TURN YOUR HEAD

CONNECTING URBAN AND RURAL

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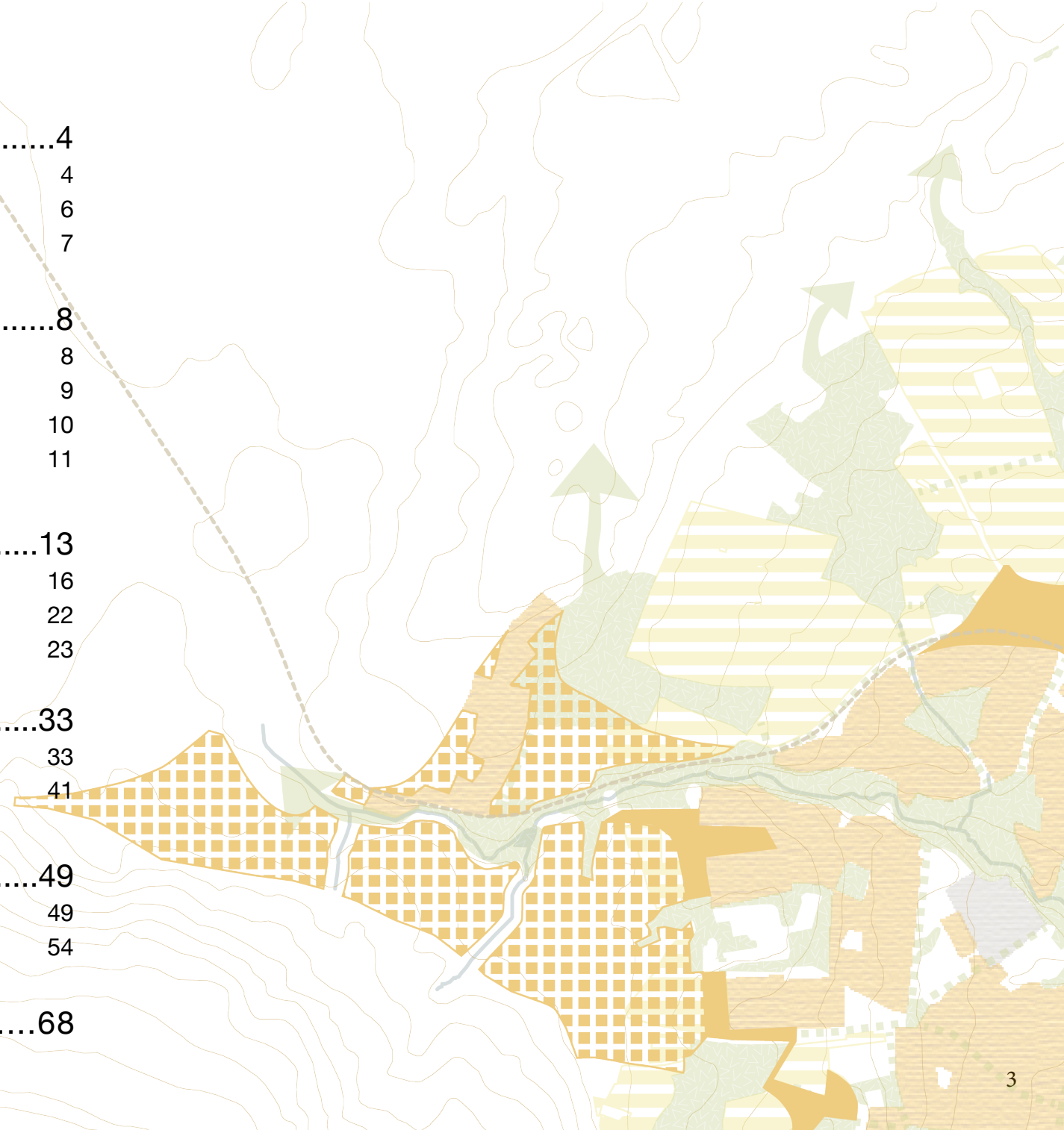


Introduction

Who are we?

We are a group of 4 people from 2 disciplines and 3 countries. Marcus is a spatial planner and Moa is an architect , both of them are from Sweden. Fabio is an urban planner with architecture background from Italy. Yu Chen is an architect from Taiwan.

All the group members grown up in urban setting and are interested to understand development from a different perspective. We are a team of enthusiasts who love exploring and looking into different view points.

Picture taken in the bird watching tower at Mullsjön. Left to right: Fabio Latino, Marcus Olofsson, Wu Yu Chen, Moa Rydell.

Introduction

Hjo is more diverse than what meets the eye. Its rural qualities are numerous yet undervalued. Today, Hjo revolves around Vättern and this project aims to turn heads towards the rural. By shifting the focus, we are beginning on a journey from Hjo town towards the rural areas of the municipality. Hidden potentials are uncovered by enhancing existing natural, historical and educational values.

Natural values are strengthened by identifying unarticulated transitional spaces between rural and urban, suggesting alternatives for a more symbiotic relationship between humans and nature. Outside Hjo town the projects continues with targeted interventions that aim to provide engagement with the rural landscape. To further strengthen the connection between the rural and urban and provide more learning opportunities, a digital layer of intervention is designed.

Picture taken along the old railway at Blickstorp

Introduction

Aim

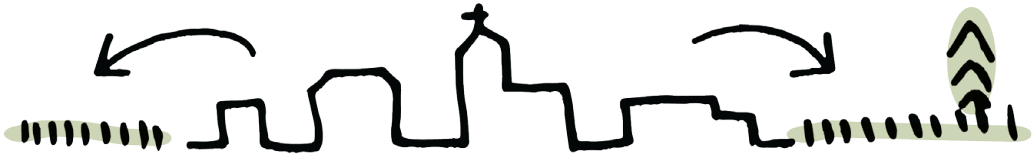
Reveal the importance of rural assets
Strengthen the physical and mental connections between urban and rural

Design Strategies

1. Enhancing existing rural, natural and historical values
2. Promoting walking and cycling
3. Using non-traditional tools to reach a wider audience

TODAY

PROPOSAL



Defining Urban-Rural Transition

Strengthening Rural Elements

Adding A Digital Layer

FUTURE

Introduction

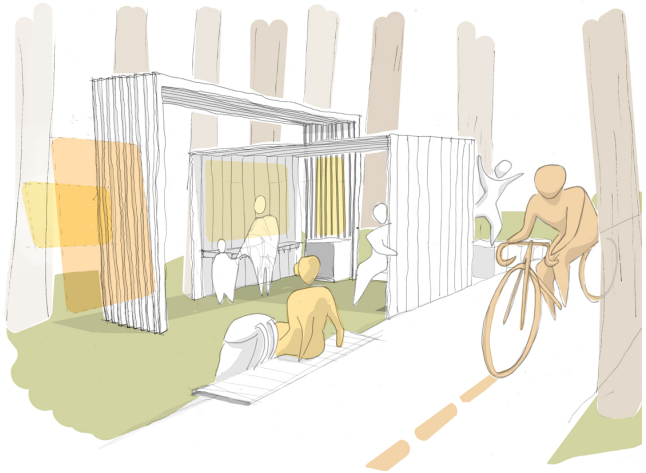
Overall Proposal

Defining Urban-Rural Transition

Natural values are strengthened by identifying unarticulated transitional spaces between rural and urban, suggesting alternatives for a more symbiotic relationship between humans and nature. These interventions enhance the presence of green infrastructure in Hjo, providing "entrances to the rural" rather than impeding exits from the urban.

Strengthening rural elements

Out in the countryside the projects continues with targeted small scale architectural interventions that aim to provide engagement with the rural landscape. Introducing places for resting and playing as natural part of the journey the landscape becomes interactive and no longer a background.



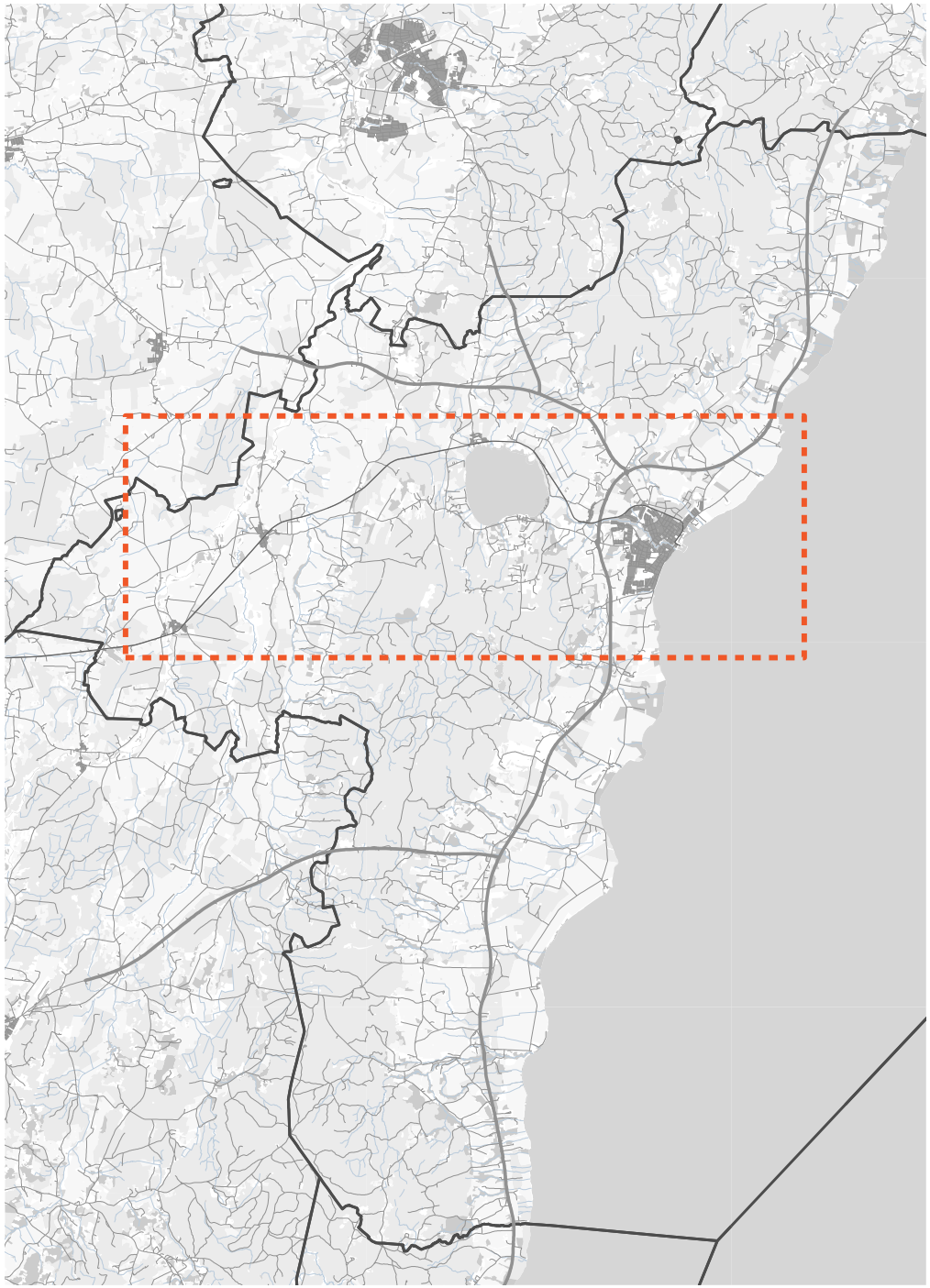
Adding A Digital Layer

Rural areas in Hjo deserve to be reevaluated and rediscovered. The digital layer aims to change the perception of these overlooked areas stressing their relevance through digital content and augmented reality.

Background

Geographic Delimitation

The geographical boundary of the project is along the old railway, situating at the middle of Hjo municipality. The project works with the transition between the Hjo town towards Mullsjön, Korsberga and Blikstorp.



Background

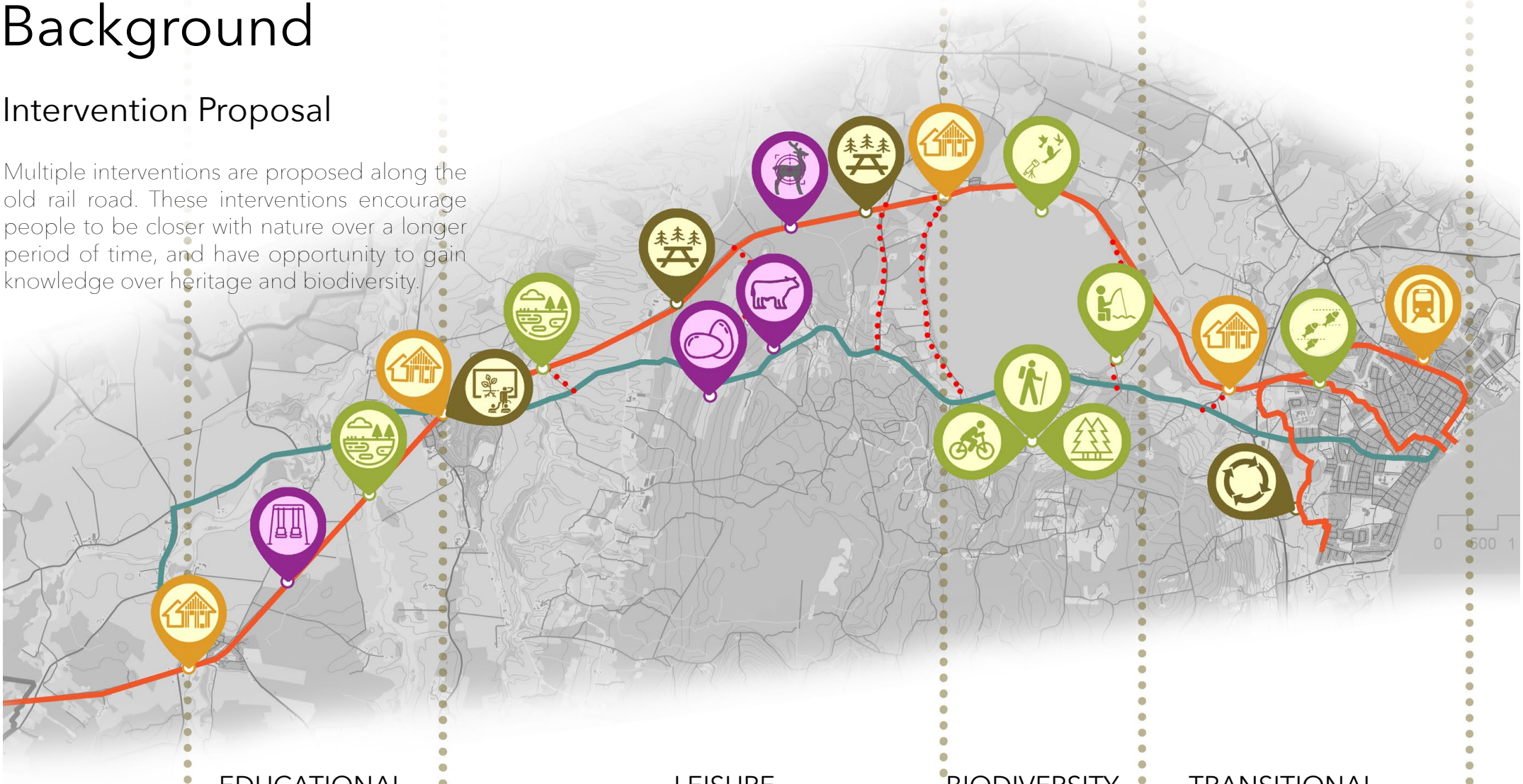
Existing Points of Interest

The map indicates the current interest points which people recognize and will visit. However, there are still many natural and rural elements which are undervalued and underused. While there are plenty points of interest along the main road, many interesting assets along the old railway are undermined and unnoticed by the people.

Background

Intervention Proposal

Multiple interventions are proposed along the old rail road. These interventions encourage people to be closer with nature over a longer period of time, and have opportunity to gain knowledge over heritage and biodiversity.



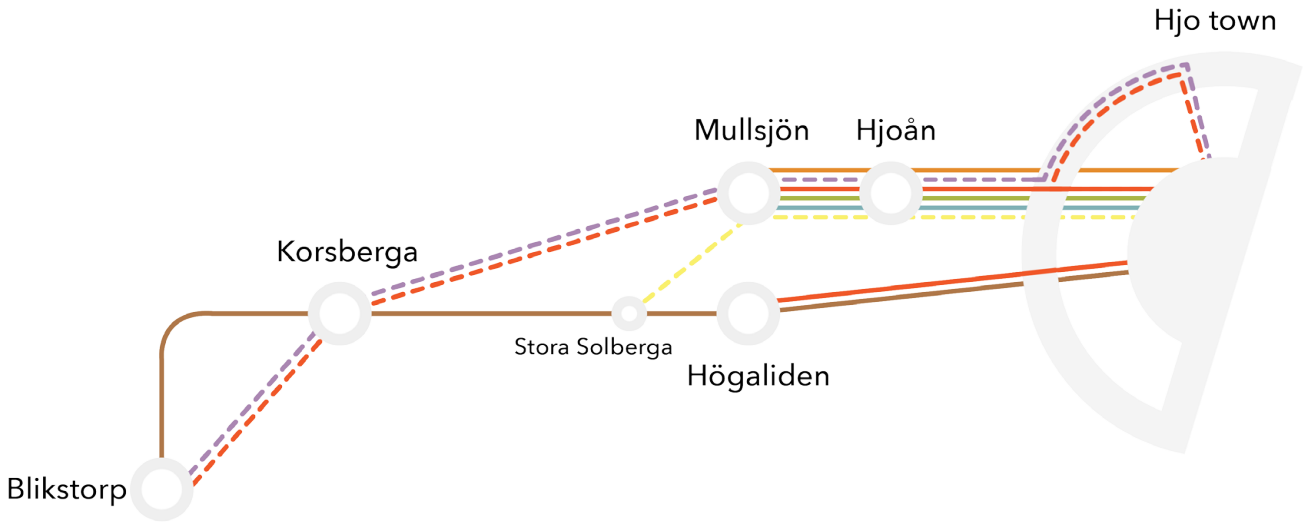
	EDUCATIONAL	LEISURE	BIODIVERSITY	TRANSITIONAL
USAGE LEVEL	HIGH	LOW	MEDIUM	HIGH
STAKEHOLDERS/ TARGET GROUPS	STUDENTS PARENTS CYCLISTS	CYCLISTS TOURISTS FAMILY	LEISURE PURPOSES TOURISTS CYCLISTS	LOCALS CYCLISTS TOURISTS

Background

Diagrammatic Connection

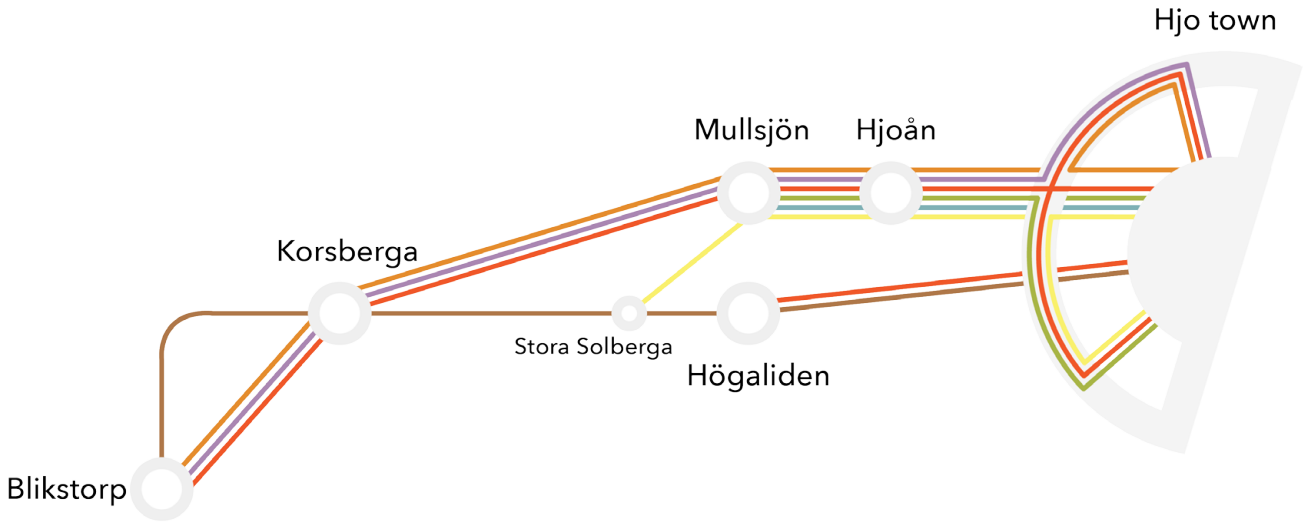
TODAY'S CONNECTION

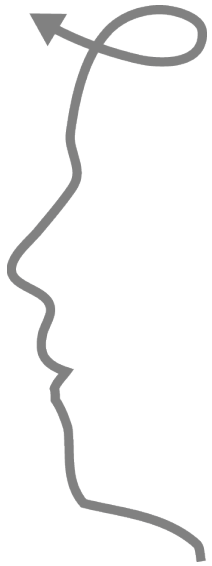
The original landscape of Hjo municipality have some physical connections between rural and urban areas. These areas have an interdependent relationship where the rural area works as a provider of habitats, leisure, tranquillity, food and water. However, a large section of the area is underused and the existing weak linkage served as an opportunity to be enhanced and developed.



PROPOSE ENHANCEMENT

The proposal uses the existing old railway as a means to enhance the rural-urban connection. Through the use of the connector, it increases the inter-relationship between the different landscape and points of interest.





TURN YOUR HEAD

DEFINING URBAN-RURAL TRANSITION

Defining urban rural transition

Aim

We argue for urban development with a rural purpose. The project highlights the transition space between rural and urban as a step in shifting the power relationship between rural and urban.

The area where rural meets urban is often overlooked and unarticulated, where buildings sometimes have backsides turned to nature and countryside.

This proposal turns backsides and "no man's land" to active fronts. By setting outer limits to urban expansion with clearly defined spaces we are framing nature to make it visible and valued. We want to make the actual transition space accessible through walking paths along and across the border. By connecting green areas biodiversity is strengthened and rural nature becomes reachable and perceivable from within the town.

Delimitation

We will begin by showing the analysis for a long term development of Hjo. We will then zoom in on a limited geographical area to show how our method can be applied to a design proposal. We are limiting the area to be able to get into enough detail for the project.

Natural border.

Looking over grassland and leaf forest.

Hjo from a rural perspective. Picture taken by Natalia Kita.

Defining urban rural transition

Methods

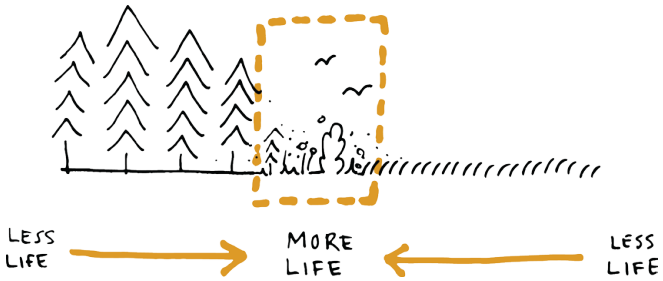
For this part of the project we have looked at two different methods. The first one we will present is "Kajer mot det gröna" and the second one is the "Environmental compensation."

We were also inspired by a lecture given by Richard Sennet (Cambridge Law Faculty, 2015) about the difference between border and boundary. He describes an ecological border as a membrane which combines porosity and resistance in equilibrium where there is more life and activity on the edge than in the centre. A boundary, on the other hand, is a place of lessened activity on the edge, for example a tiger's territorial boundary. This has made us further explore different metaphors to use for the transition space between rural and urban.

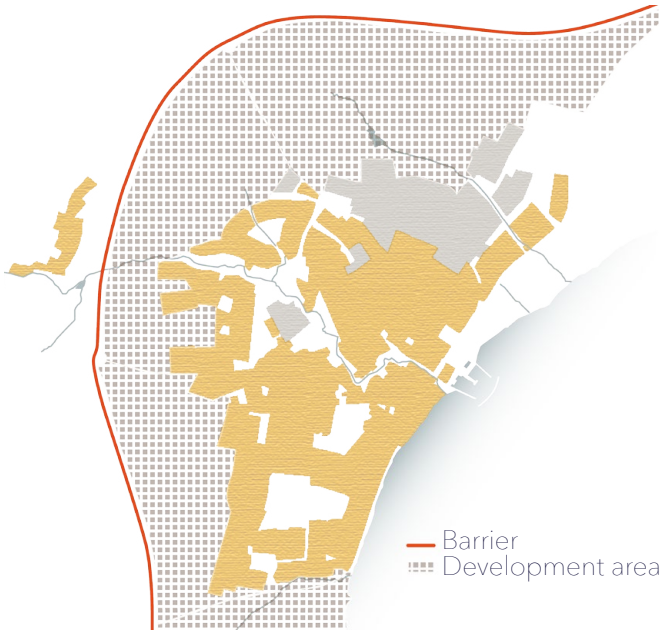
The book "Kajer mot det gröna - Handbok i stadsplanering" (Einarsson, 2015) is a planning handbook aimed at municipal planners of politicians. It offers methods for planning in the interface between city and country when we need to build more and at the same time take care of the green qualities. The book argues that by setting outer boundaries to the greenery, the expansion pressure can turn inwards and "repair" isolated and zoned neighborhoods. By creating these "borders to the greenery" you turn backsides to active fronts and make the nature more accessible.

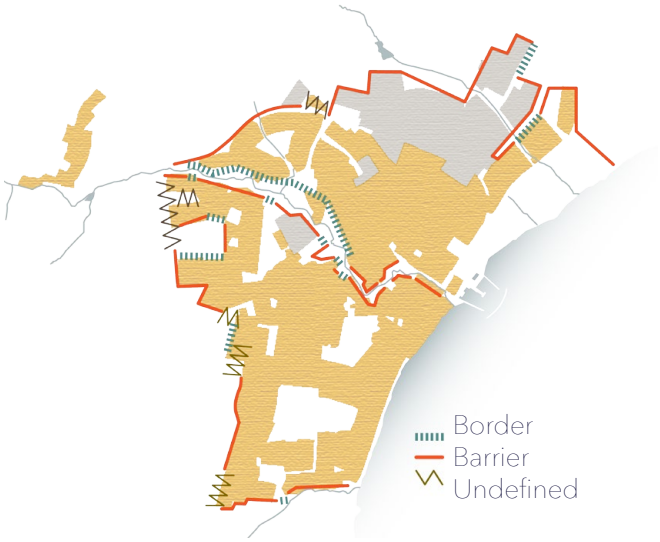
The book presents 14 steps towards a sustainable planning process. Since it uses Järfälla Municipality (a part of Greater Stockholm) as an example we have adapted these steps to the scale and context of Hjo.

The second method, environmental compensation, is described in "Balanserings-principen - tillämpad fysisk samhällsplanering" (Helsingborg, Lund & Malmö, 2002). It describes four steps to follow to integrate environmental concern into the planning process. A part of the method is to calculate the biotop values of the land taken into account when developing to see how much compensation is needed. Since the productivity of the land is seldom taken into account we have modified the four steps to add this perspective.



Analysis





MUNICIPAL COMPREHENSIVE PLAN

According to the Comprehensive Plan for Hjo Municipality 2010 new development in hjo town should stay within road 195 (Hjo kommun, 2010). Limiting the development of Hjo town until road 195 creates big barriers for mobility between rural and urban that are difficult to overcome.

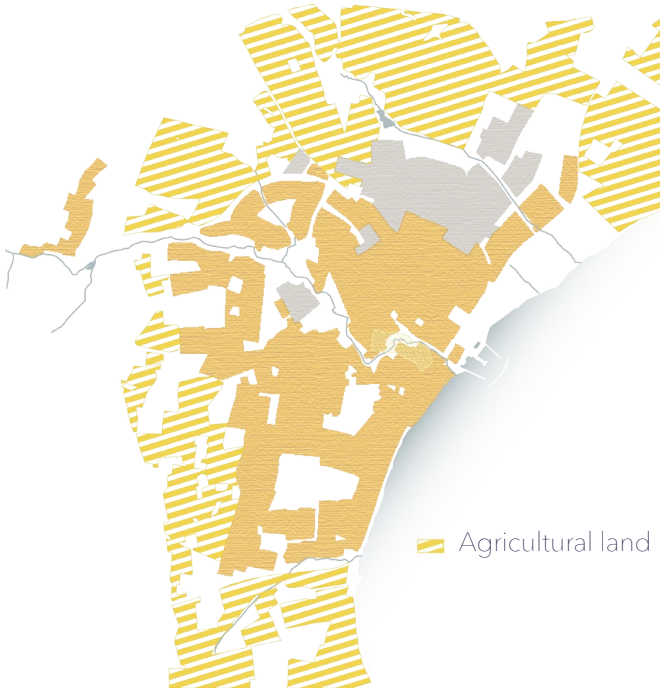
RURAL URBAN TRANSITION

In Hjo Town there are a lot of barriers, for example where housing areas meet agriculture land. Because there are only a few places where you can actually enter the countryside it is hard to reach the surrounding green areas.

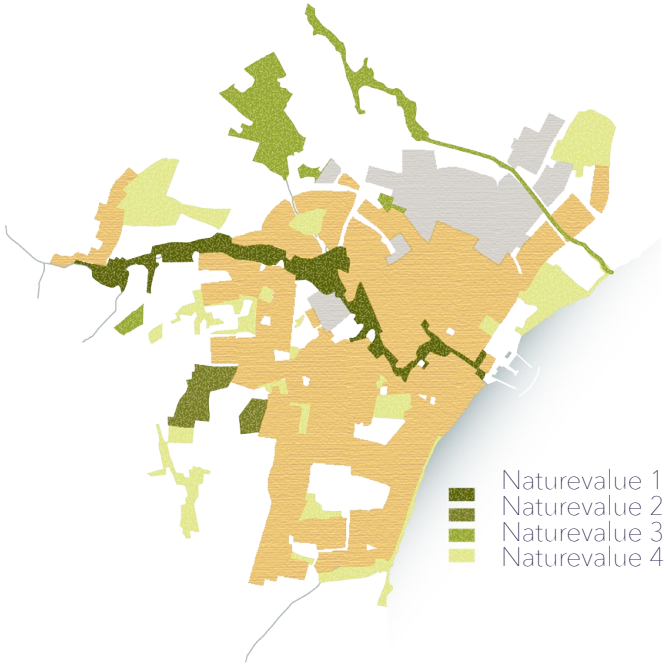
Analysis

AGRICULTURE

Between Hjo Town and road 195 there is a lot of agricultural land which is needed for Hjo to be self sufficient in food production in the future. It is possible for an adult to survive on 800 m2 productive land by becoming vegan and concentrating food production on seven different crops (Andersson, Andermo & Guamán, 2008). This means that if all the agricultural land between road 195 and Hjo town is used according to this it is possible to feed all the citizens in Hjo town. This is one big reason why it is important to take the land's productivity into account when creating new development.



Analysis



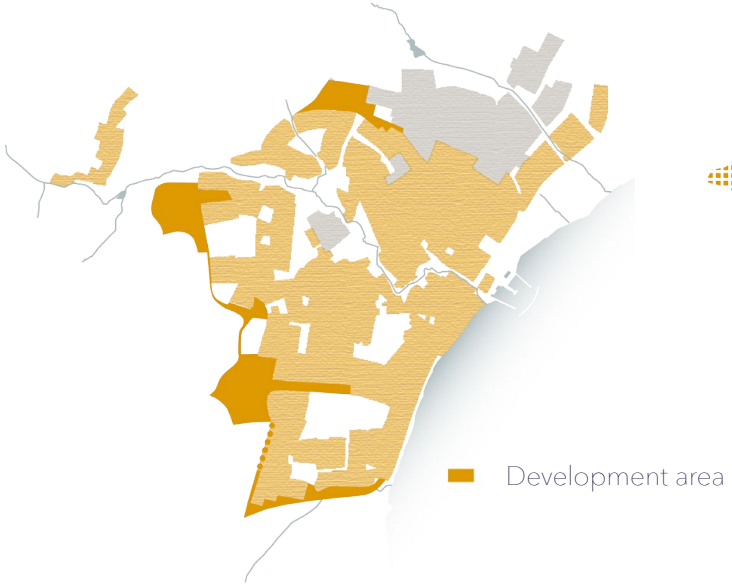
GREEN AREAS

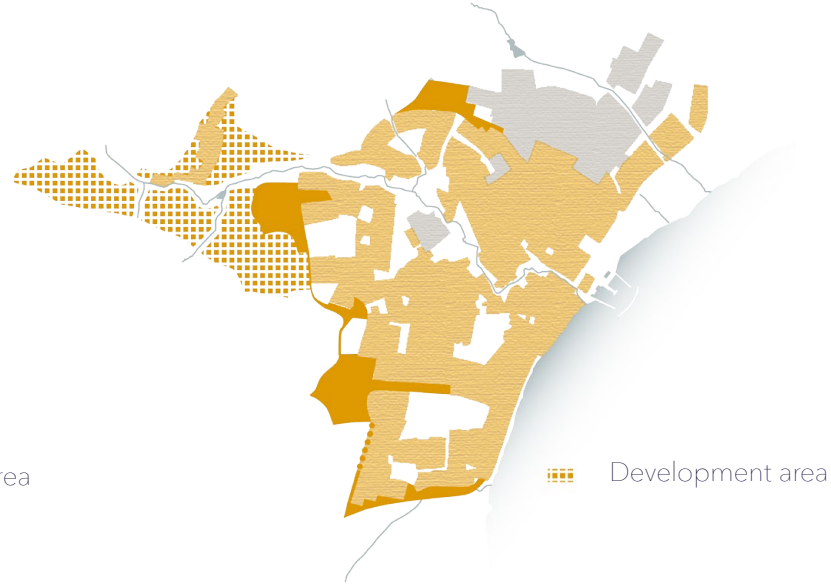
Surrounding Hjo town nature varies in types and natural values which is needed to be strengthen and protected. Some areas are pointed out as having high nature values (Hjo kommun, 2015).

GREEN CONNECTIONS

One main reason for people wanting to move to Hjo i closeness to nature and recreation, which today is lacking good connections. By strengthening existing as well as creating new green connections nature areas become more biodiverse and resilient. This will also make these areas more accessible and appreciated by people.

Analysis





PHASE 1

The first phase is concentrating on creating places which define borders and strengthen green connections where it is the most needed. In this stage some new development areas are suggested for walkability with public spaces in the periphery.

PHASE 2

Phase 2 shows the proposal for a long term development of Hjo town which is directed towards Korsberga and Blikstorp. By doing this the possibilities for public transport to these villages could increase together with walking and biking along the old railway.

Analysis

Criteria for development

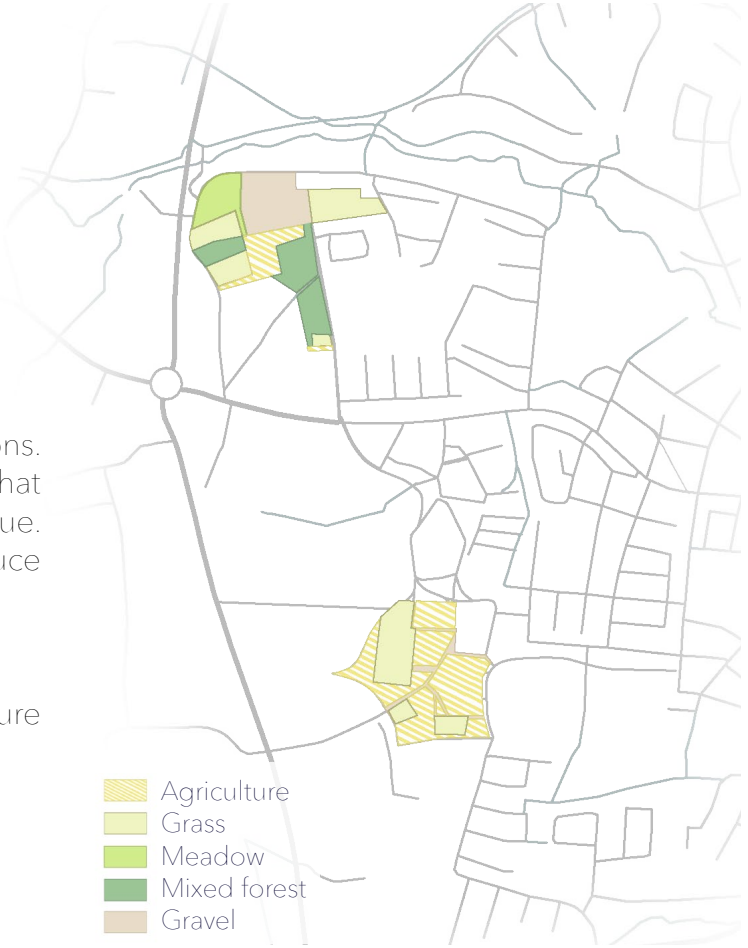
For locating new development, four criteria have been formulated based on the four steps of environmental compensation. Environmental compensation is a way of integrating environmental concern into the planning process (Helsingborg, Lund & Malmö, 2002). To this method we add the productivity aspect of the land which generally is not taken into account.

AVOID
Avoid building on agricultural land and areas with high natural value.

MINIMIZE
Take as little valuable land in possession as possible. Minimize the impact on the agricultural land so that the land saved is possible to use in the future. Keep rather big cohesive land for agriculture over small and detached.

EQUALIZE
Strengthen and create green connections. Replace agricultural land with greenery that can contribute with new productive value. Use compensation calculation to introduce greenery with higher biotope value

REPLACE
Replace the negative impact on valuable nature and land if other measures are insufficient



Analysis

Environmental compensation

When the area is selected for new development calculations are made for the different landusage which is taken into possesion. This creates a biotope value which need to be compensated.

After the first calculations was made for the area it was clear that additional compensation was needed. By adding an allotment garden and a Fruit tree garden we were able to reach the goal for compensation of biotope values and also contribute with food productivity.

Total area for new development
180 000 m2
Biotope value to compensate
63 500
The proposals biotope value
64 000 Goal reached!

PROPOSAL

Total area of building blocks
135 560 m2

Buildings	30%
Gravel	20%
Grass	25%
Community garden	25%

Total area of public space
44 440 m2

Park	25%
Grass	25%
Forest	5%
Surface with joints	30%
Completely sealed surface	15%

Adding Productivity
Allotment garden
Fruit Tree garden

Additional compensations
New possibilities for local food production
Connecting green areas
Increasing recreational areas
Increasing possibilities for walking and biking
Increasing the accessibility to nature and countryside
Closeness to community garden
Increased permeability for greenery and wildlife

Higher vegetation

Deciduous	0.9
Mixed Forest	0.7
Coniferous	0.7

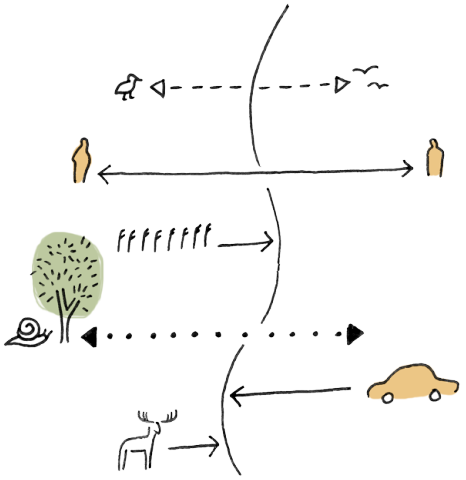
Lower vegetation

Meadow	0.7
Allotment garden	0.7
Agriculture	0.3
Grass	0.3

Ground

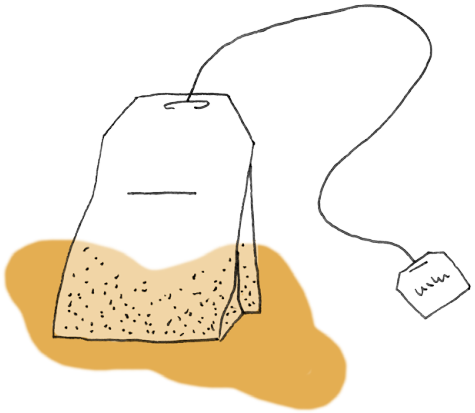
Gravel	0.2
Surface with joints	0.1
completely sealed surfaces	0.01

Concept



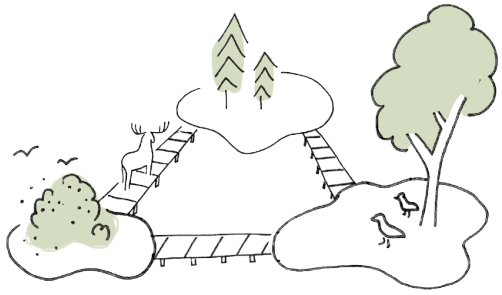
Borders

The rural urban transition should consist of borders instead of barriers. A barrier impedes movement while a border has a defined use of space but is permeable. A border can however have very different meanings depending on if you are looking at it from a human, animal, natural, rural or urban perspective. It can be open for movement in one direction but not another.



Tea bag

A desirable relationship between rural and urban can be compared with a tea bag in water. The bag is a border that contains the leafs (urban development) but the water (nature, countryside) can pass in and out of it. The tea bag and the tea leafs are useless without the water and it is in the actual meeting between leafs and water that the taste (life, activity) comes out.



Green islands

By physically connecting different green islands the biodiversity is strengthened and nature becomes more accessible for humans. By doing so the project is overcoming barriers and establishing green corridors where there are none today.

Proposal

Design strategies

We want the transition space to be a first step on the journey towards the rural. The transition space needs to be a place to visit and dwell as well as a place to inspire people to go further into the countryside. To achieve this, we have set up four strategies for the design of the new development.

1. The border as well as the building blocks are permeable for green and recreational corridors

2. New development areas are well connected to each other and the existing street network

3. Buildings are aligned with the street

4. The built environment form sightlines towards the rural and create entrances to the nature and along the border

Proposal

Thematic diagrams

INNER AND OUTER BORDERS

NEW STREETS AND PATHS

GREEN CONNECTIONS

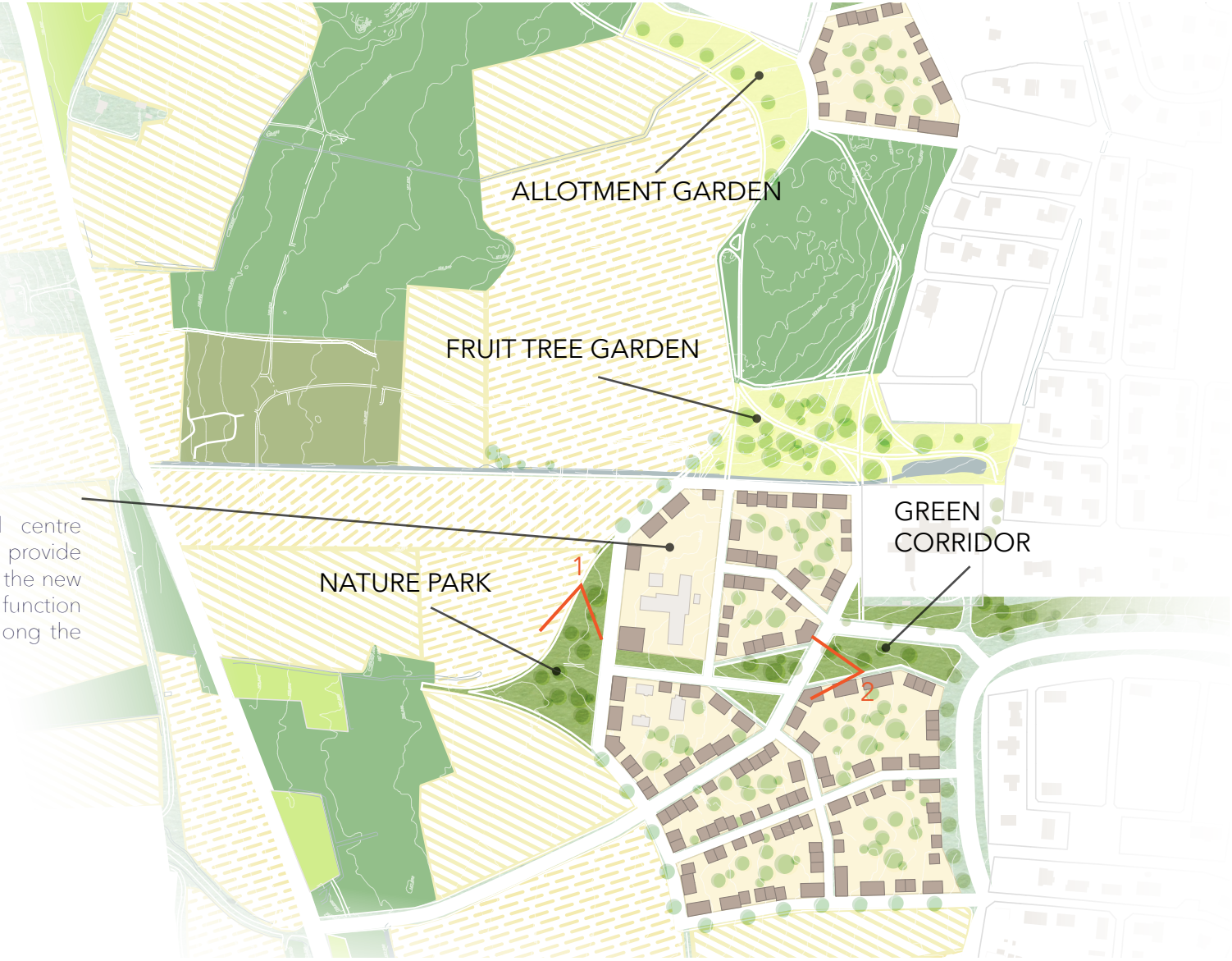
SIGHTLINES

Proposal

Northern development area

Proposal

Southern development area



MATERIAL CENTRE

Within the plan a material centre will be located which could provide recycled building materials for the new development. This will also function as a public gathering place along the border of the town.

Scale 1:5000

0 25 50 100 200

Proposal

Nature park

Proposal

Green corridor

Proposal

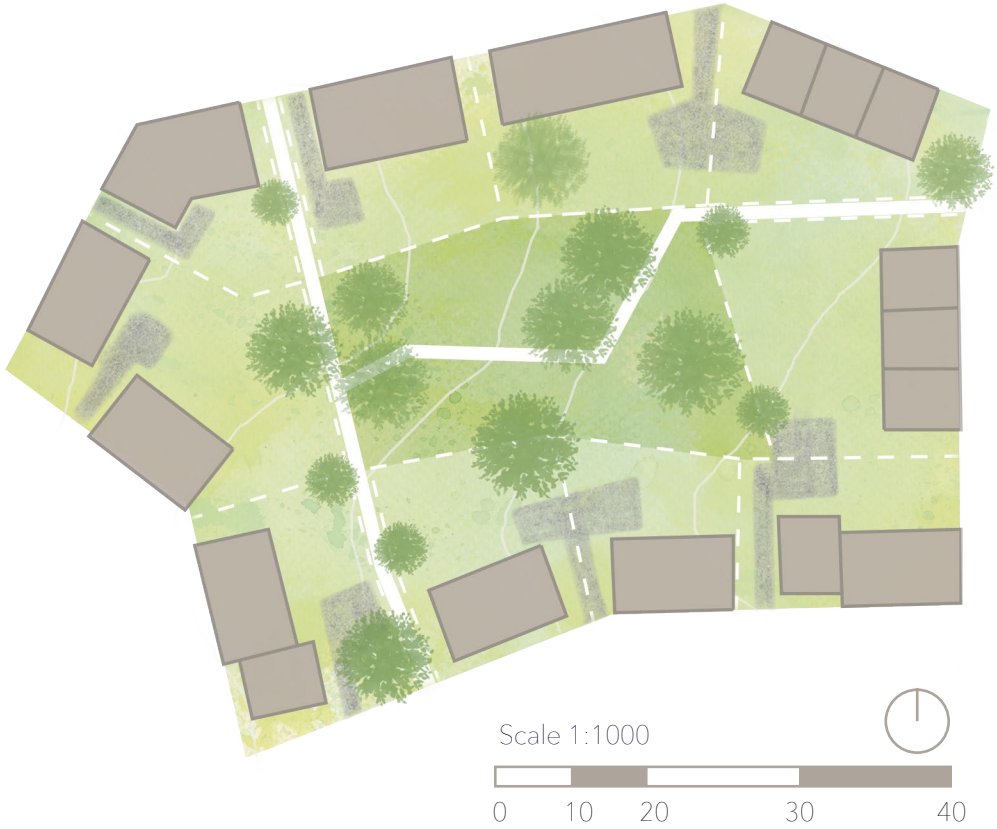
Forest corridor

Proposal

Building block

When zooming in on a typical building block the different scales of permeability become clear. With walkways and greenery each building block serves as habitat for humans as well as nature. In the centre of each building block a community garden is positioned which is commonly owned by its habitants, creating a center for small scale community. Each garden consists of a wide range of vegetation that enhances the biodiversity and provides a pleasant microclimate.

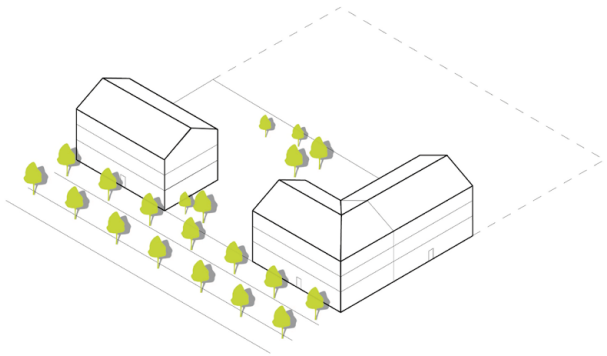
Buildings and entrances are located along the street in similarity to the wooden town in Hjo. By doing so the streetscape becomes more defined and there's space for community gardens.



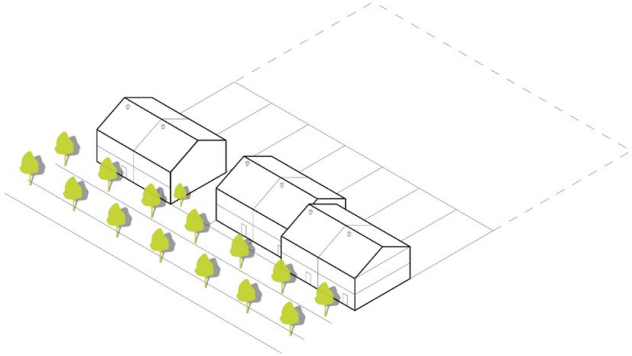
Proposal

Housing typologies

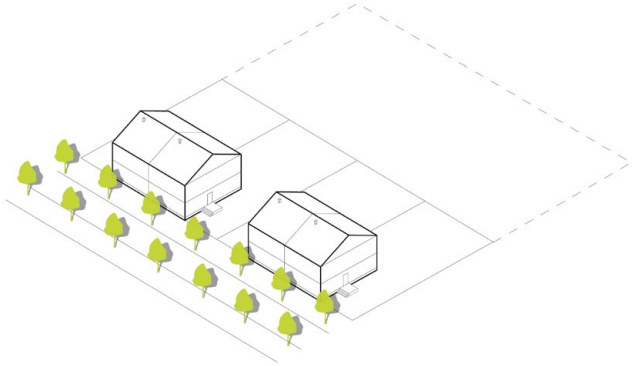
The proposed building types accommodate to the varied housing demand in Hjo with a wide range of housing which consist of apartment buildings, terraced houses, semi-detached houses and villas. Considering the town scale we propose that the building heights vary within 1 to 3 storeys.



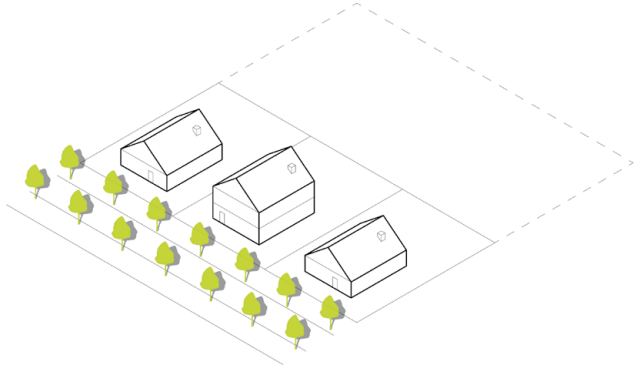
Apartment building 2-3 stories



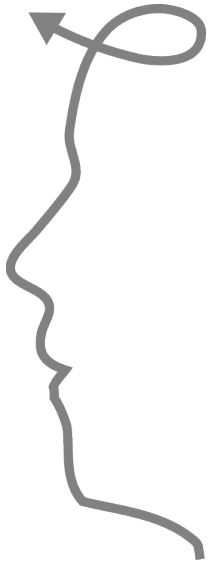
Terraced house 1-2 stories



Semi-detached house 1-2 stories



Villa1-2 stories



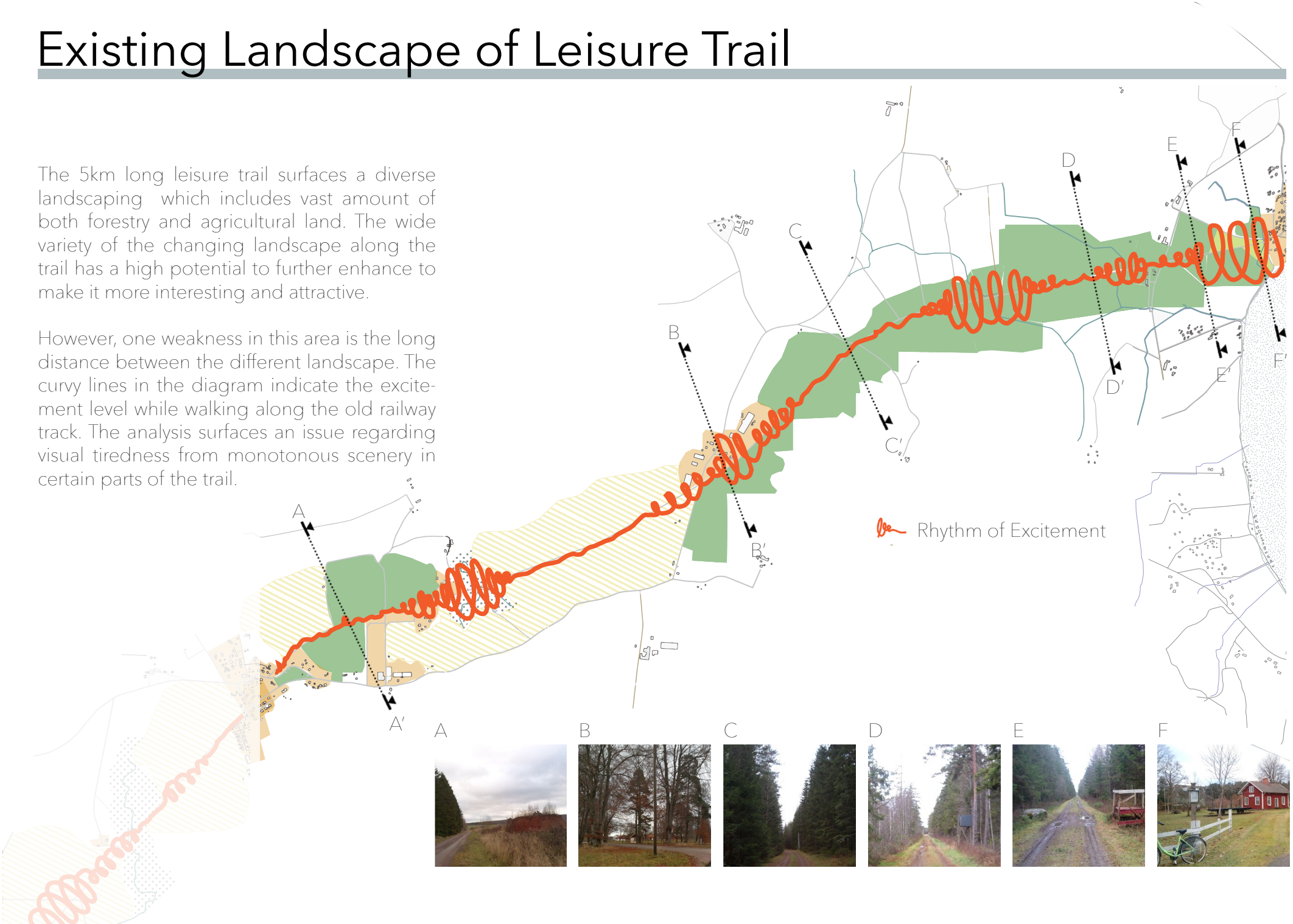
TURN YOUR HEAD

STRENGTHENING RURAL ELEMENTS

Existing Landscape of Leisure Trail

The 5km long leisure trail surfaces a diverse landscaping which includes vast amount of both forestry and agricultural land. The wide variety of the changing landscape along the trail has a high potential to further enhance to make it more interesting and attractive.

However, one weakness in this area is the long distance between the different landscape. The curvy lines in the diagram indicate the excitement level while walking along the old railway track. The analysis surfaces an issue regarding visual tiredness from monotonous scenery in certain parts of the trail.



A

An abandon half-built red brick house.

B

Farm with houses. Simulation of interest for animal lovers.

C

Highly dense forest with tall pine trees.

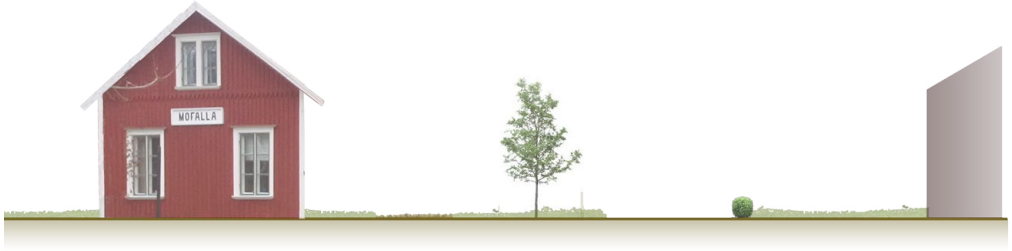
D

A row of elk hunting tower situating along the old railway.

E

Wooden crate and large stone situation at the side of trail.

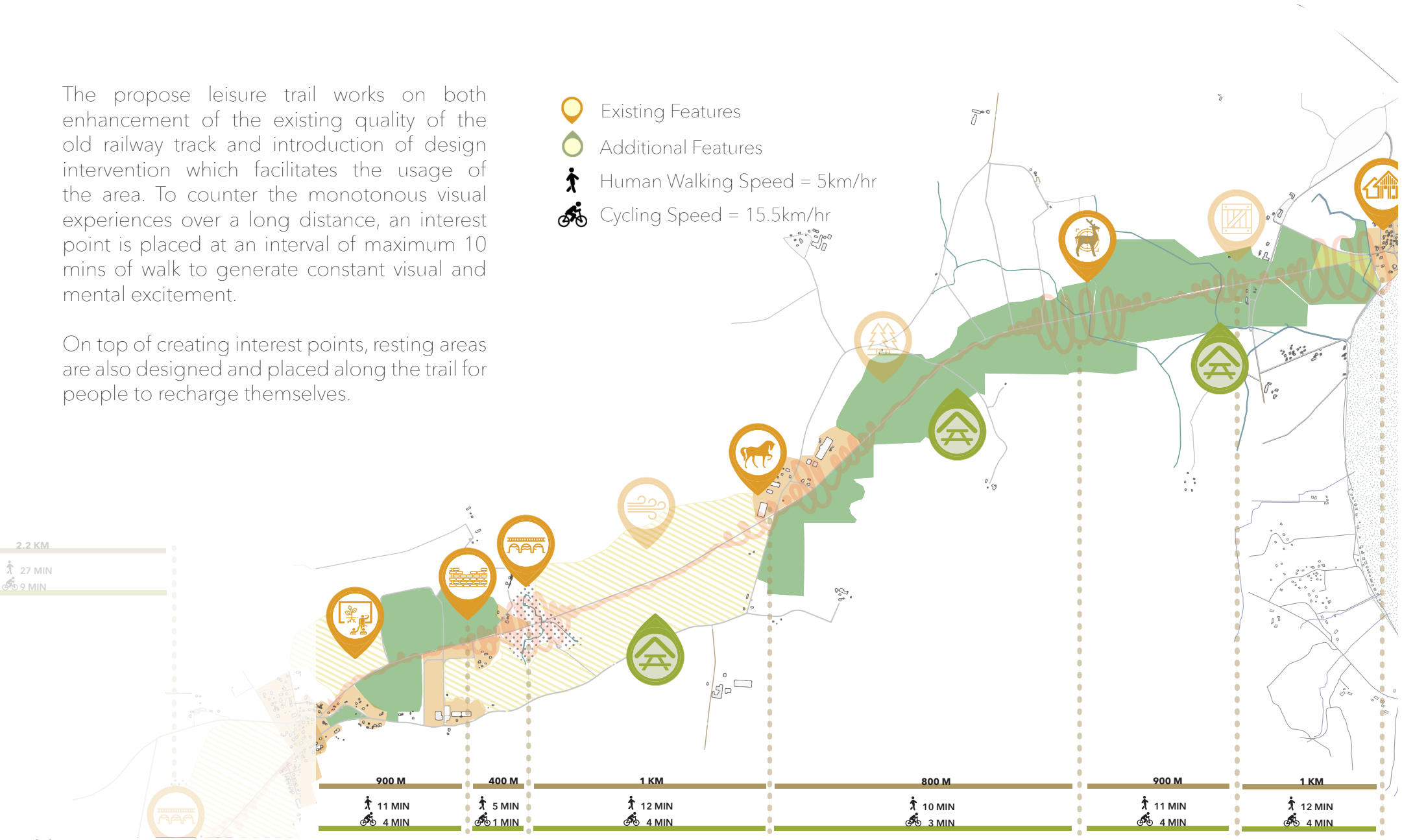
F Preserved old rail train station - Mofalla Station.



Leisure Trail Proposal

The propose leisure trail works on both enhancement of the existing quality of the old railway track and introduction of design intervention which facilitates the usage of the area. To counter the monotonous visual experiences over a long distance, an interest point is placed at an interval of maximum 10 mins of walk to generate constant visual and mental excitement.

On top of creating interest points, resting areas are also designed and placed along the trail for people to recharge themselves.



Leisure Trail Design Considerations

USAGE LEVEL: LOW
TARGET GROUPS:
CYCLISTS, TOURISTS, FAMILY

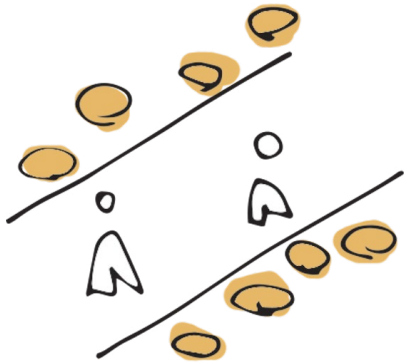
With the low usage of leisure trail, the intervention in this area should be of low maintenance and easily accessible by people.

As the target groups of the leisure trail is mainly the cyclists, equipments for these people should be considered and provided. These equipments include air pumps for tyre, as well as water points after exercising.

Being a long trail, resting points and sheltering areas are needed in cases of rainy/snowy season. Moreover, wayfinding is in placed to ensure people are directed on the right path.

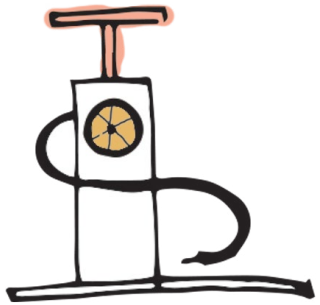
Shelter & Resting Points

Wayfinding



Water Points

Type Pump Points

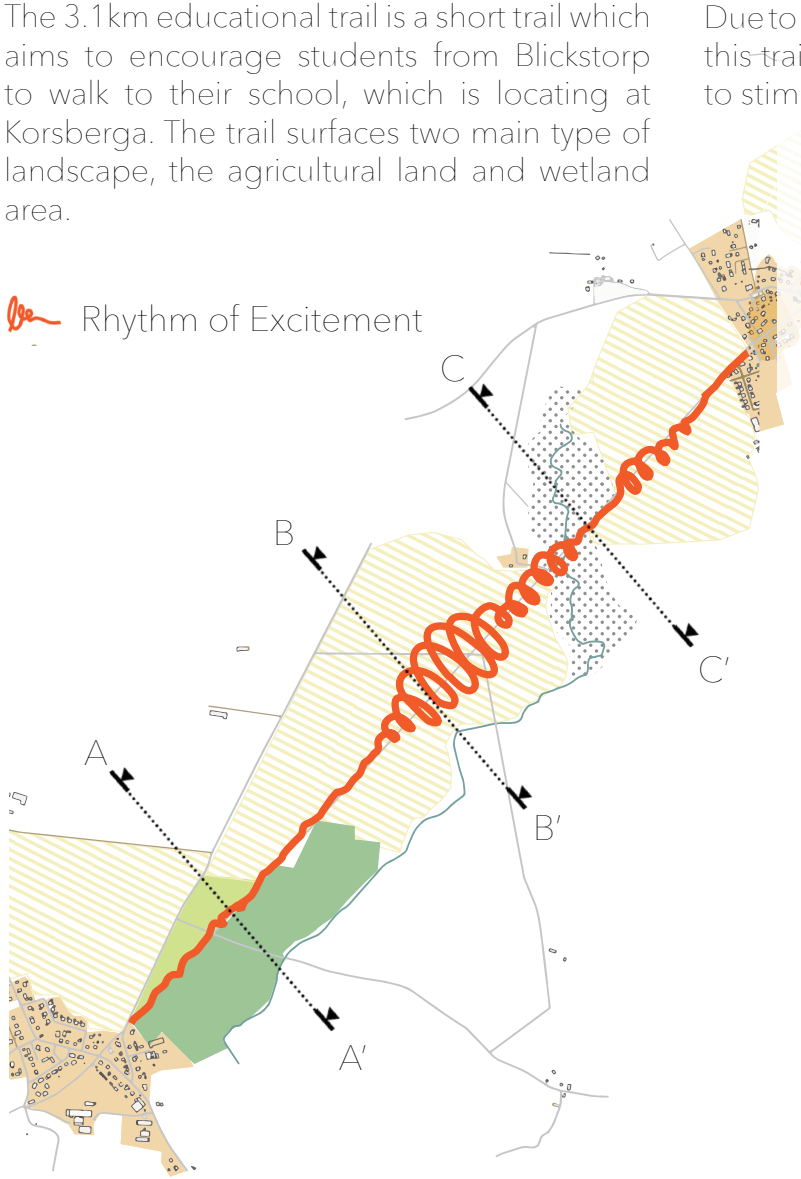


Existing Landscape at Educational Trail

The 3.1km educational trail is a short trail which aims to encourage students from Blickstorp to walk to their school, which is locating at Korsberga. The trail surfaces two main type of landscape, the agricultural land and wetland area.

Due to the short distance, the visual tiredness for this trail is lesser and require less interventions to stimulate excitement.

Rhythm of Excitement



A

Plot of empty land at the junction between forest and agricultural land

B

A wide view of agricultural land

C

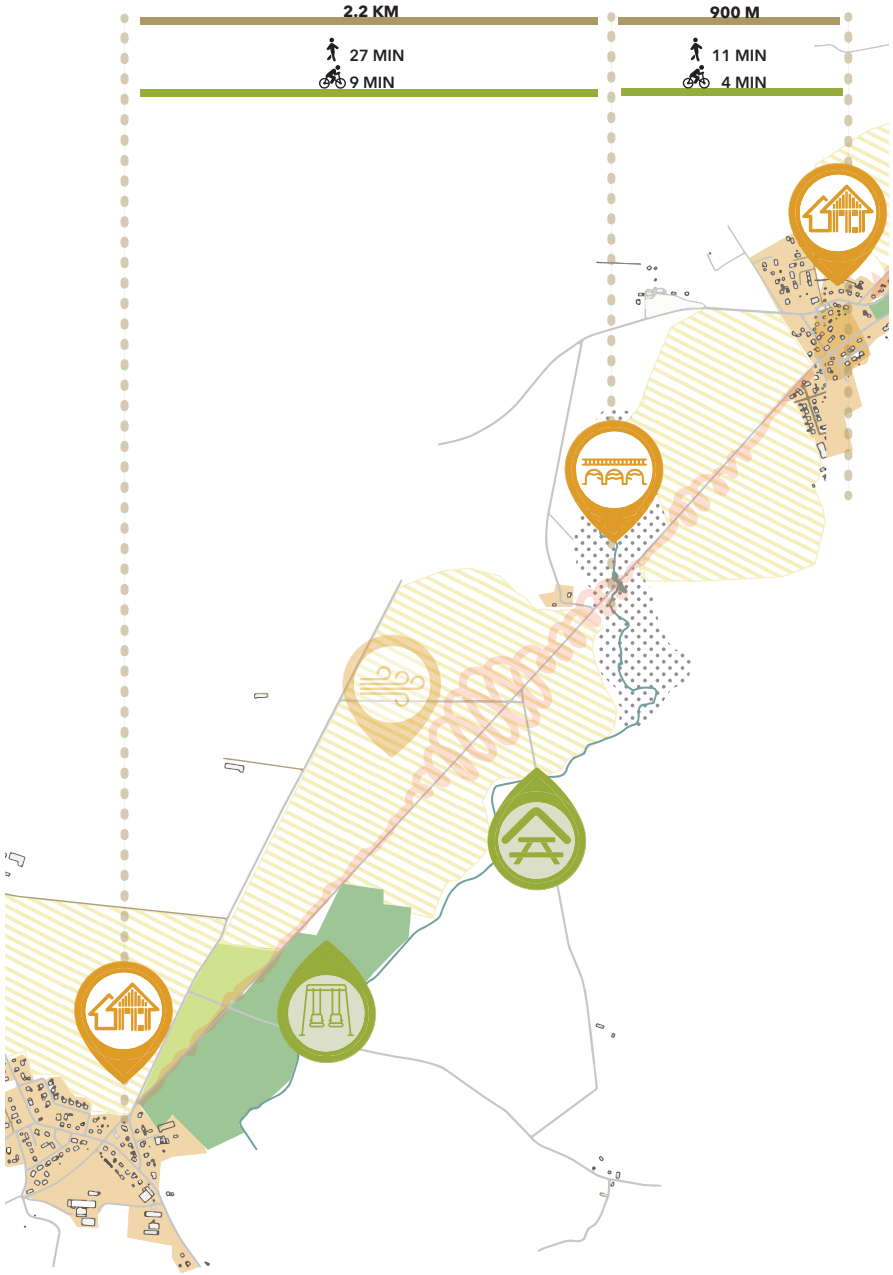
Wetland area.

Educational Trail Proposal

The propose educational trail aims to provide a place for people to stop by and stay at the place for a longer period of time. While the educational trail is relatively shorter than the leisure trail, it is more important to provide interesting points for people to interact and engage with the surrounding than simply a resting point.

Being an educational trail, points of small interventions are introduced for people to understand their surrounding environment and the historical cultural heritage. A digital layer is also presented to facilitate the learning.

- Existing Features
- Additional Features
- Human Walking Speed = 5km/hr
- Cycling Speed = 15.5km/hr



Educational Trail Design Considerations

USAGE LEVEL: HIGH
TARGET GROUPS:
STUDENTS, PARENT, CYCLIST

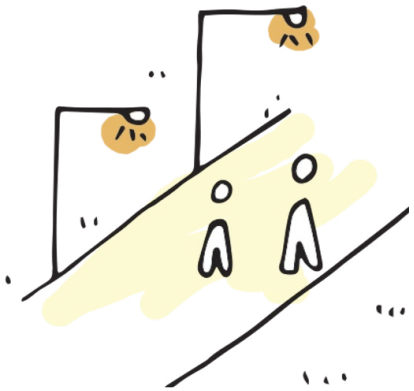
As a commuting route for students to go to school, there are more safety considerations. A place for children at grade 1-9, the trail should be both a safe and fun place.

The early sunset in the winter reflects a need for street lighting along the trail to ensure the visibility throughout the walk.

Being a commuting route, it is hoped that students will go to school by cycling or walking.Nonetheless, this also surfaces the need for seperation between the bike lane and pedestrian walkway to tackle the different needs and speeds.

With students being the main target group, it is thus crucial to provide learning opportunities. This is done through introduction of app

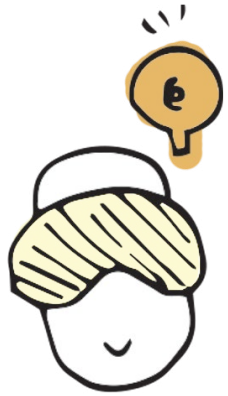
Lighting for Safety



Play Elements

Bicycle Lane and Pedestrian Walkway

Educational

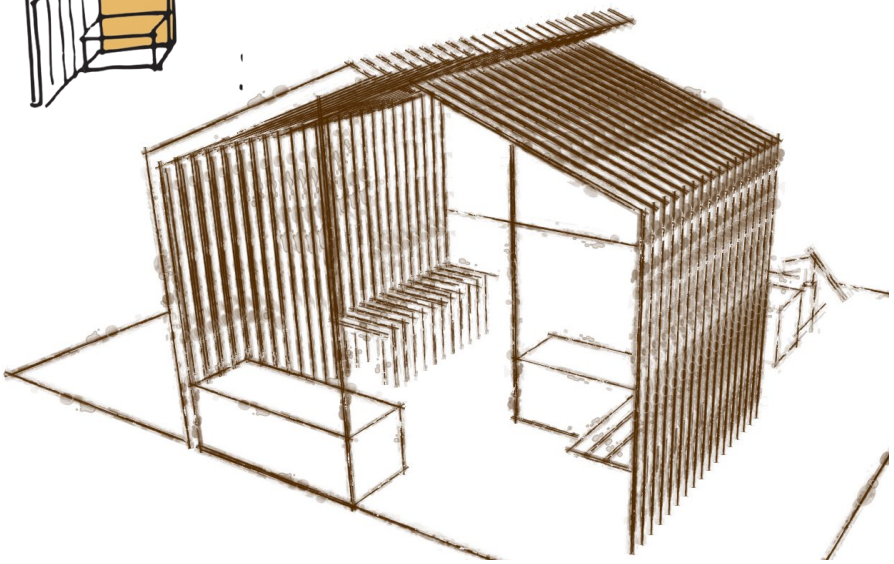


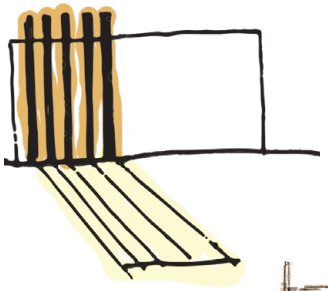
Shelter Interventions

One main intervention for both trails is the introduction of shelter design. The shelter does not only serve to provide a resting area but also learning opportunity for the users. On top of educational purpose, the shelter also provide various support for the user. In each shelter, a water point is introduced. The tyre air pumps are also placed to assist cyclists in need.

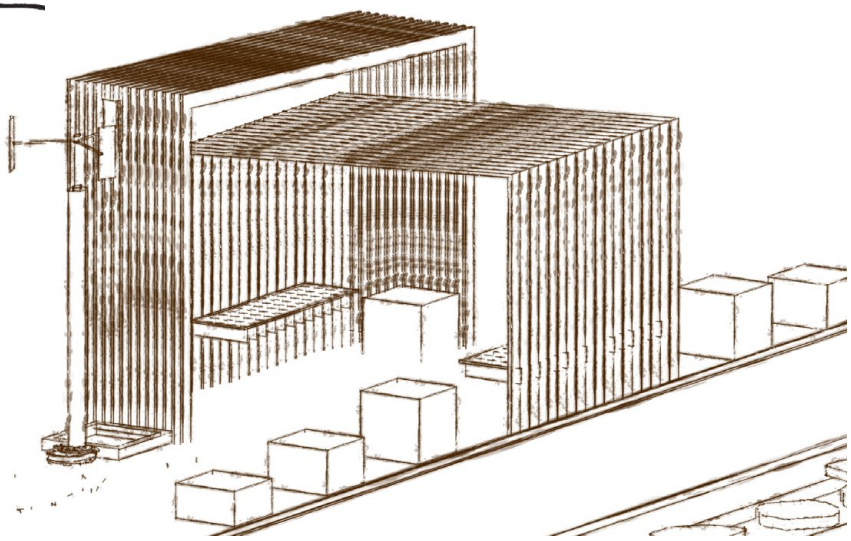
The shelter designs tally to different type of landscape, mainly define into agricultural and forestry land area. The characteristics for both landscape vary widely, which define the form and usage of these shelters.

For Agricultural Land





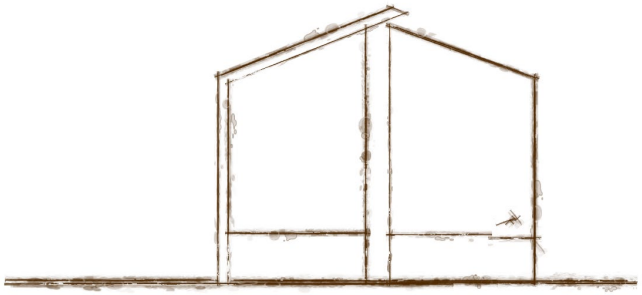
For Forest Land



Agricultural Land Shelter

According to the previous analysis, strong wind can be felt along the agricultural land. The design of the shelter serves to become a wind breaker shelter to reduce direct wind blow to the users.

The shelter design makes use of the opportunity of the wilderness view of agricultural land through creation of frame to capture the beauty of nature. The 'frame' is designed similar to the wooden houses in Hjo to highlight the identity of the municipality.



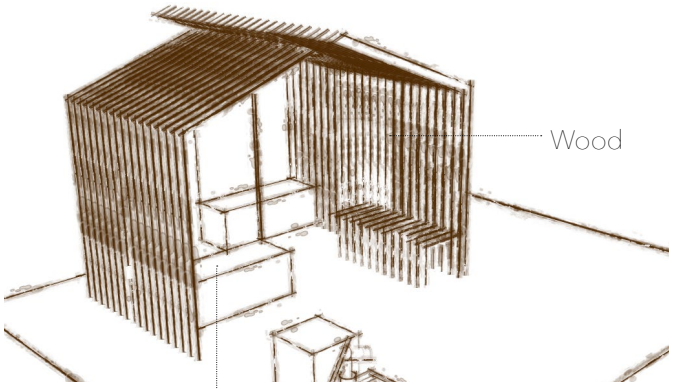
Framing of landscape via the outline of shelter

Visibility of the element sinside shelter while passing by

Shelter in agricultural land with water point

The materiality of the shelter design is chosen to facilitate its functionality, breaking the wind. The use of structural glass in the shelter provides structural support and break wind from various direction.

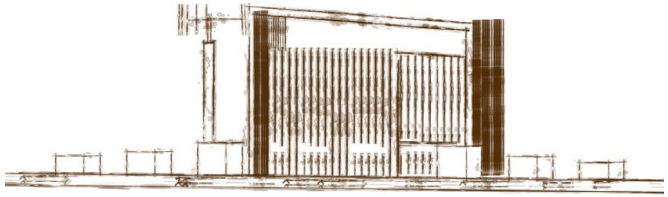
The seating in the shelter are placed at multiple places for users to adjust themselves according to the wind direction.



Forest Shelter

The large land mass of forest can lead to visual tiredness and boredom after a period of time. The introduction of shelter does no only serves as a resting point, but also a place to stimulate different forms of experiences.

The design concepts work with the consistency of the forest. The design follows the prominent vertical elements of the tall pine trees. The consistent interval of wooden planks encourages shadow casting on to the floor, creating another experience. The alternating of the direction of wooden planks create twist to visual sensation.

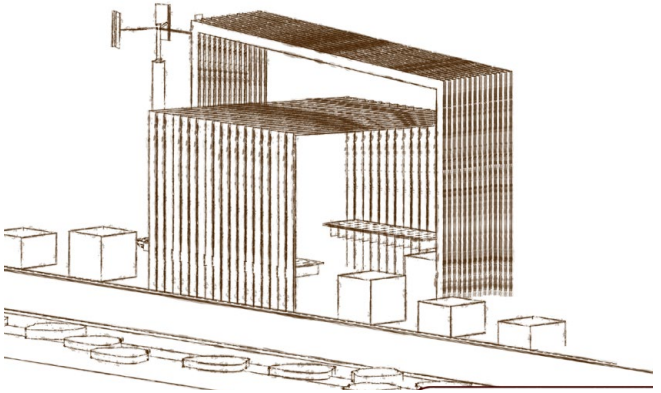


Elevation of forest shelter design

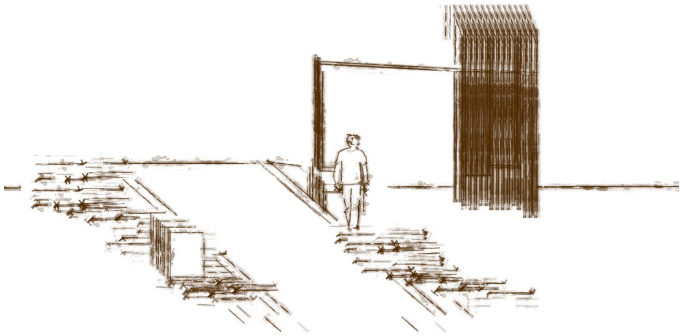
Experience in shelter

Experience in shelter

The introduction of the shelter is done through a gradient of increasing sitting stone sizes.



Close up of shelter



Perspective from far

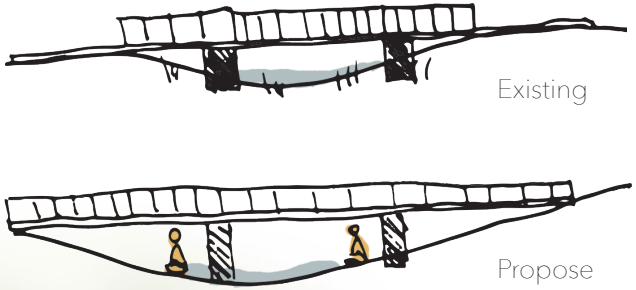
Wetland Intervention

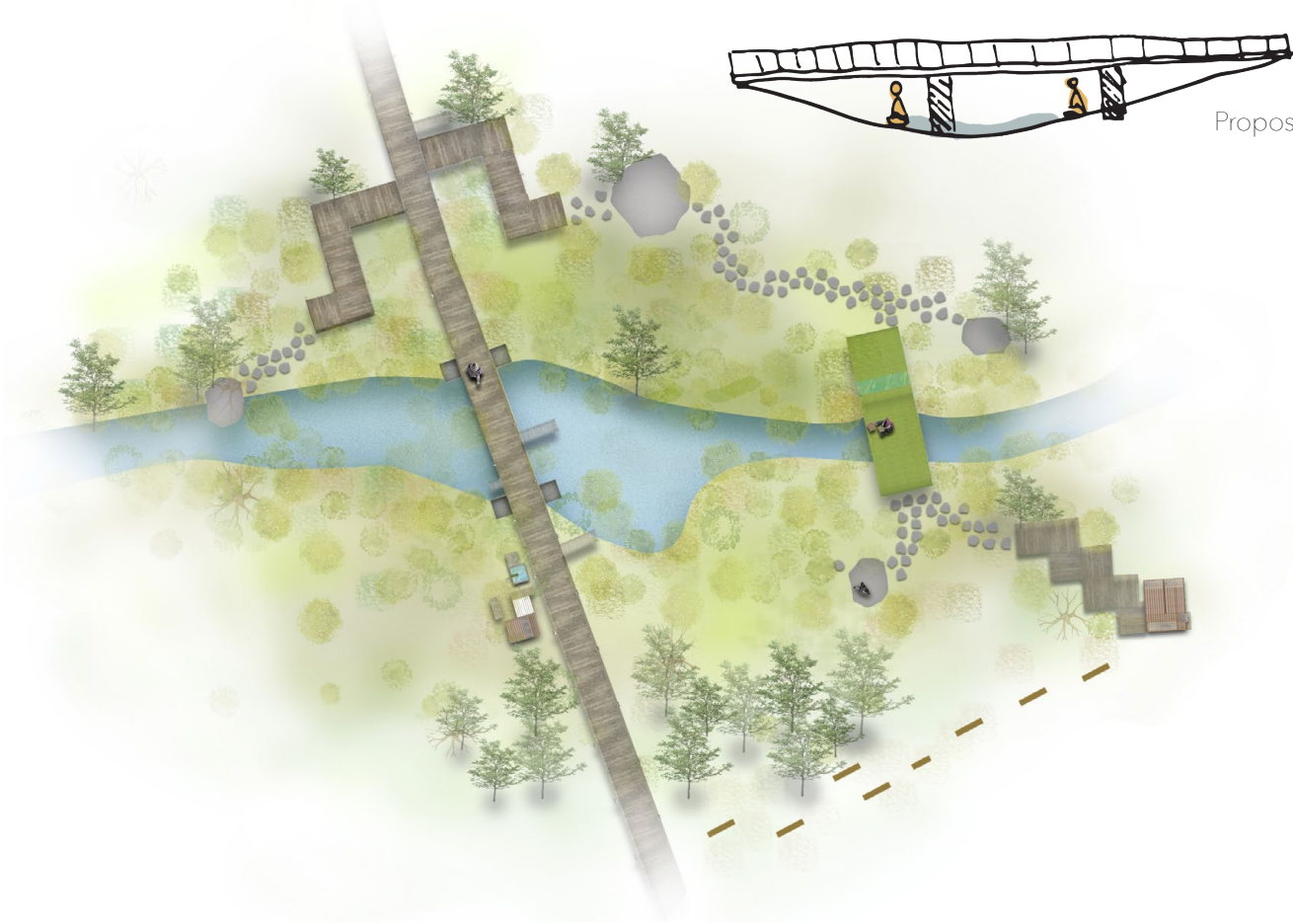
The rich biodiversity in wetland area provides an opportunity for people to understand the nature and provide leisure purposes. Through design intervention, it enhances the experiences in wetland area and allows people to

The wetland design considerations include a place to interact with water, a resting point and viewing platform. One main design change to the area is the removal of 'artificial' soil infill under the bridge to recover the original landscape. This also enables people to have closer connection with the water element.

Overview of landscape design

Section change with proposal





Overall Landscape Plan

Wetland and Play

Perspective for PlayBridge

Wetland area also serves as a place for people to play and meditate. The design intervention provides areas which enable people to be alone and enjoy the nature.

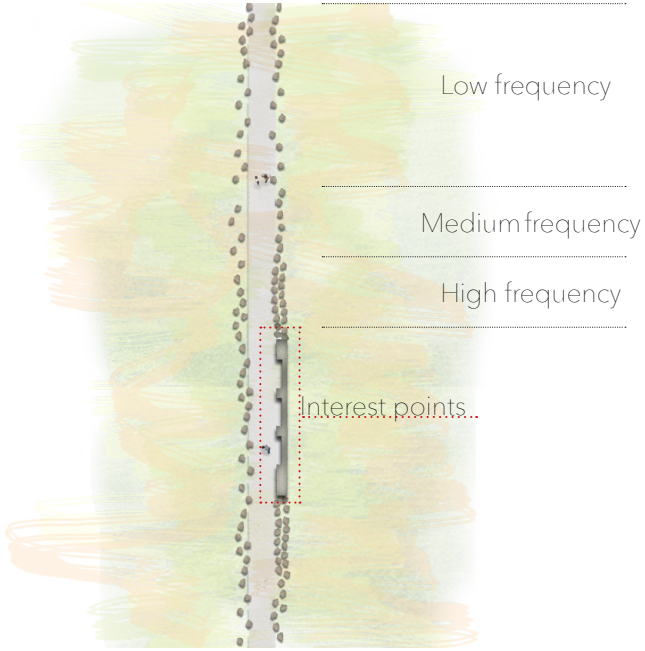
A bridge is not just a bridge. It is both fun and functional. The 'wave' form of water connector serves to provide people to interact with the water while walking through it and relax themselves on the bridge itself. To integrate with the existing landscape, a 'green bridge' with grass cover is in place.

Stepping stones to connect

Landscape Intervention

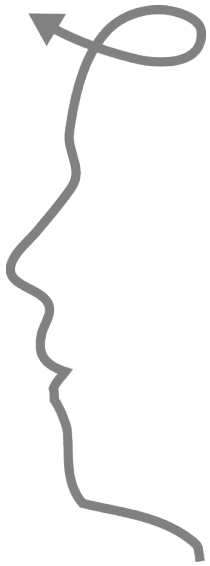
While the walking trail has a long distance, it is crucial to provide wayfinding elements to indicate the direction for people. The small intervention of stone placement along the trail serves to guide the users to the next point of interest.

The frequency and the placement of the stones are varied to indicate the upcoming interest point. When the frequency between the stones gets higher, it reflects that something is coming up.



Placement of Stone

Visualize pavement design



TURN YOUR HEAD

ADDING A DIGITAL LAYER

WHAT AND WHY

"You in Hjo" is a mobile phone application that adds to the user experience while in the rural areas of Hjo municipality. The app aims to provide a more engaging, readable and fun environment for local and visitors. Because Hjo is more diverse than what meets the eye, the application aims to give visibility to the hidden layers and overlooked potentials.

"The old railway is just a bunch of weeds"

CATEGORY

EDUCATION - TOURISM - LEISURE

TARGETED USER

FAMILY - OUTDOOR ENTHUSIASTS - VISITORS AND LOCALS

PURPOSE

WAYFINDING - Routes, Location

INFORMATION - Digital content, associations, events, live feeds, etc.

AUGMENTED REALITY - Interactive content

VIRTUAL REALITY - Recreation of historical heritage

FEATURES

CAMERA ENHANCEMENT
- Visual Search Technology
- Visualize GPS data on the camera display
- QR code reader

DISCOVER
Database of available activities
News feed (happenings in Hjo)
Associations and their schedule

PLAY
Quiz game

ADD SOMETHING
Local knowledge

ACCESSIBILITY

AUDIO SUPPORT

PURPOSE

The main purpose of the App is to add value in rural areas; improving the readability of nature, historical heritage and landscape to especially engage the users that are not familiar with such aspects.

The mobile application wants to act as a connection between the physical and digital world. Not only it will help navigate the landscape but it will also directly engage with it. The landscape will be equipped with augmented reality features as quick response (QR) codes, additional GPS data information, and visual research technology that can interact with mobile devices such as smart phones. The users can learn about what they encounter along their way, boosting their curiosity and engagement with the outdoors. The acquired knowledge can be saved in one's collection of findings or shared with other users.

The Play features provides the user with a quiz game option. The knowledge gained in the early stage will be tested here. Users can also choose to test their knowledge on interactive objects they took a picture of.

The function Search will link associations with users. Events, scheduled meeting and interest points are now under one roof. Users can get notifications while they are close to one of these, making it easier to join and get to know about them.

MODULES

The application offers four main activities that the user can engage with. Visual search; Search; Play; Add something.

DESIGN

The landing page presents the options of register or login, or to start as a guest user. The home page is a map that shows the user's location and interests point nearby.
Here one finds the four main functions: camera support, search, play and add something. Clicking on the map one will get immediate information of the selected landmark, otherwise will be continuing with one of the four main functionalities.

- Camera: the application equips the mobile device camera with new functionalities such as visual search technology (VST). VST works as a reverse Google image research; the functionality allows the user to take a picture of an object or landmark and get information about it. Alternatively taking a picture of quick response (QR) code will also reveal digital content.

The function Skyline allows users to read the landscape without using a map. On the screen one will be able to see the chosen path to follow and alternatives routes or interest in close proximity. This function allows to change path or to add stops to one's journey.

The camera will also give access to Virtual reality function. GPS data or interactive codes along the path will trigger the function and give the opportunity to access the digital content. Virtual reality aims to recreate historical heritage and make the user experience local qualities that are lost or not obvius. The old railway and the train passing by or a hunting scene when near one of the several hunting towers along the path.

exampler of
Quick Response
code (QR code)

- Search: the landing page works as a gallery, where one finds images of different size for intuitive selection. The size of the images is in relation to the importance and proximity of the portrait event (date and time). Smaller icons indicate happenings in the immediate future but that are of interest because of location. Events that do not relate with the user's current location do not appear on the screen. For these there is a search bar where one can type to find

specific events.

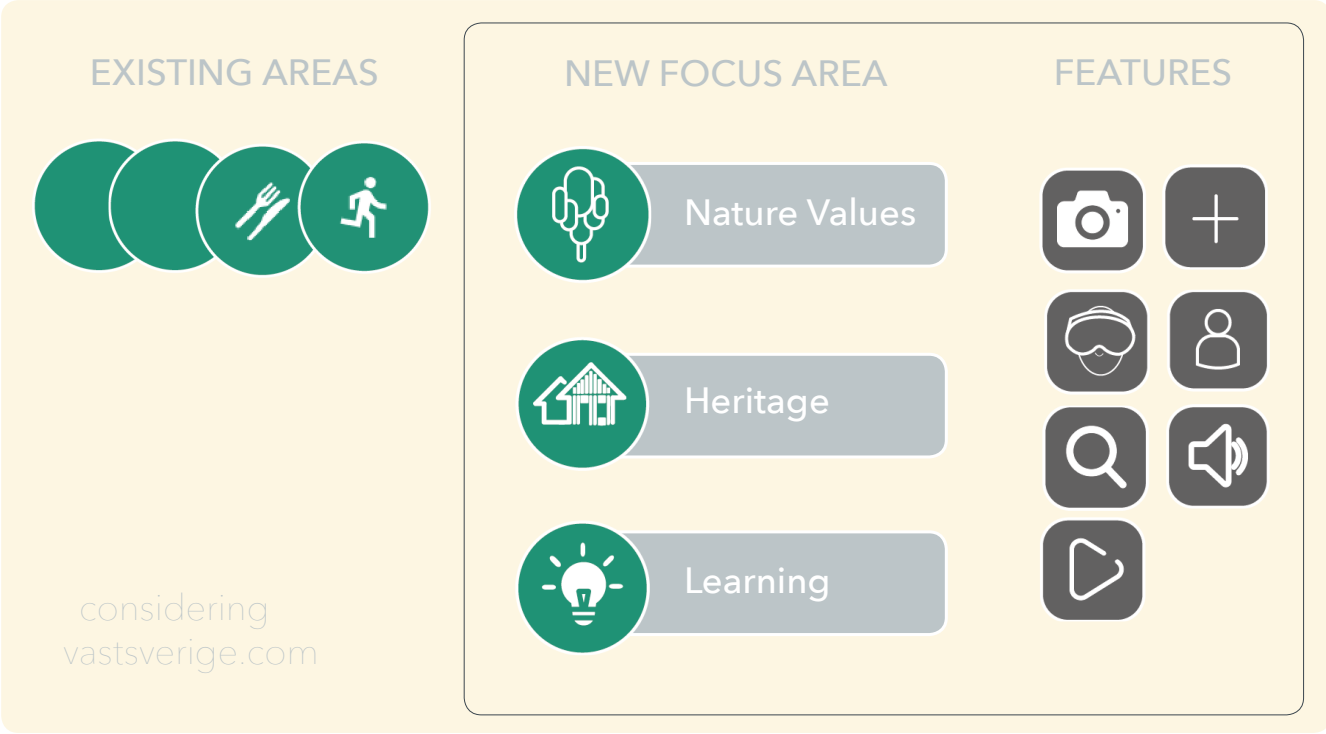
- Play: the application provides the opportunity to engage with the rural landscape through quiz games and multiple choice. The game mode can be selected from the landing page or be triggered through page of specific items found along the path. Game mode interacts with the camera and taking an image of an item that is interactive will also give to possibility to play. Other game opportunities could be hunting game, once the user reaches one of the hunting towers. Augmented reality will let the user engage with the real landscape while adding digitally generated settings for an "friendly hunting" experience.

- Add something: users that wish to do so can add local knowledge to the digital layer. The application is thought to give the possibility to allow user generated content (UGC). In order to do so users need to register and login in order to add knowledge in a responsible manner.

Other Media: the application also relies to existing material and other media such as maps and routes. External links will be also present to connect the application to the bigger picture of digital content available.

As a starting point we took in consideration the existing material available online about Hjo town. Currently there is no application dedicated to this subject so case studies from foreign countries have been used as reference material.

West Sweden Tourism Board collects useful material about the region and we took the material available as great point of inspiration and starting point for this project. The idea is not to compete with existing efforts but as mentioned to value other media and develop concepts for future development. Below the diagram showing the concept of the intervention. As mentioned the application will add focus areas that are now a hidden potential. These areas could be added to the existing ones in order to become more specific. New features will be introduced since the application will be for mobile devices and points towards a more interactive experience.



AN IMPROVED PLATFORM

The municipality is very vibrant. There are many association for outdoor enthusiasts that organise events and gathering throughout the year. Most of them use social media as main platform.

PROBLEM TO SOLVE

- It is not easy to know about them and knowing their schedule on the go.

- An official shared platform to represent themselves.

SOLUTION

The application will provide the opportunity for local groups and associations to have a shared platform to show their presence in Hjo.

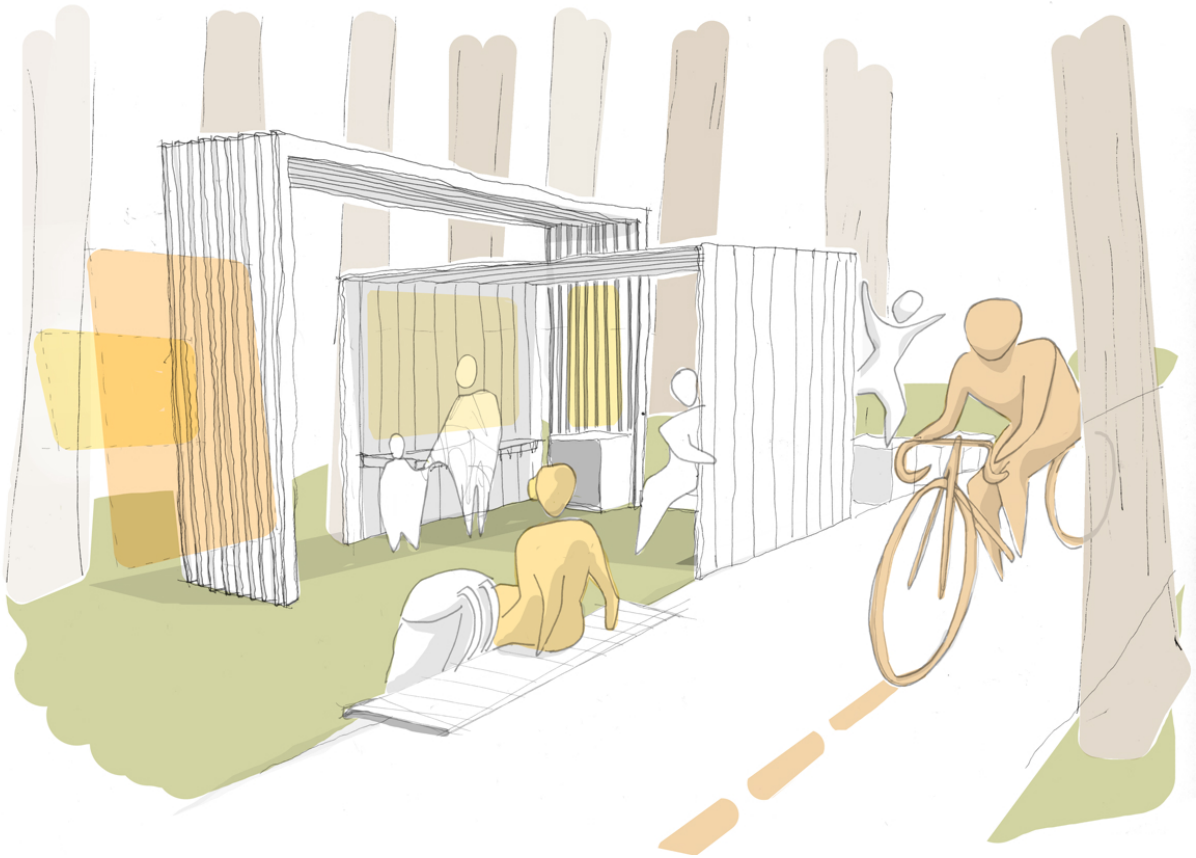
- Opportunity to share their schedule for meetings and important dates

- To advertise their events in a more efficient way.

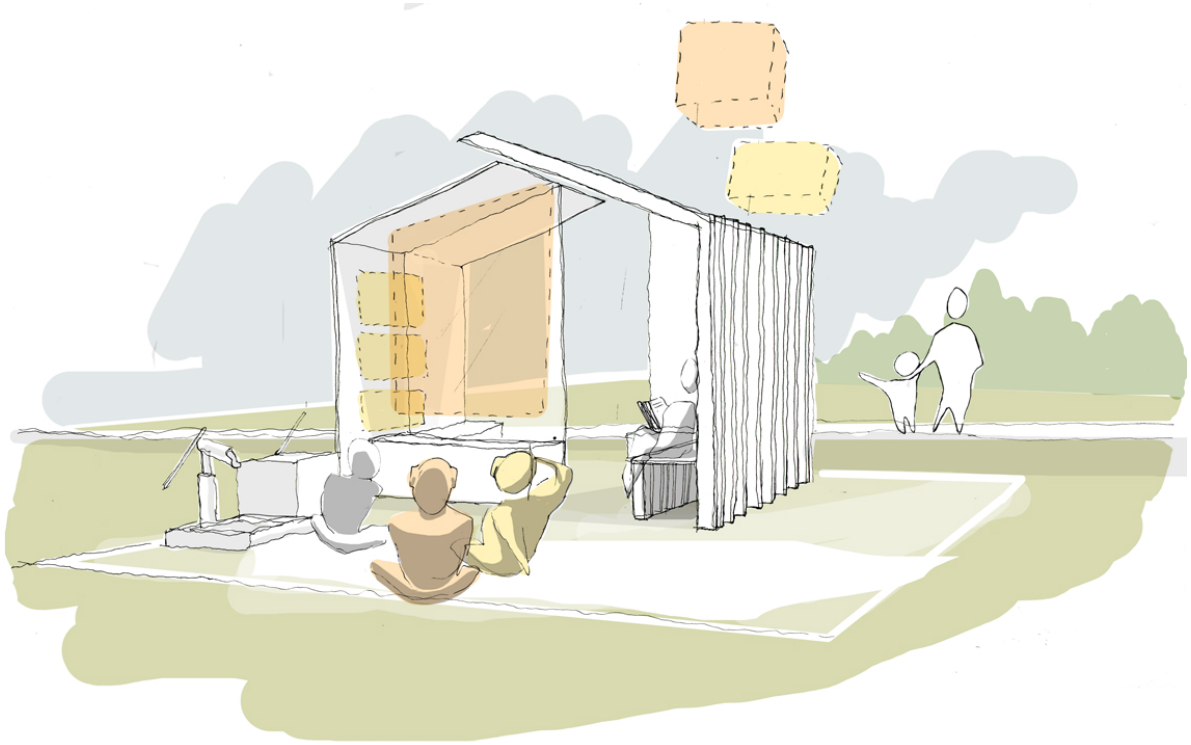
Available at : https://www.facebook.com/ 194251423931498/photos/ pb.194251423931498.-2207520000.1481706157./ 1163936446962986/?type=3&theater

THE HIDDEN LAYER

Tha digital layer aims to adds to the users exeperience of the architectural interventions and to the natural values of the rural area of Hjo. Hiking, walking and exploring the countryside will not be the same. Either you are a local, you just moved or you are visiting the town for short period of time the application will add to your jorney.



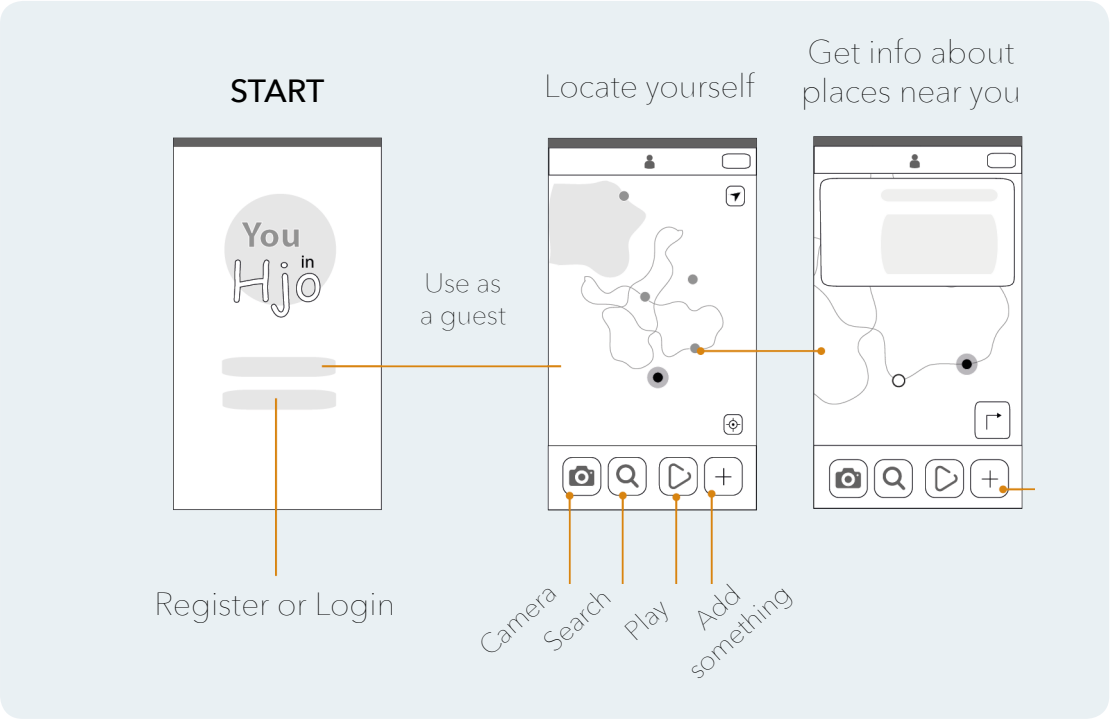
The digital content is designed to interact with the architectural interventions along the path. Users can engage with the content while resting, sheltered by the structures.

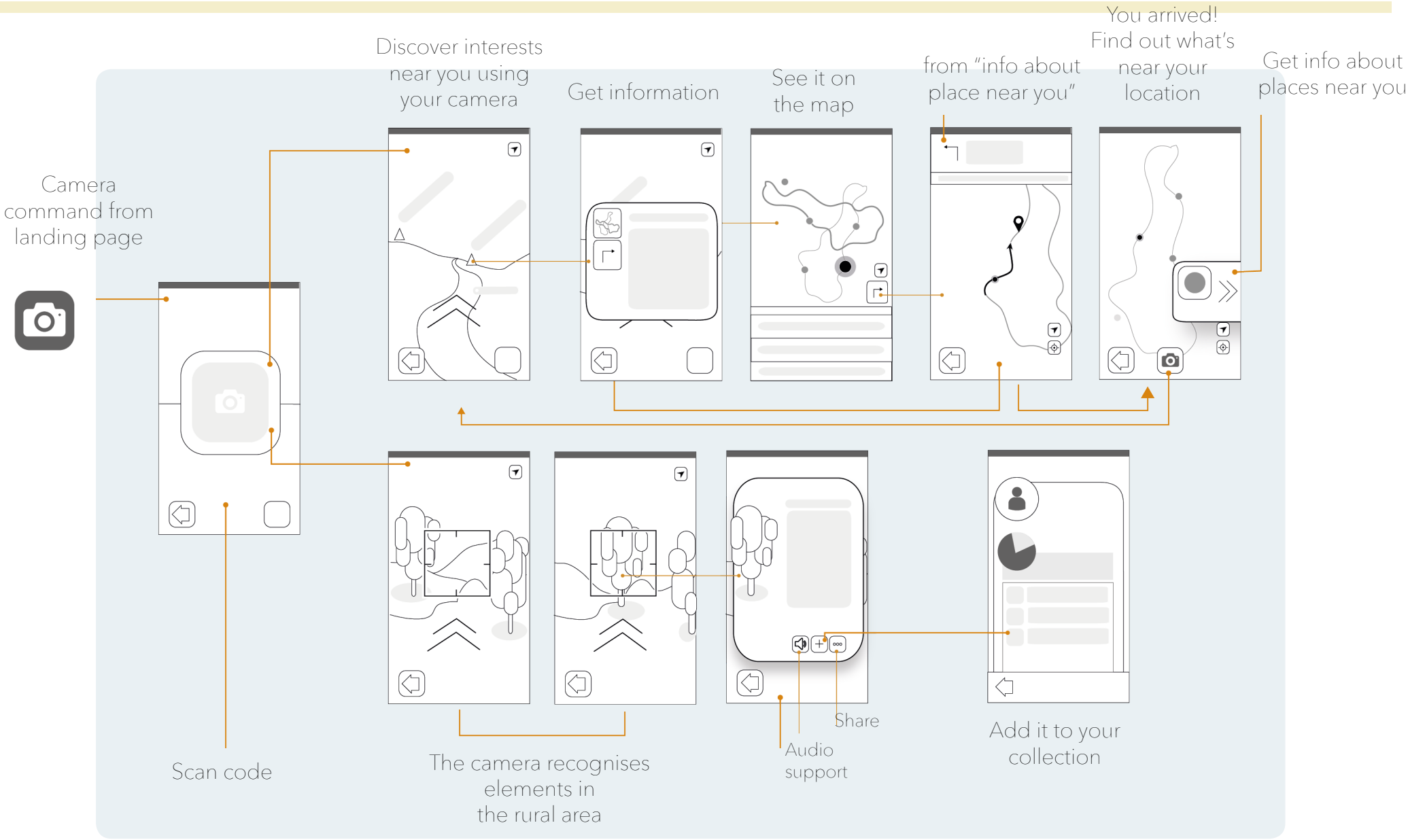


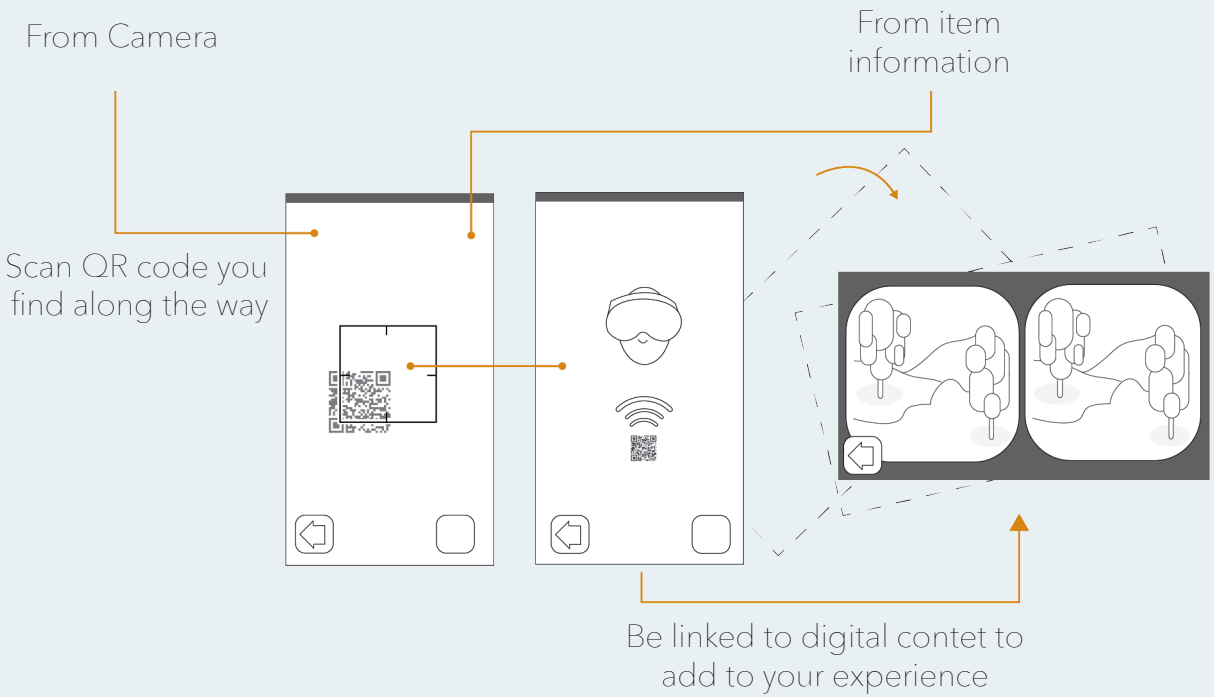
Dig into the content and learn more about the agricultural landscape, its professions and why is relevant today as in the past of Hjo. The image shows augmented reality objects and users interacting with their virtual reality glasses sharing a common experience.

FUNCTIONALITY

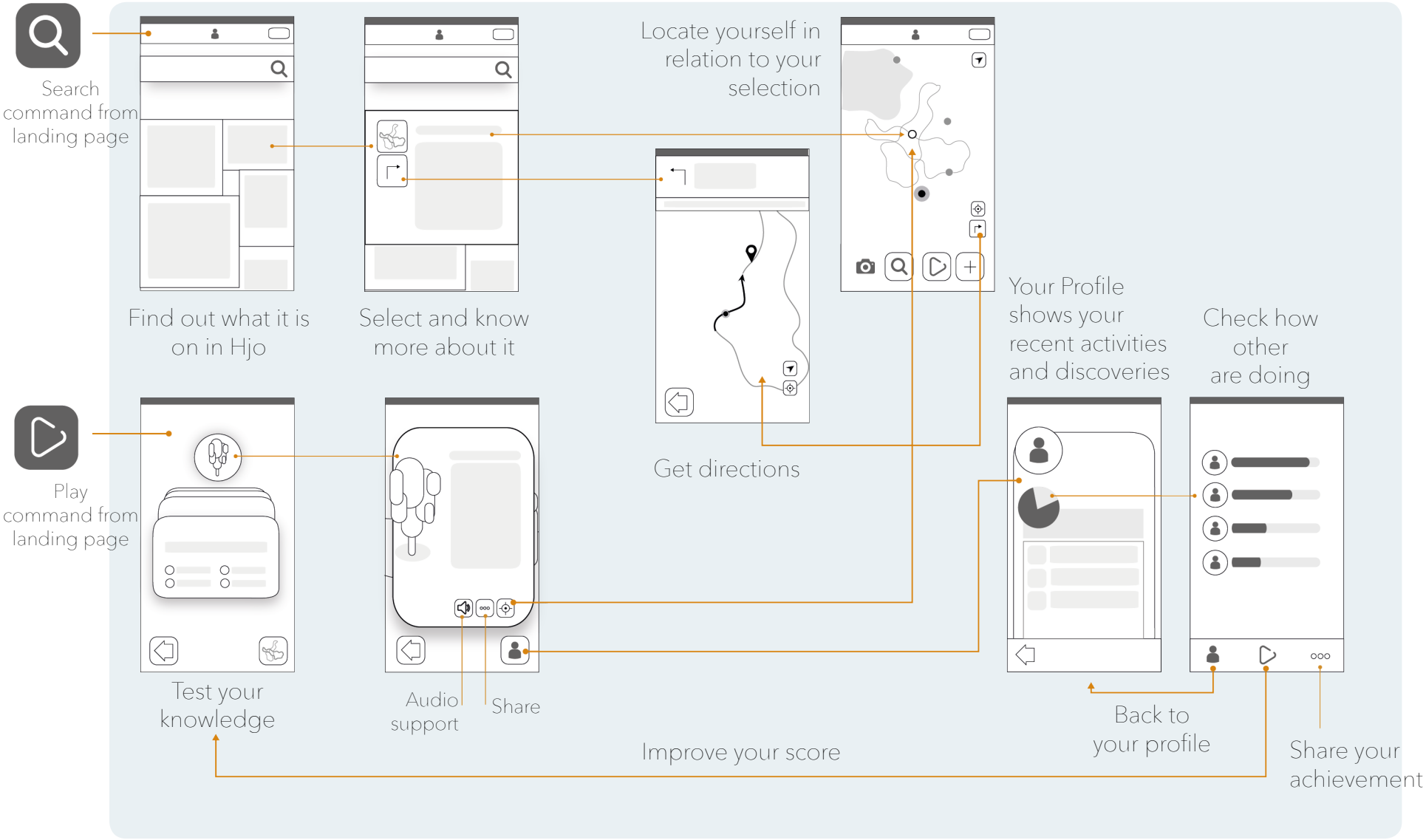
The application framework
and initial layout of the application

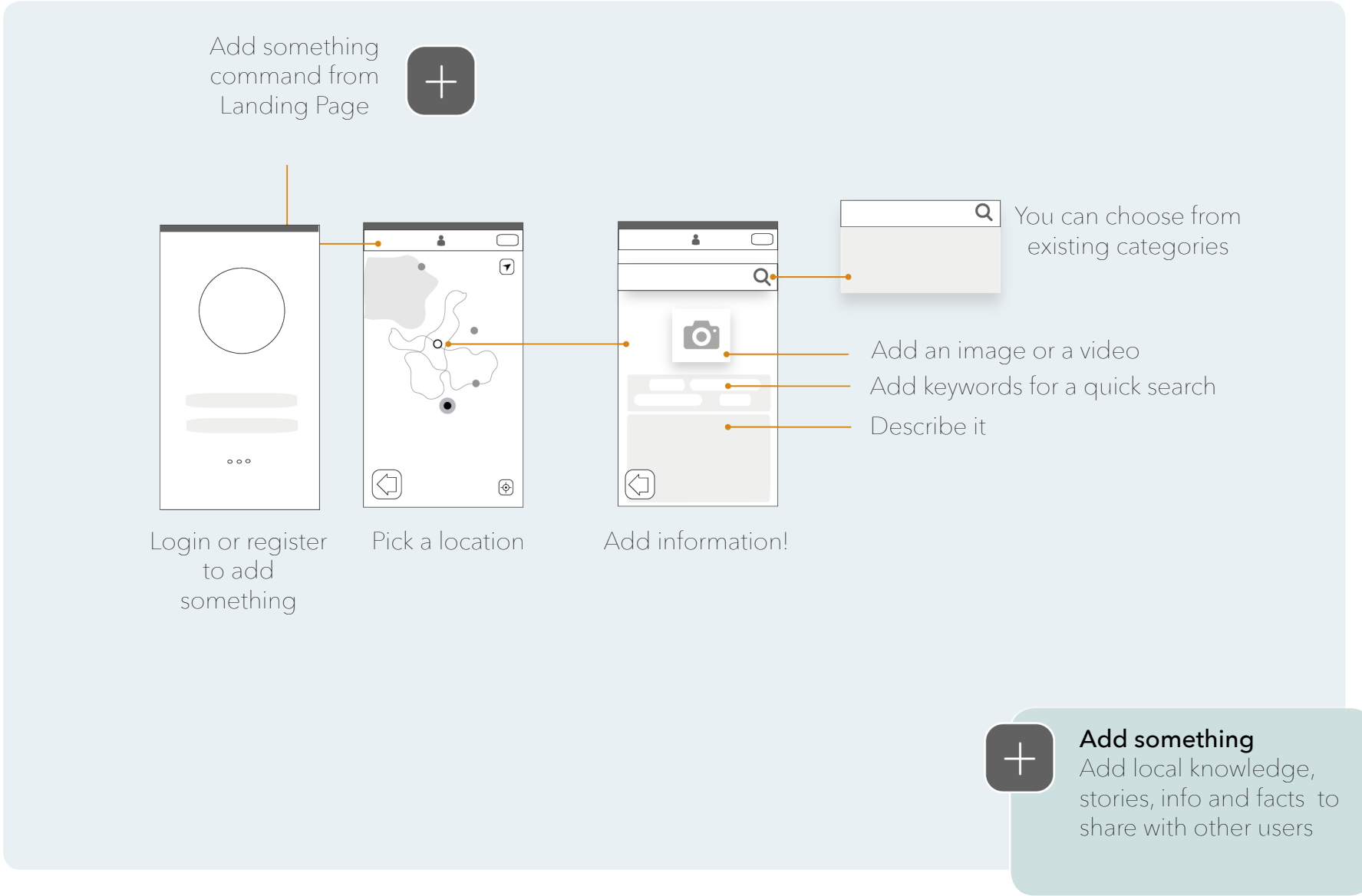


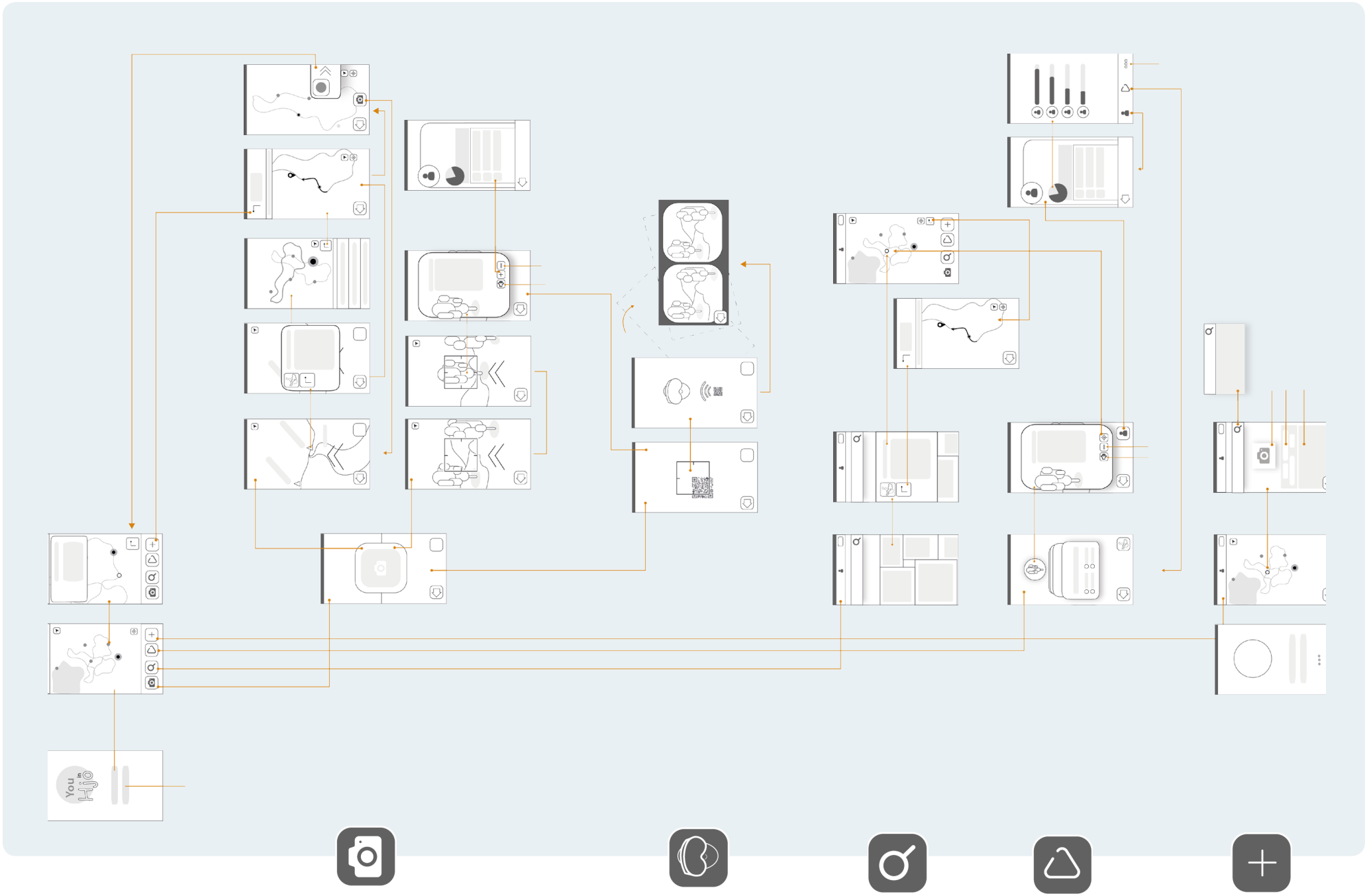

Camera command from landing page
Discover interests near you using your camera
Get information
See it on the map
from "info about place near you"
You arrived! Find out what's near your location
Get info about places near you
Scan code
The camera recognises elements in the rural area
Audio support
Share
Add it to your collection



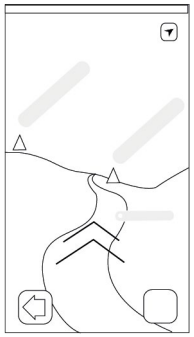
Virtual Reality
Experience the environment around you to the next level. Go back in time and watch out for the train approaching!


Search command from landing page
Find out what it is on in Hjo
Select and know more about it
Locate yourself in relation to your selection
Get directions
Your Profile shows your recent activities and discoveries
Check how other are doing
Play command from landing page
Test your knowledge
Audio support
Share
Back to your profile
Share your achievement
Improve your score

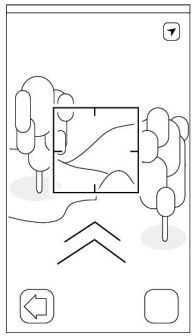

Add something command from Landing Page
You can choose from existing categories
Add an image or a video
Add keywords for a quick search
Describe it
Login or register to add something
Pick a location
Add information!
Add something
Add local knowledge, stories, info and facts to share with other users


You

User Interface Design (UI)

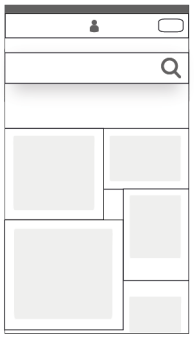


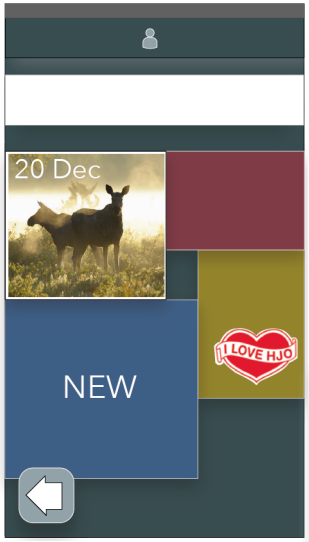
Skyline: what's next?
The app indicates the route you are following. It also shows what other route are near by, in case you change your mind (or feeling more adventurous.)



Visual search technology
Find out about the places you are walking through by taking picture of things along your way. You can listen to the content if you prefer, add it to your collection of findings or share it with other users.

Camera Support
Experience augmented reality with GSP data and visual search technology.

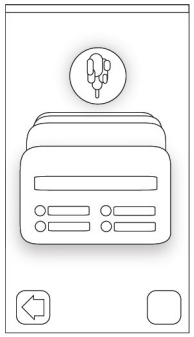


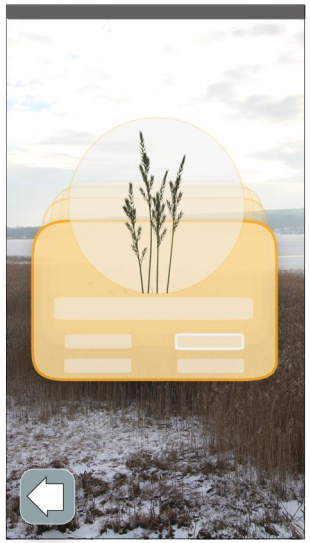


Be updated and reach out

All in one place. "Cyclist association is planning an event today. See their schedule!"

"The Safari starts at19:00. Do you want to join?"





Quiz time

Play on site or remotely to find out new things about the area. "How much do you know about wetlands?"

Discover
What to do and what is happening near you in the municipality. Find outdoor associations schedules, events and more. And join in!

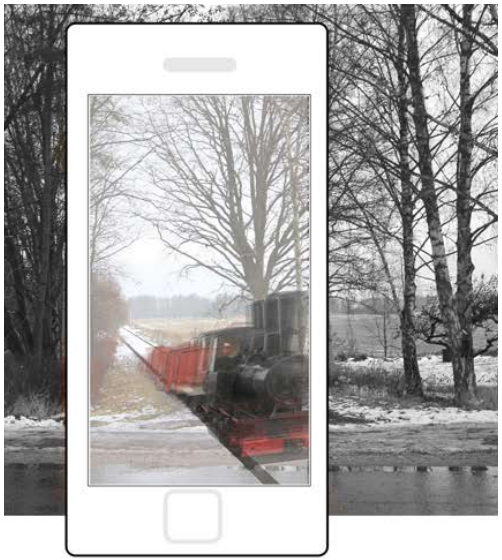
Play
Test your knowledge of Hjo and the rural areas and compare it to other players.

VIRTUAL REALITY

The definition of virtual reality comes from the definition of 'virtual' and 'reality'. The definition of 'virtual' is near and reality is what we experience as human beings. So the term 'virtual reality' basically means 'near-reality'. It usually refers to a specific type of reality emulation. Everything we know about our reality comes by way of our senses. Our entire experience of reality is combination of sensory information and our brains sense-making mechanism for that information. If you can present your senses with this made-up information, your perception of reality would also change in response to it. Virtual reality then entails presenting our senses with a computer generated virtual environment that we can explore in some fashion.

"There is nothing wrong with technology , it is our approach to it that is wrong"
- Marina Abramovic

Old railway in Hjo

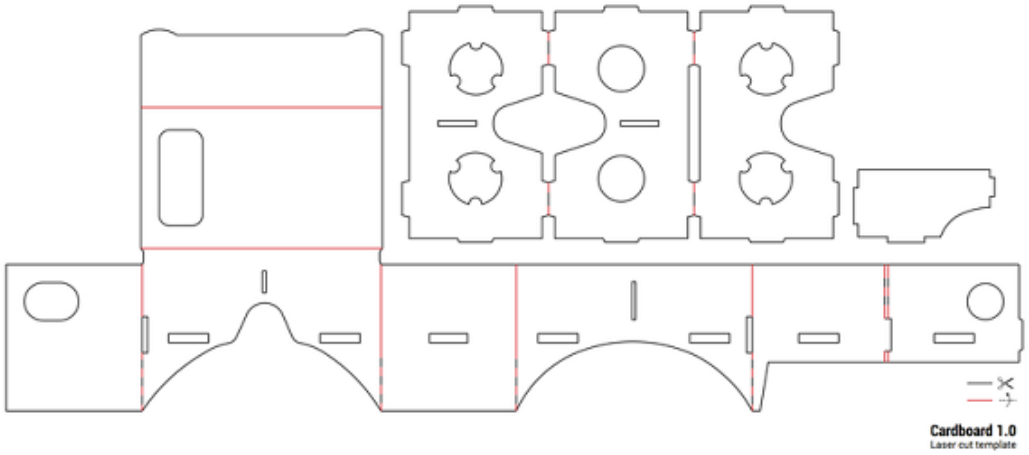


Bring history back to life. The augmented reality will allow the users to see the train passing by along the old railway path. GPS data will give the user the option to access this content. If available the user will be also able to use virtual reality headset for Wa more engaging experience. The image on the left shows how the screen will look like in VR mode.

THE VR HEADSET

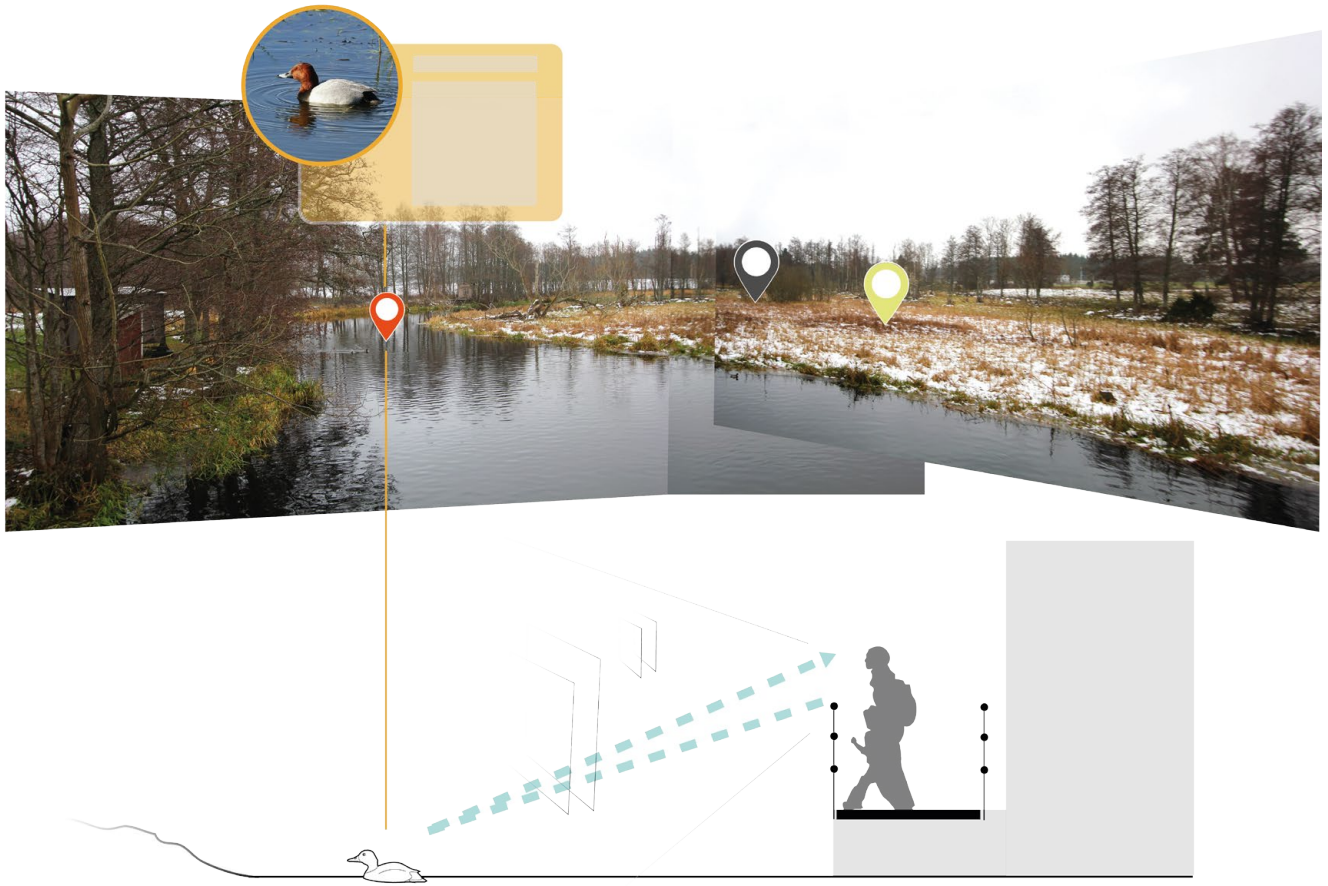
This technology has never been more accessible. Virtual reality headsets have reached entertainment industry, tourism and retail. Google designed a cardboard version of virtual reality headset making it inexpensive and easy to assemble. The users can then slot their mobile device in to access the digital content.

http://www.geekissimo.com/wp-content/uploads/2014/06/cardboard-2-640x356.jpg

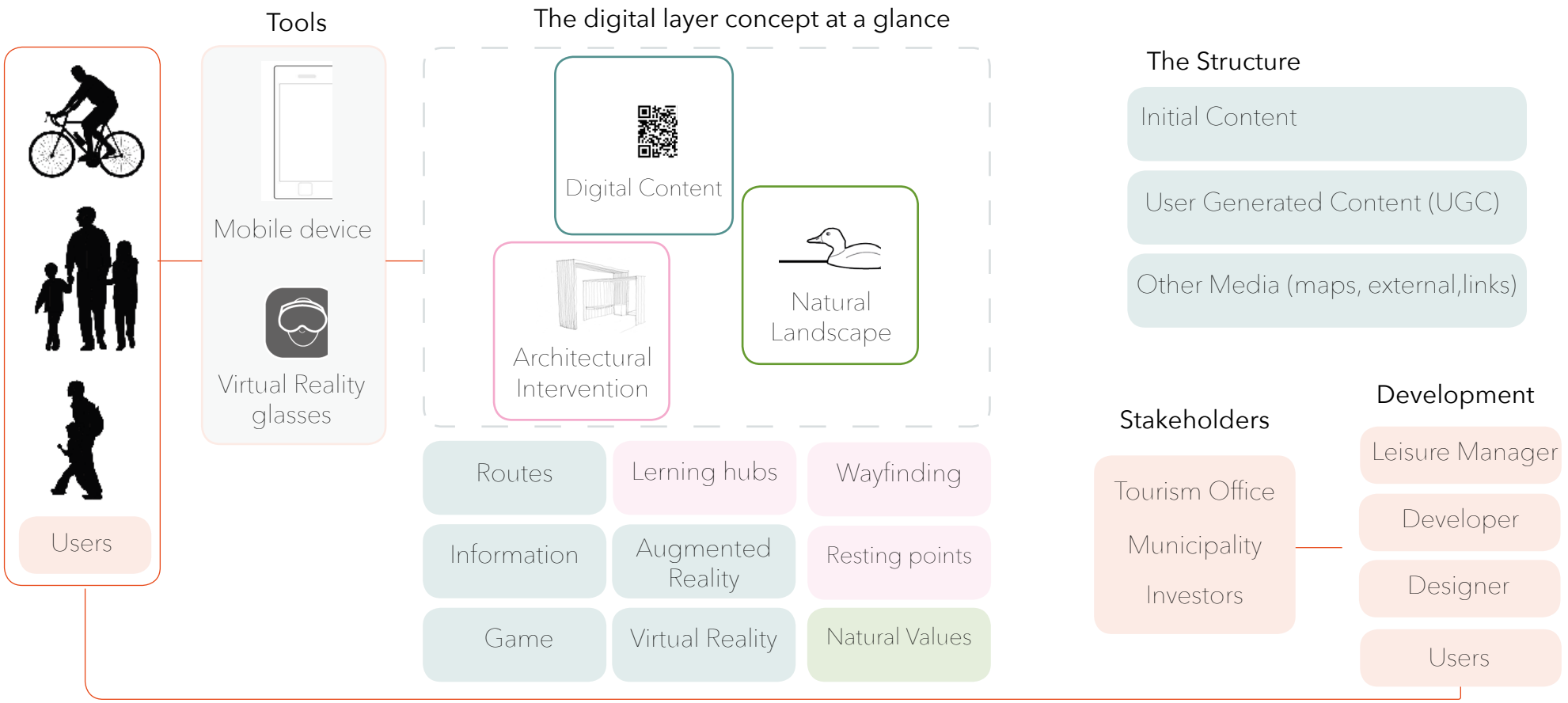


Did you know?

The augmented reality feature aims to add to the journey. Walking in the landscape users will have the possibility to access digital content that will help them reading and understand what they encounter.



Summary diagram:

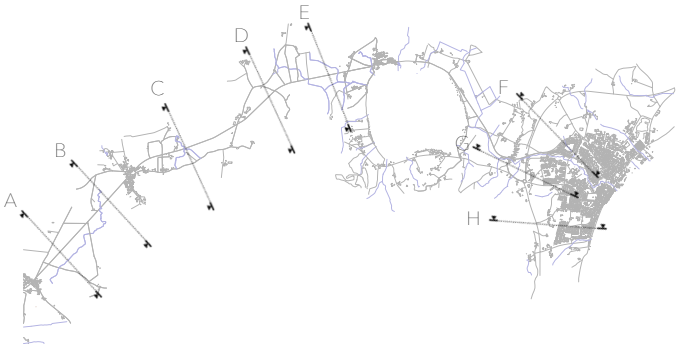


The diagrams shows a summary of The Digital Layer idea and how it can be implemented in the coming future.

Conclusion

The project aims to underline the interdependent relationship between rural and urban. By shifting attention from Vättern and focusing on the rural qualities we are showing ways to make the countryside current and relevant.

The interventions tackle readability, accessibility and shared understanding of these values, enhancing existing assets. Natural values are strengthened suggesting alternatives for a more symbiotic relationship between built environment, human technology and nature.
These interventions enhance the presence of green infrastructure in Hjo, providing "entrances to the rural" rather than impeding exits from the urban. Small scale architectural interventions continue out in the countryside introducing places for resting and playing as natural part of the journey. The digital layer aims to change the perception of these overlooked areas stressing their relevance through digital content and augmented and virtual reality. Finally the landscape becomes interactive and no longer an overlooked background. These interventions could be the first important step to challenge the urban norm, making rural values as important as the urban ones.



A B

F

G

THE VIRTUAL REALITY IS PRETTY COOL!
YAY! I CAN PLAY WITH WATER!
THE SCENERY HERE IS SOO NICE!

C

SO NICE TO HAVE A SHELTER TO REST...

D

LET ME USE THE APP TO CHECK HOW TO USE THE HUNTING TOWER!

E

L

WHAT A VIEW!
NICE PLACE FOR A FIKA!
THE TREES ARE SO TALL...

H

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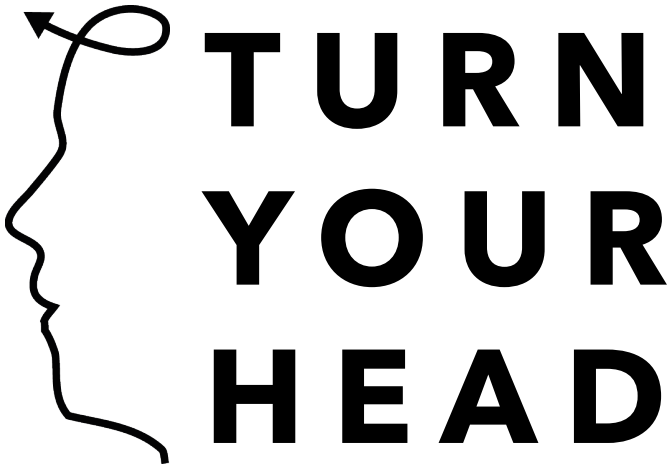

TURN YOUR HEAD

CONNECTING URBAN AND RURAL

CHALMERS

ARCHITECTURE

Master's Programme Design for Sustainable Development 2016/2017
HJO - Towards Resilient Urban-Rural Interactions and Transitions
Design studio part B / In-Depth Project
Fabio Latino | Marcus Olofsson | Moa Rydell | Wu Yu Chen
Turn Your Head