE. IT IS IMPORTANT TO DESIGN FOR INCLUDING THEM AND ALSO WORKS FOR MANY OTHER AGE GROUPS.

- EXPERT A

THE IDEAS THAT YOU PRESENTED IS SO FLEXIBLE, SO VISUAL, VERY ATTRACTIVE TO THE PUBLIC. IT IS ACCESSIBLE FOR THE MUNICIPALITY AS WELL, I THINK THE CLOSE CONNECTION BETWEEN THE TWO IS VERY CRUCIAL. HEARINGS AND CONSULTATIONS OFTEN TAKE LONG TIME AND DEMANDING. SO THE SUCCESS OF THIS KIND OF DIGITAL TOOLS CAN BE VERY CRUCIAL IN TERMS OF FITTING IN THE USE OF THE TOOL IN MUNICIPALITY'S STRATEGY AND PROJECTS.

- EXPERT B

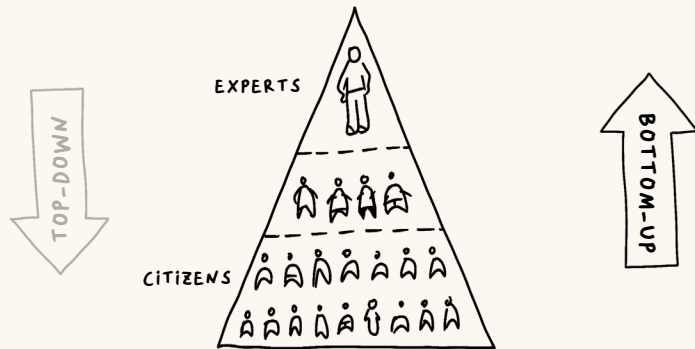
THE THING IS THAT YOU CAN DO IT ANYWHERE, YOU GO FOR A WALK, WALK A DOG, WITH A FRIEND. IT DOESN'T HAVE TO BE A MEETING, A DAY, A MONTH, WHATEVER. YOU CAN GET A WHOLE LOTS OF STRANGE MEANINGS OF POINT OF VIEW YOU WILL NEVER GET, BECAUSE THOSE PEOPLE WON'T ATTEND TO A MEETING, YOU DON'T GET HOLD OF THEM.

- EXPERT C

THE DESCRIPTIVE TEXT IS ALSO INTERESTING LIKE THE ANALYSIS TOOL THAT YOU KIND OF IMAGINE, AND I DON'T KNOW WHAT WOULD HAVE. I AM MISSING THE COLLAGE OR MOODBOARD TOOLS. I'VE BEEN TRYING TO RESEARCH A BIT, BUT THERE ARE NOT THAT MANY PLATFORMS FOR THAT.

- EXPERT D

# Value of This Proposal



## Crowdsourcing

Now, citizen participation projects are quite expensive, so they only run when required by laws. Furthermore, only a small number of people has been approached.

Via the digital communication tools, the city could obtain a large number of citizens' inputs, the city to make decisions according to the public. It shifts the old way of top-down governance to bottom-up. It is cheaper while still democratic. Everyone's voice will be heard.

## Digitalization

Digitalization gives us advantages, let the information be transparent and lower the participation threshold. We have already stepped out by converting proposals, text and mails into a digital form that can be stored by a computer in public sectors, but the only way to work with that is to read all the text, all the reports. There are still opportunities in updating how to process the aggregated information.

The tools in my proposal makes it possible to turn visual data into something that can be processed, analyzed or even sorted. What is more, it can be a reference for future urban developments. It can become a dataset, user feedback book, or history book, which is searchable. You could check the tendencies every year, follow people's needs over time, and learn from similar projects without having to run a new process.

## User Experience

When speaking of public involvement, service design project is my first thought. Without a doubt, new services are important, but user experience within the service journey is crucial too, and is less developed in the market.

I started this project with a "user-centered" mind. The screen interactions for the user end are my priority. How to make the user experience better? What kind of different tools should be designed to guide the citizen in the planning involvement? How to design tools that help citizens express and visualise their thoughts? I have addressed these questions in my proposal.

## Collectivism

The tools are aimed to bridge the people and the city, ultimately empathize with each other and regard the place as a whole. I hope people who give comments may consider others than oneself.

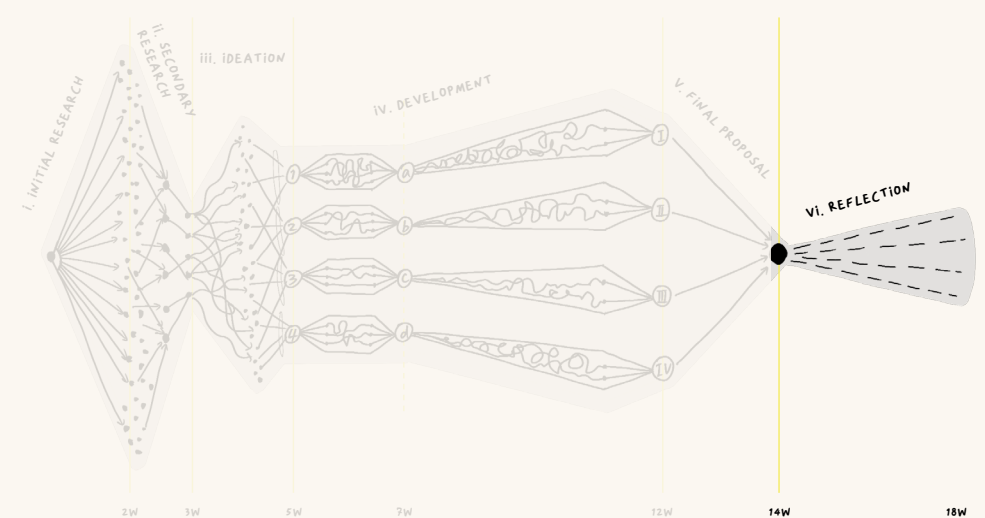


# VI.

# Reflection

Road Forward  
Potential for Other Aspects  
Learning  
Covid-19 Battle

The last chapter is the conclusion of the diploma project. It reflects on what can be done further continuing my project, as well as other aspects improving the participatory city. In addition, I discuss I have learnt along the process.



YOU are the ‘they’ in:  
“THEY should do something about that.”

— Nick Williamson, 2015

## Road Forward

### Testing in Real Context

The fit-in scenario matrix is a kind of conclusion. However, I did not have time to test tools in the real context. My plan is to start small, to test on scale S first, which is most likely and feasibly implemented, then scale up to M and L afterwards.

### Universal Design

The proposal was piloted with the young generation, but of course the participation needs to cover all age groups. So far the design is for young adults. It is bright and vibrant. Next, I will expand this to include other age groups following universal design guidelines.

### Tone of Voice

My intention is to test out the possibility, not a finished product. I will say they are Mid-Fi prototypes. For the next round developing Hi-Fi prototypes, I should consider the visual language and tone of voice. They should be inclusive for average people, designers and bureaucratic politicians.

### All on One?

According to a few user testings, many asked why this is not one platform which has four feature options. Certainly there is the potential to combine all of them. The challenges are that it increases the complexity of the data and furthermore, how it could impact the design of a visually clear data processing interface.

### Level of Understanding

The premise is the municipality restricts when and where comment and feedback are accepted, so the users might need to understand different amounts of background context. It is important for them to understand what type of feedback to give, complaints, needs or a solution? The interaction on the feedback interface should give them enough information to guide them through the process.

# Potential for Other Aspects

## User Engagement

Since my proposal only focuses on the interaction experience, other aspects in the “HMW” questions (Page40) were less designed. In the interviews, also the user survey, many talked about the key step in the participation is the trigger! How to reach out to people? How to invite them? There are many ways starting communications, such as scanning QR code, sending emails or messages, handing out flyers, and meeting in person. Which way can attract the most people to land on the digital communication tools? What format would the tools be? Is it an app or a website? Does it require an ID to log in? These factors all affect the participation in a long term. In short, there are many other considerations in the adoption of a participatory tool.

## Leftover Sketches

Even though I only showcased four possibilities in this project, it does not mean the other ideas are useless. The other sketches in my idea thumbnail board (Page59) are valuable in other situation as well. The city might need the diversity of all tools at different phases and I think a lot of those concepts could be also developed into applicable situations, with possibilities that the city has more tools to choose from in the future.

## Self Initiative

So far, the tools are made after strategic plans, meaning the city has some clues already. The municipality has the control over which places take comments and then look for answers to do about the specific sites.

Completely self initiated schemes will be the next level of citizen participation. A scenario where people proactively initiate an idea. At this point, what tools should be implemented under this condition?

# Learning

## Interaction Design

Some usually say that system oriented design, service design and interaction design are the same thing, but just at different scales. I agree. If a tiny button on the interface is leading users to achieve something, that might be a new feature, a new service as well. And this service could then influence the whole system, like the butterfly effect. What I have done is just one step in the urban planning process. Hopefully, it will change the way the city develops.

## Project Management

The earlier you frame your project, the more detailed you can plan. The special thing for diploma projects from normal design projects is there is no limitation. You can do anything but actually you can not do everything, so we have to set the rules by ourselves. To define it as a problem-solving task, possibility-driven or research oriented, design for the future or now, is helpful. Plan the whole project ahead, also remember to give yourself more flexible time, because you always need more time than you expected, and stick to your own plan.

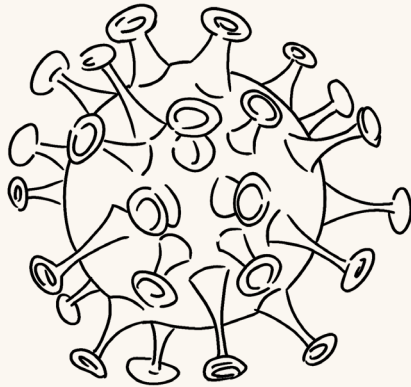
## Methods and Approaches

At the very beginning, I decided to use all the skills I have learnt at AHO in my diploma as a closure of the Master program. We have had a Sprint workshop, possibility-driven week, concept evaluation, user testing and so many more. I utilized all of them as main methods at different design stages. They helped me to create a rich and rational work.

Furthermore, I kept a diary and updated the Miro board every working day to record the process, notes and pop-up thoughts. It is a good way for reminding myself how I changed my mind, what I was thinking at that moment and why I made this decision.

# Covid-19 Battle

I want to begin this section with the biggest impression - working individually under corona situation is really depressing! However, this has already become a new normal all over the world, we have to adjust ourself to get used to it.



## Home Office

I found myself preferring working at home than going to school. The key is trying to separate study room from bedroom. I know it is hard for us college students living in the tiny dorm to separate different “rooms”. Specific fixed space would give my brain a signal to switch mode.

## Social Contacts

During work, conducting interviews is one way of communicating, but obviously not enough. We also had weekly stand-up, peer reviews among diploma candidates ourselves. Discussing about the projects, meanwhile having some remote social contacts.

Apart from academic communication, I sometimes walk, jog and cook with friend under municipal’s restriction. Calling with families and friends is an efficient way to release pressure and depression.

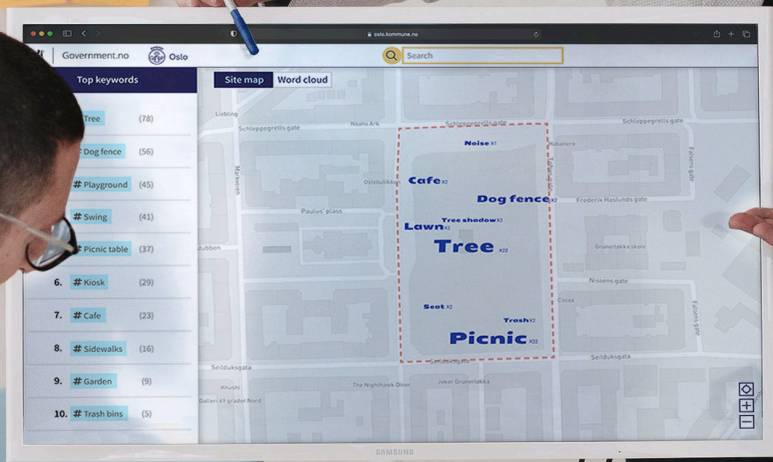
## Break Time

Spending the whole semester on doing one big project is tiring and boring sometimes. Our brain needs to relax and restart. Go out to get some fresh air, watch movies or read a book on weekends, cook a meal to treat yourself, or talk to someone... Find your own tempo to work. If you do not feel alright in weekdays, do not push yourself so hard.

## Remote Meetings

We used to run workshops and user testings face-to-face. This is my first time to do it online by myself. I was not experienced at all, but got better and better over time. My suggestion is regarding the first interview, workshop or user testing as a trial. After the first trial, you iterate on that. Other considerations, how much time it requires? Did the platform (Miro/Figma) work well for it? Is it better to share the screen or share the co-editing link? Can some sections be done in another way?





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# Appendix

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B. Image Credits

C. User Questionnaire

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## C. User Questionnaire

1. What year were you born in? \*

- 2011-2021
- 1995-2010
- 1961-1994
- Before 1960

2. Do you live in Norway \*

- Yes
- No

3. Do you know about the urban planning process or relevant knowledge? \*

- Not at all
- A little
- Yes, a lot

4. Have you ever been informed by the city/city district/community that what the future city development will be like? \*

- Yes
- No

5. (If Yes) In what way? Ex. Website, message, physical information board, face-to-face talk, etc. And how did you feel?

6. Have you ever given the city/city district/community suggestions, feedbacks or complaints? \*

- Yes
- No

7. (If Yes) In what way? Ex. Hearing, council meeting, website, email, face-to-face talk, etc. And how did you feel?

8. (If No) Why you didn't speak out your voice?

9. Do you know any website or application where you can share your thoughts about the urban public space? If yes, please write them down, and what do you think of those tools? \*

\* Required questions



