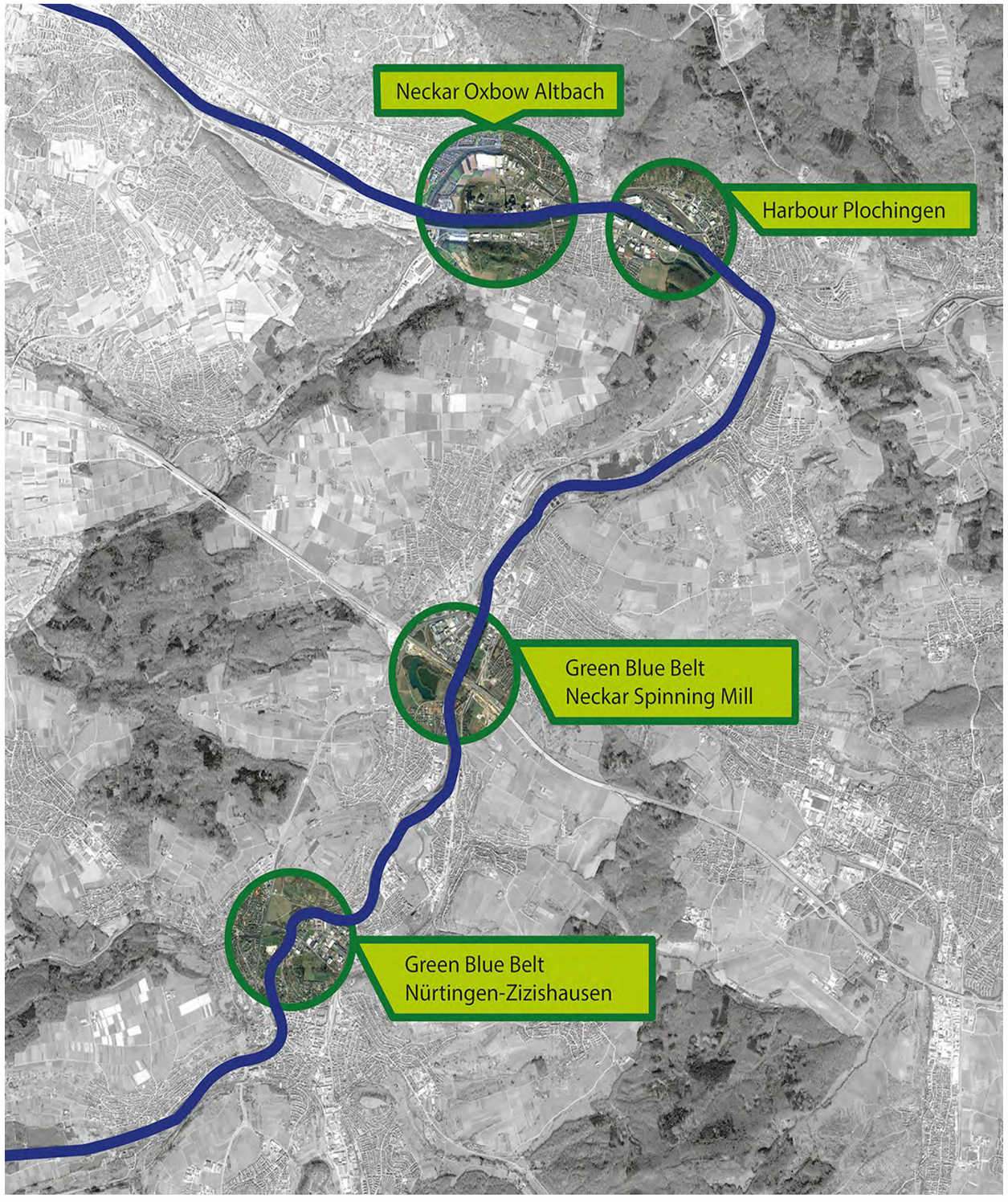


IBA27.de/
Festival

International Student Competition

Neckar Landscape Park

Re-imagining the Productive City Region

Working Period: October 2022 - January 2023

Winning teams and finalists

Verband Region Stuttgart

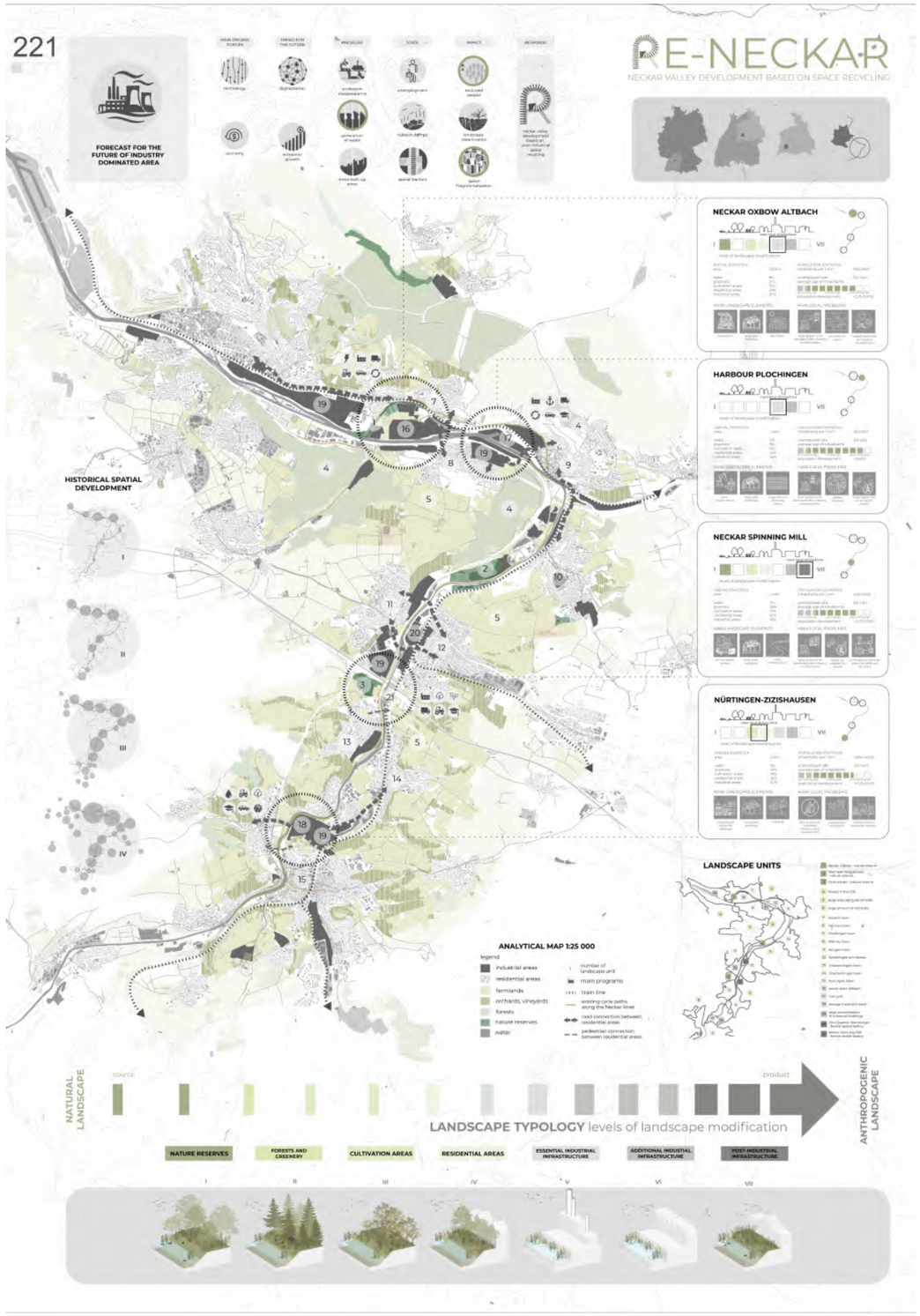
TELOS Towards a European Landscape EconOmy for a Sustainable urban development

Landschaftspark Region Stuttgart

Hochschule für Wirtschaft und Umwelt Nürtingen-Geislingen

bdla Bund Deutscher Landschaftsarchitekt:innen

LE:NOTRE Institute
Linking landscape education, research and innovative practice



First Prize

Gdańsk University of Technology, Poland

Marta Hrycyna, Natalia Fronczek, Marta Kloch,
Liudmila Matsisovich, Szymon Jackowski

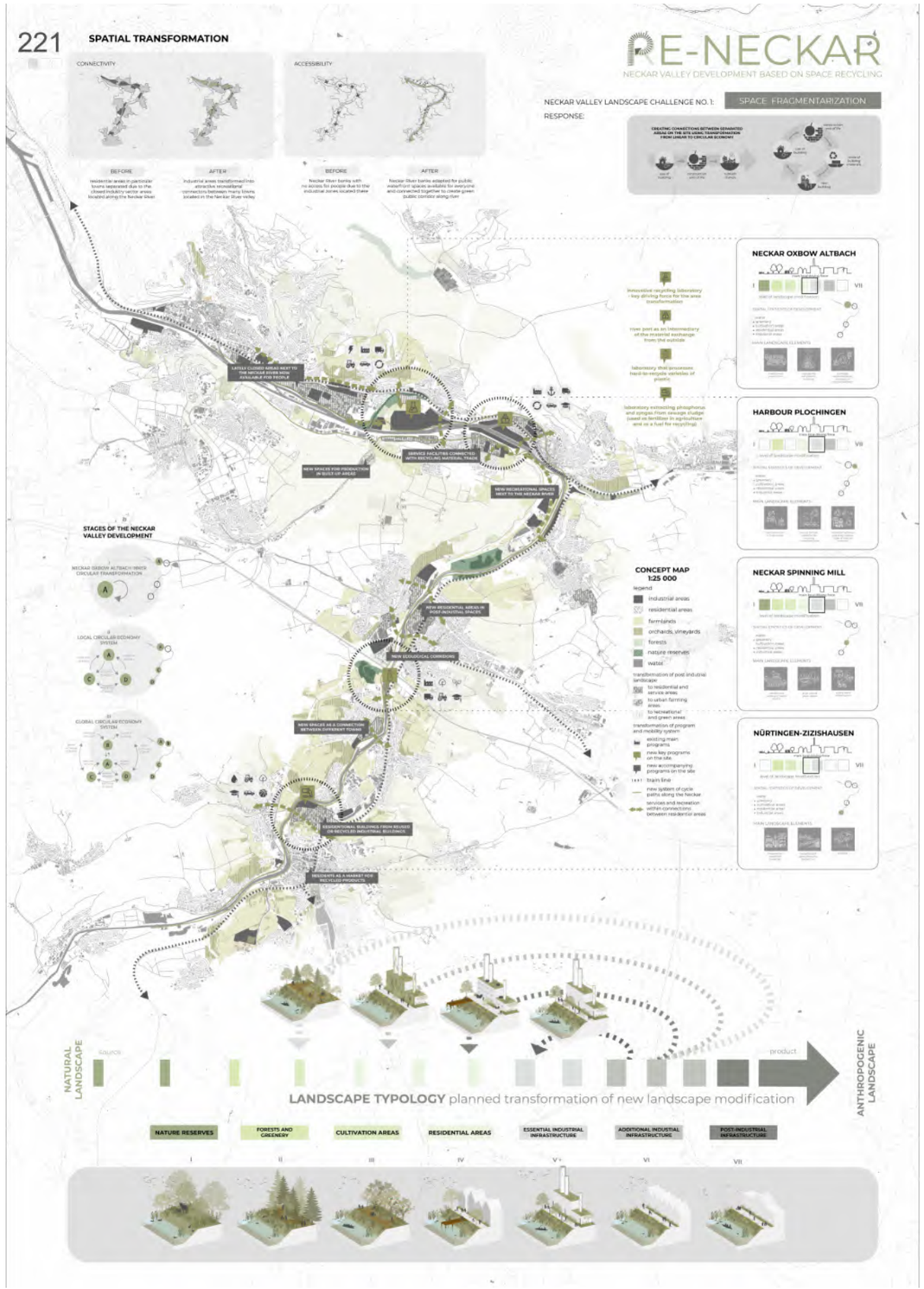
Re-Neckar. Neckar Valley redevelopment based on space recycling

Neckar is a river located in south-western Germany, going through the city of Stuttgart, but most importantly for our project it is going through cities of Altbach,Plochingen, Unterensingen and Wendlingen am Neckar and Nurtingen-Zizishausen.The whole concept of the project is to connect those cities by creating a circular linkproviding new healthy ideas for people, environment and economy.

Our idea of circular economy concerning all four areas is to create spaces for reusing non-decomposable building waste and creating new ways of using it again as a building material. First area, in which we will go into deteails later, is going to be a area of laboratories and science work. Moreover the area will be enriched with new public spaces connected to the science, with educational aspect. Second area, which is a harbour space, could be developed to become a storehouse for al the waste. The materials could be transported to the area by the train or by the river. The third area could be a part of the science process. Old manufactures could be reused as buildings for chemical and mechanical process of transforming waste. Last area is going to be expanded and developed from the reused waste.

Coming back to the island near Altbach, the idea for this area is to create laboratories and science centre from the powerplant building colmplex. In 50 years, shift to green energy is very possible. Powerplant will no longer be needed, due to new ways of creating energy. Energy could be produced from wind, sun, water, vegetation of even plastic. Our complex will have its magazine area, laboratories for scientists and science centre for educational and also fun purposes. Moreover, conference centre is giving possibilities for other people connected to science to broaden their horizons and learn about new technologies.

On the east of the island there is going to be an area for tourists, where they can find places for sport and cultural activities. In the place of magazine halls we would like to



create housing buildings that can also restore canal bank. Between the buildings there are neighbourhood gardens where residents can all together take care of vegetation. This is a way to create bonds between people and place. Lastly, green farming areas and garden plots are preserved and open for people. They are connected to the Heinrich-Mayer Park.

The park and buildings create a view axis that leads to the public space in the area of science centre and longshore promenade. The idea for the business is to create new working places for workers who used to work in the powerplant. Moreover, laboratories focus on the environment and help to preserving it by searching for new ways of reusing building waste. The resources could come from re-built areas near the Neckar river and be for example: concrete, window frames or light bulbs. It is a huge opportunity for science world, environment and local people.

In conclusion, this change would make the arae of Neckar river a cradle of circular economy. The complex of laboratories and science centre will bring new life to the beautiful area of the island by Altbach. Also, it will give new opportunities for economical growth of the region.

SPATIAL TRANSFORMATION

RE-NECKAR

NECKAR VALLEY DEVELOPMENT BASED ON SPACE RECYCLING

BEFORE — communication separation of the power plant island from the surroundings, communication system dedicated to cars

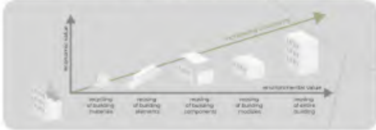
AFTER — new communication system with priority for pedestrian and bicycle traffic, communication routes connect the most important spaces locally

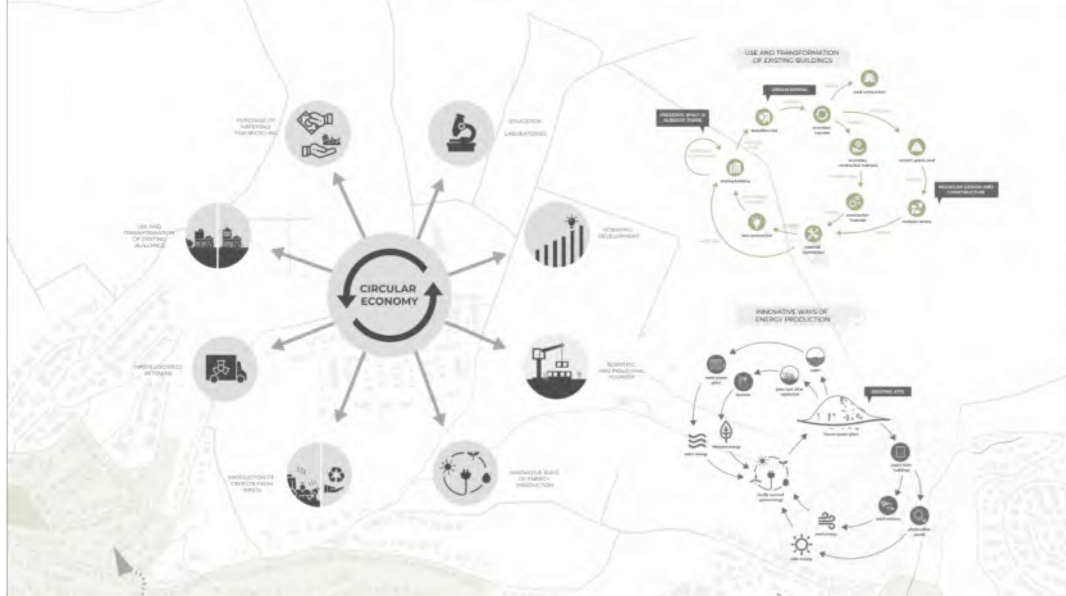
BEFORE — Heinrich-Mayer-Park being the only one public space located on the site with lack of connection with surrounding public space system

AFTER — the island is an integral part of the local public space system, the core of the system is the connection of the space around power plant with the town of Altbach through the Heinrich-Mayer-Park

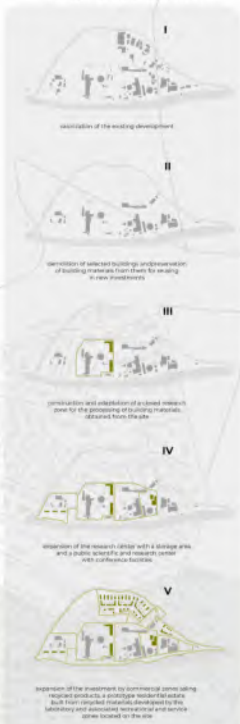
NECKAR VALLEY LANDSCAPE CHALLENGE NO. 2: **GENERATION OF WASTE**

RESPONSE:





STAGES OF PLANNED INVESTMENT DEVELOPMENT



I — revitalization of the existing development

II — demolition of selected buildings and preservation of building materials from them for reusing in new investments

III — construction and adaptation of a closed research zone for the processing of building materials obtained from the site

IV — expansion of the research center with a storage area and a public scientific and research center with conference facilities

V — expansion of the investment by commercial zones selling recycled products, a prototype residential estate built from recycled materials developed by the laboratory and associated recreational and service zones located on the site

MASTERPLAN OF THE NECKAR OXBOW ALTBACH SITE 1:3 000

legend

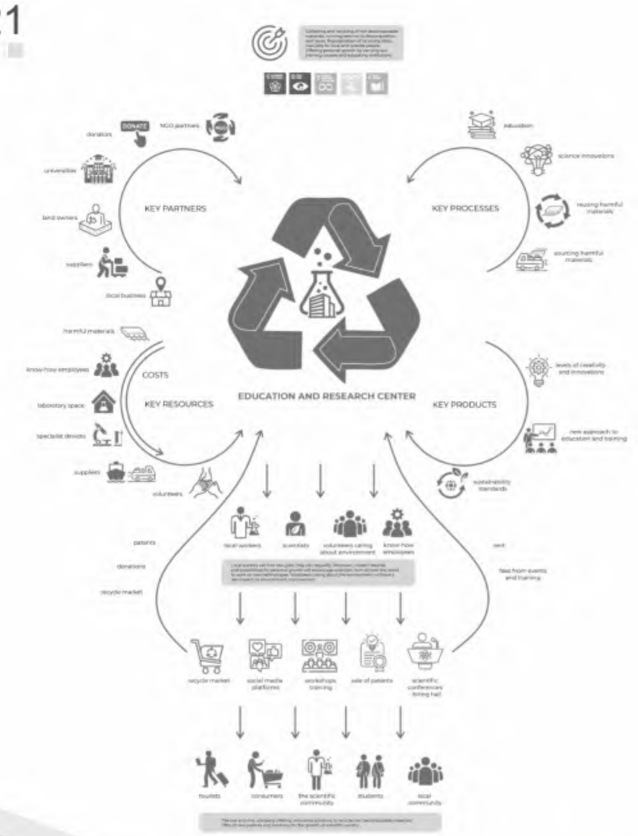
- existing building
- new building made of reused materials
- greenhouses
- allotment gardens
- greenery
- existing vegetation
- new vegetation
- rain gardens
- public squares for events
- existing program on site
- new program on site
- S-bahn line
- S-bahn station
- existing bus line
- existing bus stop
- new bus line
- new bus stop
- existing roads
- road connection with surrounding
- new pedestrian and cycling path
- pedestrian and cycling connection with surrounding

LANDSCAPE UNITS

221

RE-NECKAR

NECKAR VALLEY DEVELOPMENT BASED ON SPACE RECYCLING

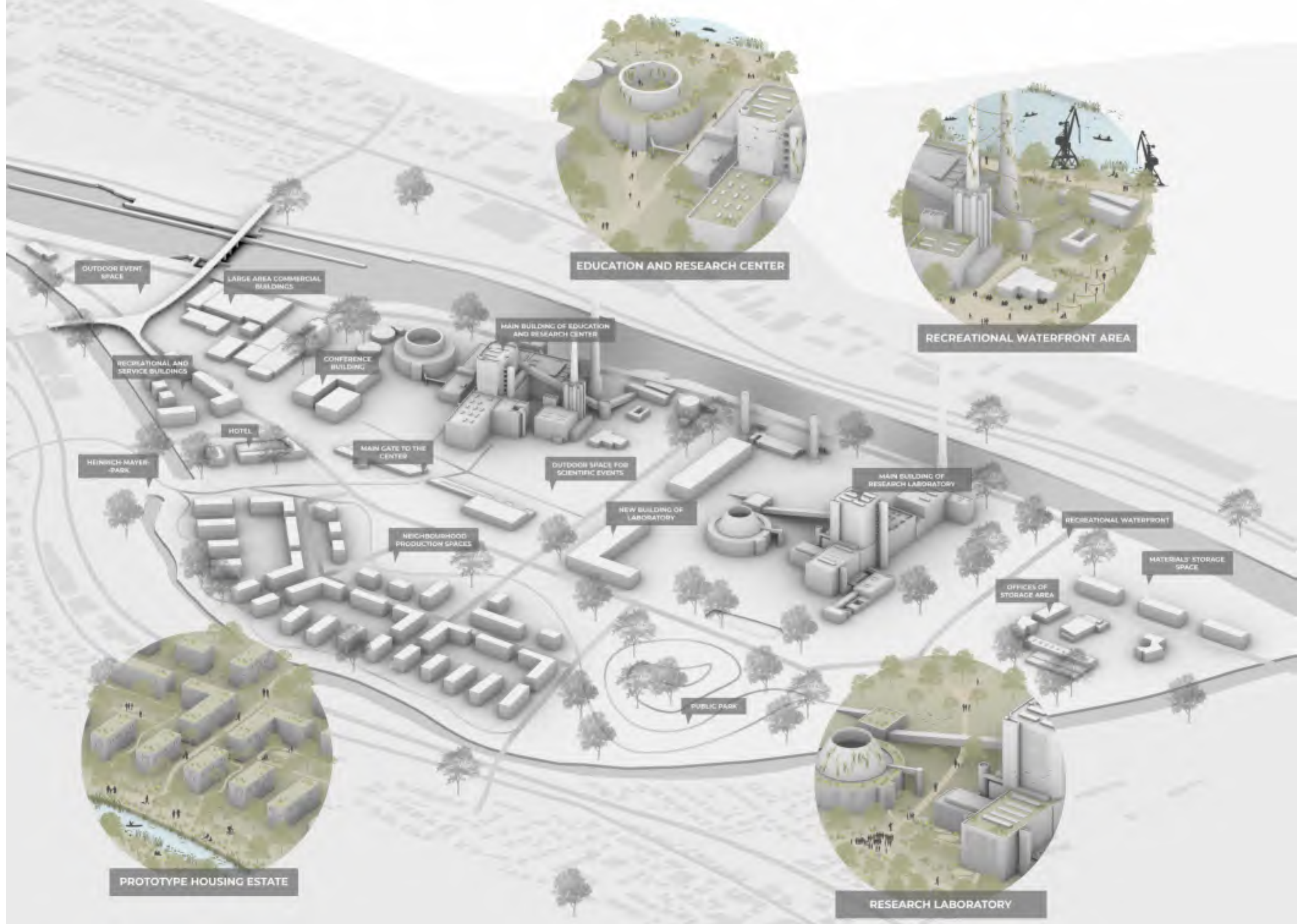


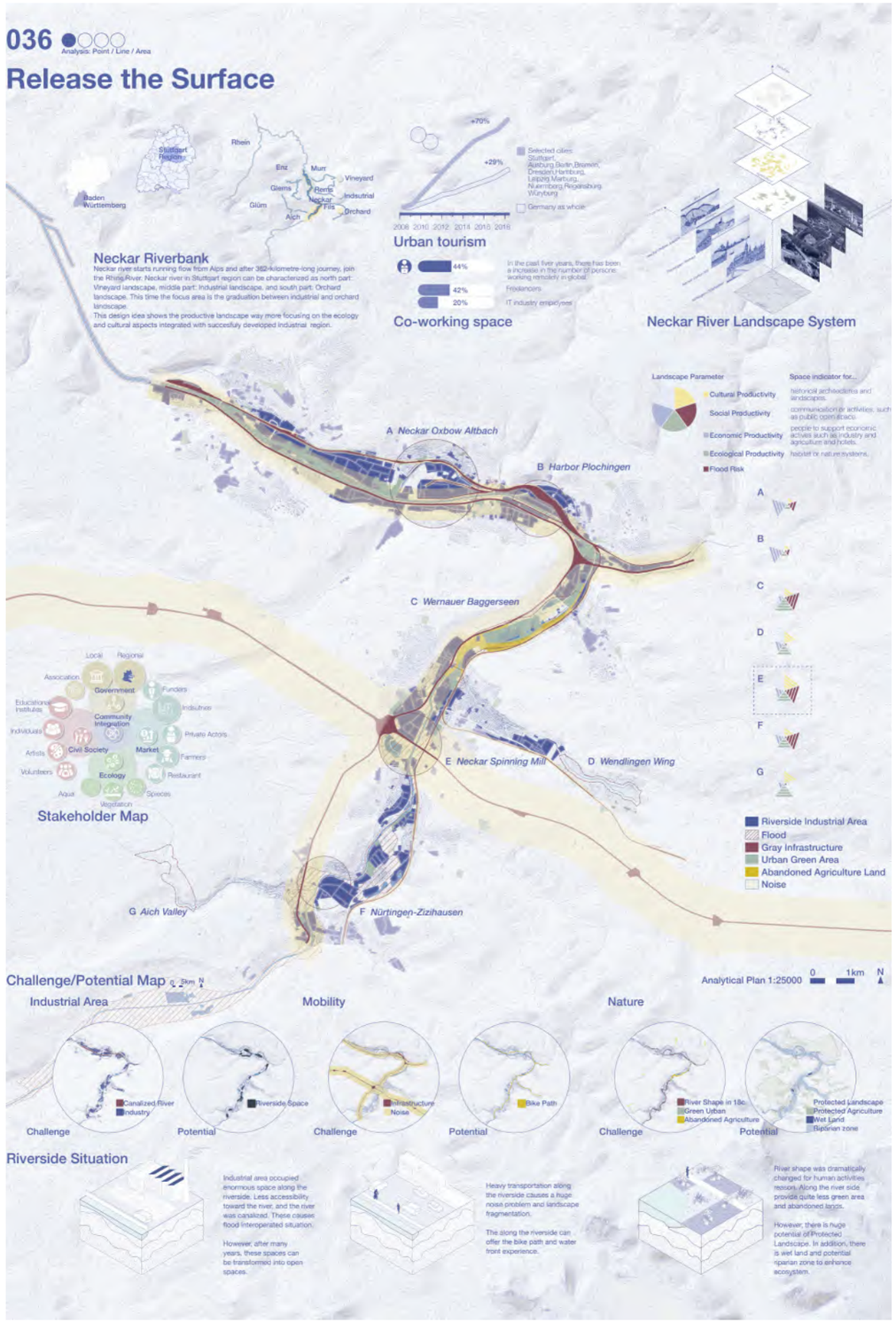
NECKAR VALLEY LANDSCAPE CHALLENGE NO. 3: **EXCLUDED PEOPLE**

RESPONSE:

LANDSCAPE OF NECKAR OXBOW ALTBACH SITE - SOURCE FOR CIRCULAR TRASFORMATION

LANDSCAPE OF NECKAR OXBOW ALTBACH SITE - PRODUCT OF CIRCULAR TRASFORMATION





Second Prize

HfWU Nürtingen-Geislingen
HSWT Weihenstephan-Triesdorf, Germany

Yuga Tanaka

Release the surface

The Neckar river in focus area has challenge with intensive industrial land use consume(point), and heavy demand of mobility (line) which cause critical flood risk, and fragmentation of nature connection.

These conditions have been happened by intensive and rapid urban development.The main idea to improve this situation, is to design the landscape in a long-term process.

The proposal is to release the surface so that the vegetation succession start and grow which provide for spices ecology and people recreational and nature experience. To achieve the strong productivity of Ecology / Cultural / Economy/ Social/ Economic/ Water management, we propose the three main green structure which is green hotspot, green corridor, and landscape typology to animate the identity of landscape and livable space for all living things.

In detail focus area is named as Neckarspinnerei Landscape Park, which people can observe the variety type of vegetation succession, depending on soil, sunlight, use of function, that is nature disturbance and human-caused disturbance. The landscape in growing in time will increase people’s sense of place and habitat productivity.

Neckarspinerrei, historical industrial architecture, is the core platform for community activities for individuals, government, economic sectors. While the vegetation succession process, community interaction will develop together step by step. The community-landscape interaction though the process is the strategy keeping the sense of place responsibility.

The moment the surface is released, the landscape dynamics will start developing. The landscape in process will enhance the landscape productivity in this Neckar river system.

036 Concept: Green- Point / Line / Area

Release the Surface

Concept Idea

Green hot spot /*Point*

Green Corridor /*Line*

Ecological Network /*Area*

A *Neckar Oxbow Altbach Green energy park*

B *Harbor Plochingen Habitat hosting harbor*

C *Wernauer Baggerseen Natural habitat park*

D *Wendlingen Wing Farming trail*

E *Neckar Spinning Mill Nature/Culture Heritage*

F *Nürtingen-Zizihausen Community farming park*

G *Aich Valley Nature park*

Landscape Typology

Landscape democracy development

Community integration · Government · Market · Ecology · Civil Society

Green Network
Wet land
Green Corridor
Open hot spot

Concept Plan 1:25000

Riverside Situation

Industrial Area

Enormous space used for industrial recycle space transformed into the opens ace or vegetation succession will start. Huge building will be renovated into the semipublic functions which support people's activities.

Mobility

Train railway will be transformed green railway, which will affect for noise absorption. Fast roads will be transformed into water absorbed asphalt which will enrich the soil and resilient for heavy rainfall. River side will be open for people and river shape will be curvy to control the flow speed.

Nature

After the flood or cultivation, the vegetation succession will start. Medium term will be the most variable species will co-exist it, people can walk through the vegetations. After year by year, the landscape will be changed, eventually it will become forest.

1: Current Situation

Green Hotspot *Point* + Green Corridor *Line* + Ecological Network *Area*

Vegetation structure

4: Late Succession Stage (2070～)

Site transformation

Early-Succession

Annual plants (Winter/Summer) · Short-lived Perennial herbs

First Year · Second Year

Vegetation succ

Cruciferae · Compositae · Aster pilosus, Erigero

Water Terrace · Forest Succession · Grienwiesen · Federal highway 8 · Wendlingen–Ulm high-speed railway · Neckar River · Railway tunnel construction · Agricultural Land

Blue Classroom · Wetland Vegetation Succession · Vegetation Succession · Gravel Succession Vegetation · Community garden · Spontaneous use · Wetland Vegetation Succession · Esslinger Str. · "Community Plaza" · Neckarspinnerei Quartier · Kleine Wendlinger Kurve · Große Wendlinger Kurve (planned to be constructed in 2030) · "Tunnel park" · Plaza · Meadow · Grove Plaza · Rest Point

Section BB'

Create hollow to host aqua habitat

Slight topography facilitate variety of succession

Vegetation separate the car and pedestrian zone

Access to the riverside and create buffer between people

Dry vegetation succession area distributed by people's activity

036

Landscape Interaction

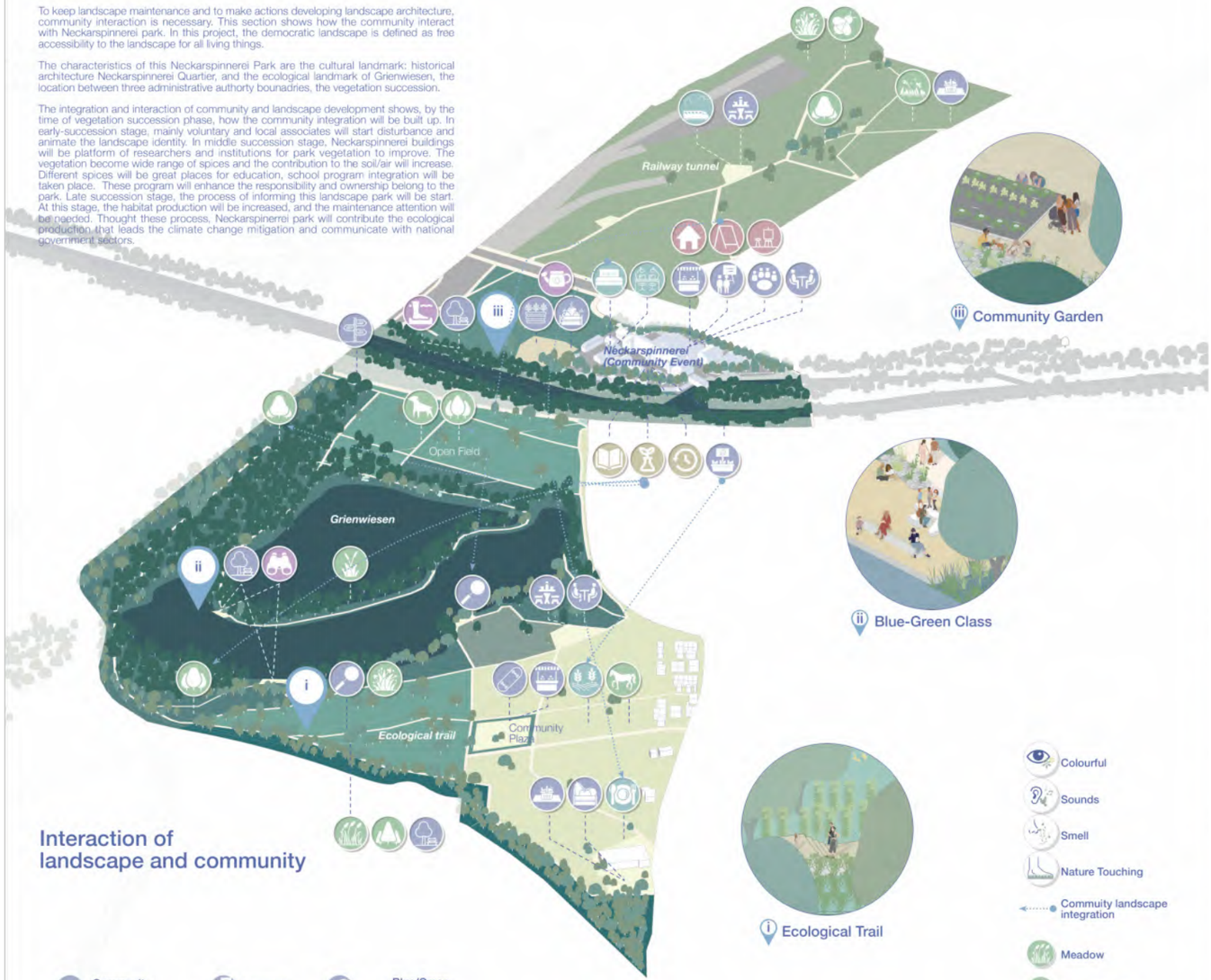
Release the Surface

Landscape Interaction

To keep landscape maintenance and to make actions developing landscape architecture, community interaction is necessary. This section shows how the community interact with Neckarspinnerei park. In this project, the democratic landscape is defined as free accessibility to the landscape for all living things.

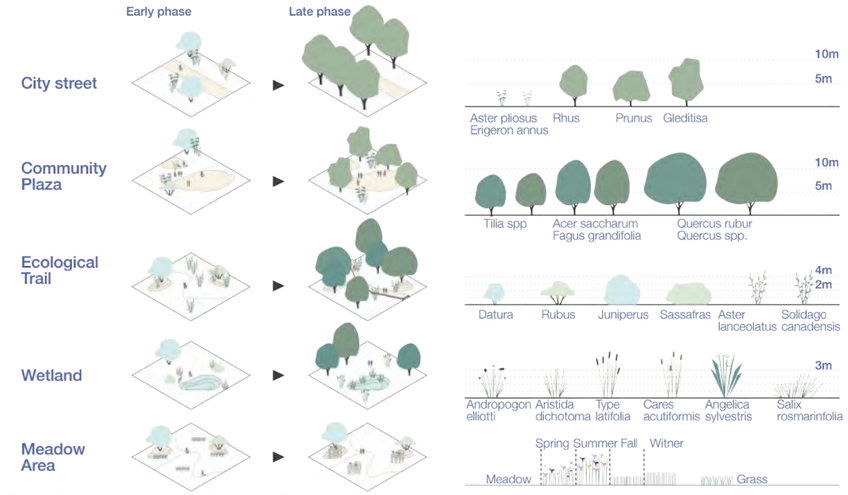
The characteristics of this Neckarspinnerei Park are the cultural landmark: historical architecture Neckarspinnerei Quartier, and the ecological landmark of Grienwiesen, the location between three administrative authorty bounadries, the vegetation succession.

The integration and interaction of community and landscape development shows, by the time of vegetation succession phase, how the community integration will be built up. In early-succession stage, mainly voluntary and local associates will start disturbance and animate the landscape identity. In middle succession stage, Neckarspinnerei buildings will be platform of researchers and institutions for park vegetation to improve. The vegetation become wide range of spices and the contribution to the soil/air will increase. Different spices will be great places for education, school program integration will be taken place. These program will enhance the responsibility and ownership beiong to the park. Late succession stage, the process of informing this landscape park will be start. At this stage, the habitat production will be increased, and the maintenance attention will be needed. Thought these process, Neckarspinnerrei park will contribute the ecological production that leads the climate change mitigation and communicate with national government sectors.

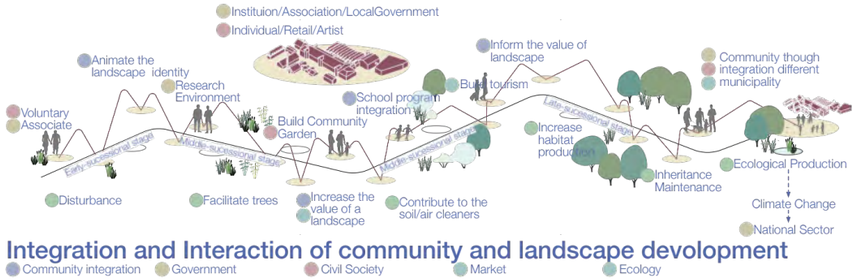


Interaction of landscape and community

Community Interaction
Spacial Experience
Government
Private
Economic
Ecological
Learning
Meeting point
Rest point
Regional Signboard
Experiment Farm
Market
Blue/Green classrom
Café meeting
Picnic table/area
Skateboard
Edible garden
Community garden
Observation point
Water experice
Responsibility of the community
Experiment Instituion
Archive
Historical Tradition
Art studio
House
Exhibition
Short stay
Co-working space
Agriculture field
Restaurant
Railway view point
Colourful
Sounds
Smell
Nature Touching
Commuity landscape integration
Meadow
Aquatic plant
Habitat hotspot
Dog run
Horse Tracking
Conifer tree
Deciduous tree



Landscape spacial transformation

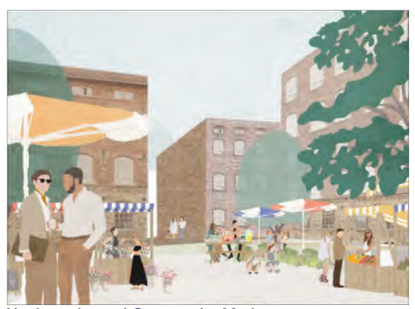


Integration and Interaction of community and landscape devolopment

Community integration
Government
Civil Society
Market
Ecology

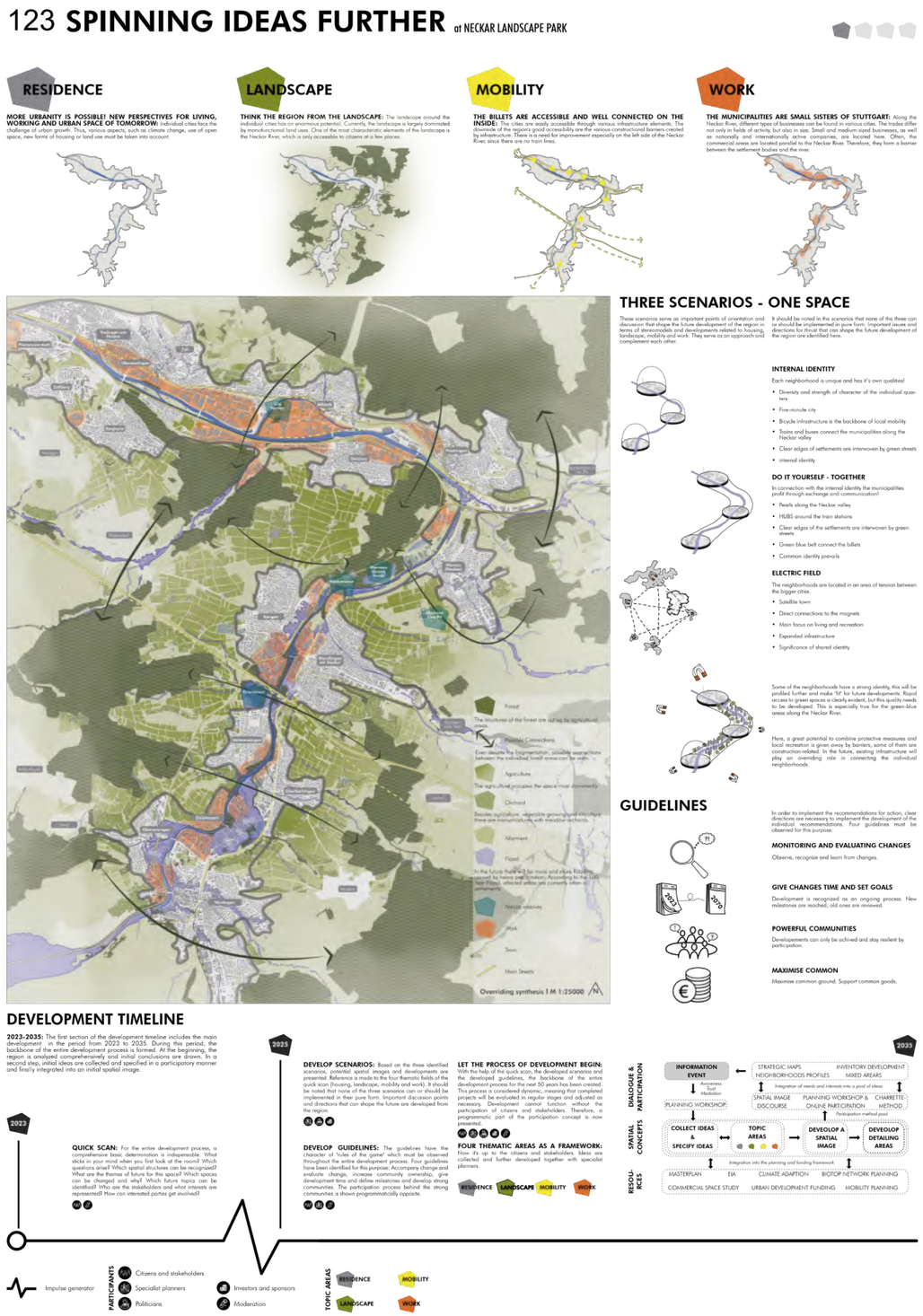
Ecological trail

Grienwiesen Green blue class



Neckarspinnerei Community Market

Railway tunnel park



Third Prize

Hochschule Geisenheim University, Germany

Anke Otten, Konstantin Schmitt, Jonas Börner, Saskia Quint

Spinnng Ideas Further

In the period up to 2070, cities will face particular challenges. In analyzing the planning area, the subjects of residence, landscape, mobility and work emerged as key aspects with immense development potential. All of these are in conflict with the impacts of climate change.

Through the concept ´spinning ideas further` it is possible to strengthen the identity of the neighborhoods. Central is a quick access to green space, especially for the green-blue areas around the Neckar River. Here, a great potential for combining ecosystem services, flood prevention measures and local recreation becomes apparent. In addition, the renaturalized forests as well as the traditional vineyards and orchards are increasing. In the mobility sector, the existing infrastructure will be upgraded, especially for pedestrians, cyclists and public transport. Due to digitalization, many people work in flexible places, in mixed-use neighborhoods.

Guidelines are needed to achieve these goals. These include monitoring and evaluating change, giving time to change and setting goals, creating strong communities and shared value.

Wendlingen´s old Cotton Mill area in particular becomes a field of experimentation and a future best practice model illustrating the points mentioned above. Through temporary projects, new developments can be tested together with citizens and expert planners and incorporated into the spatial image. By preserving the factory buildings, an important contribution is made to the preservation of the industrial and cultural heritage. The urban reorganization creates a self-regulating social structure within the dense existing development, which can pursue various uses and activities

123 SPINNING IDEAS FURTHER at NECKAR LANDSCAPE PARK

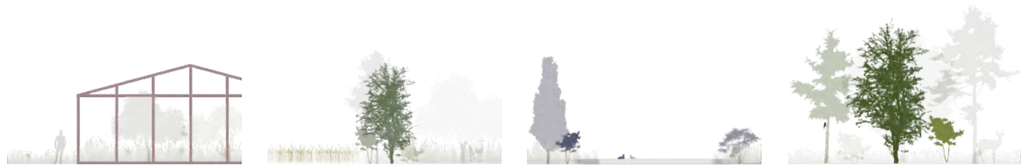
LANDSCAPE

AGRARHUBS
Green centers I Organic farming I Nature education

PRODUCTIVE LANDSCAPE
Avoid monocultures and plant new cultures I
Create small-sized landscape mosaics I Local products

WATER LANDCAPES
Renaturation I Develop tourism I Recreation right up the doorstep

GREEN LABELS
New usage of fallow land I Support biodiversity I Forest conservation



FOUR THEMATIC AREAS AS A FRAMEWORK:

RESIDENCE

KEEP CLEAR CONTOURS
Restrict growth and spread liveable places I Create welcoming spots I Target networking

STRENGHTEN URBAN CENTERS
Avoid vacancies I Allow temporary use I Strenghten identification I Qualified green spaces

PRESERVE THE OLD AND USE THE NEW
Recognize inventory as an important resource I Develop landmarks

SUSTAINABLE RESIDENTIAL AND OPEN SPACE
Promote a mix of uses in the districts

LANDSCAPE

AGRARHUBS
Green centers I Organic farming I Nature education

PRODUCTIVE LANDSCAPE
Avoid monocultures and plant new cultures I Create small-sized landscape mosaics I Local products

WATER LANDCAPES
Renaturation I Develop tourism I Recreation right up the doorstep

GREEN LABELS
New usage of fallow land I Support biodiversity I Forest conservation

MOBILITY

BEING IN REACH
Reachability and movement on different scales

USAGE OF EXISTING STRUCTURES
Transforming existing structures I Climate adoption I Green paths connect the municipalities

URBAN MOTORS
Mobility HUBS as nodes

SHUTTLE
Shuttle buses are connecting the municipalities on the left side of the Neckar I Connection to the train stations

WORK

COOL WORKING
Climate adopted workspace I Green-blue commercial areas

PLACES OF INNOVATION
Commercial spaces as thinktanks of the settlements I Pulsing and dynamic creative centers

TRANSFORMING SPACES
Common process of a socio-ecological urban and open space development

SMART WORK
Remote work I Extensive digital infrastructure

FROM THE IDEAS TO THE SPATIAL IMAGE: The former analysis poster programmatically shows the process from idea generation to actual measures. Core of the entire process is continuous participation of stakeholders and citizens. This concept poster shows the development from individual topic areas to the spatial image. To realize these developements, each of the topic areas have their own timeline.

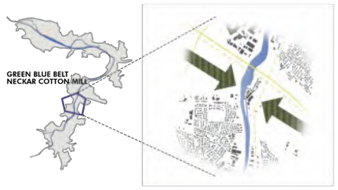
TOPIC AREAS → DEVELOP A SPATIAL IMAGE

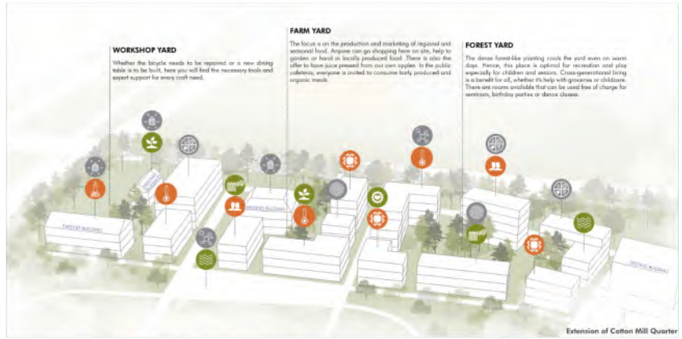
123 SPINNING IDEAS FURTHER at NECKAR LANDSCAPE PARK

GETTING ALL THREADS TOGETHER

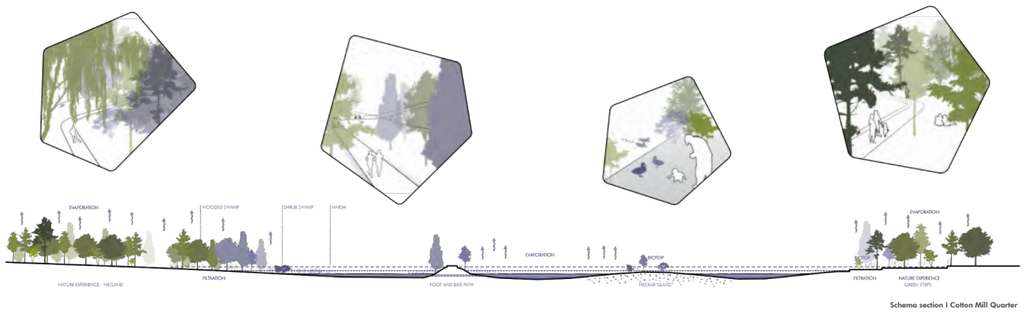
ESTIMATE ECOSYSTEM SERVICES: Due to the impacts of climate change, prolonged droughts and heat waves as well as heavy precipitation and flooding are expected. Therefore, it is necessary to prepare the region for such weather events. This is where ecosystem services become essential. To ensure that the region heats up less and cools down at night, a high amount of greenery and little sealed surface area are necessary. This can be achieved by reducing road and parking areas, greening buildings and planting numerous new shade-providing street trees. In order to be able to reduce the amount of water from precipitation, the creation of natural flood protection is necessary. To achieve this, the concept relies on the renaturation of forests and wetlands. This has the effect that the soil can absorb and store more water, so that surface runoff is reduced. In addition, the Neckar is given more room in the wider riverbed.

USE THE OLD IN A FRESH WAY: The area around the Cotton Mill is an important hub for the surrounding localities, where all the above subjects are combined. The natural spaces that arise bring not only climatic benefits, but also great added value for users. New path connections for pedestrians and cyclists enable the experience of nature on the doorstep. The bridges connect both banks of the Neckar River and the planned quarter extension of the Cotton Mill. There are seating steps that invite for recreation and activity and react flexibly to the water level in their use. Another highlight a the island that can be used for swimming in the Neckar.





RECOGNIZE AN USE NATURAL FUNCTIONS



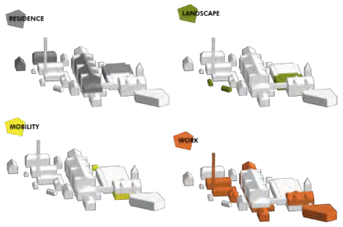
Schema section I Cotton Mill Quarter

123 SPINNING IDEAS FURTHER at NECKAR LANDSCAPE PARK

REVITALIZE THE COTTON MILL

THE COTTON MILL AREA AS AN EXPERIMENTAL FIELD: The Cotton Mill site becomes an experimental field and future best practice model. Various fields of action from the four thematic areas are applied on the site. Through temporary projects, new developments can be tested and incorporated into the spatial image together with citizens and expert planners. The chimney on the Cotton Mill can be seen from far away. By preserving the factory buildings, an important contribution is being made to the preservation of the industrial and cultural heritage. But how can the Cotton Mill site be used in the future and above all, made accessible to the public? The concept integrates many possible uses and addresses a broad spectrum of uses. The urban reorganization creates a self-regulating social structure within the dense existing buildings, which can pursue numerous uses and activities.

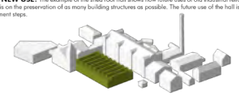
MIXED USE: The area of the old Cotton Mill serves as an example quarter for future life within the competition area. Here, the four future themes are applied too. A detailed specialization of the individual uses can be found in the illustration within the individual themes.

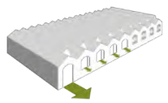



Inside of the shed roof hall

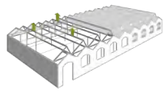
STEPS OF THE TRANSFORMATION

OLD HALL - NEW USE: The example of the shed roof hall shows how future uses of old industrial relics can be converted. A special focus is on the preservation of as many building structures as possible. The future use of the hall is shown on the basis of five development steps.

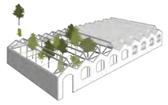




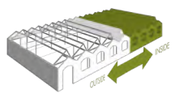
1. STEP - OPEN AND CONNECT: In the first step, the bricked-up windows in the southern part will be generously broken out on both sides and the frontmost window will be created flush with the floor as a new entrance.



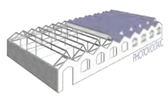
2. STEP - NEW PERSPECTIVES: In the second step, individual roof elements in the southern part (where the bricked-up windows have already been broken out) will be removed so that the roof structure can also be seen from the outside.



3. STEP - OLD STRUCTURES, NEW ATMOSPHERES: Through the targeted use of pioneer vegetation (e.g. Betula pendula, Verbascum spec.), a ruderal atmosphere is created, which blends into a unified image together with the old industrial structures. In addition, the use of the supports and roof beams, which function as existing and preserved structures, as climbing support.



4. STEP - INSIDE AND OUTSIDE: In the fourth step, the hall will be divided into two parts. The green courtyard and the cultural center. The latter serves as a multifunctional meeting place. It houses a café and restaurant, a communal foyer and smaller meeting rooms. The cultural center will be accessible barrier-free via the green courtyard.



5. STEP - RETHINK CYCLES: In the fifth and final step, various cycles are considered and corresponding technical measures are implemented. Individual vegetation structures in the green courtyard, as well as on the roof, are designed as retention areas, so that not only rainwater is infiltrated on site, but also small biotopes are created. In addition, photovoltaic and solar thermal systems are installed on the remaining roof area. These feed the energy generated into the corresponding storage tanks.

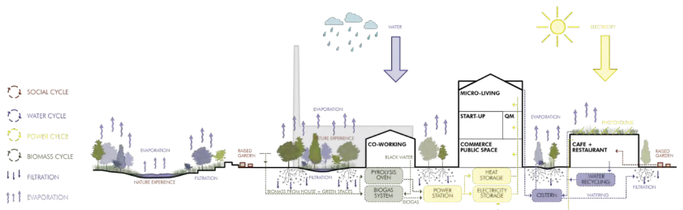
RETHINK CYCLES

SOCIAL: In addition to the technical cycles (water, electricity and biomass), the social cycle is an important component for the Cotton Mill neighborhood. The social cycle consists, for example, of smaller projects in the four thematic areas (landscape, living, working, mobility), such as small productive landscapes in the form of community beds and the benefits of vegetation structures. Here, the focus is on microclimatic improvements through shading or evaporation and the experience of nature.

WATER: Increasing extreme rainfalls often temporarily overload the systems of the central stormwater management. To prevent this, decentralized stormwater management is a key component of stormwater management on the Cotton Mill site. This allows water to be stored at the point of origin and infiltrated with a time delay. Decentralized rainwater management can make a small contribution to improving the microclimate through evaporation. Rainwater from roofs, for example, is temporarily stored in cisterns. The collected water can be used to irrigate the green structures, especially in summer. Rainwater that is not discharged into the cisterns can be infiltrated in retention troughs with a time delay. This promotes groundwater recharge.

ELECTRICITY: A future increase in sunshine hours is seen as an opportunity and great potential for the Cotton Mill to be more independent with the help of a wide range of technical equipment (photovoltaics, solar thermal). In addition, the generated electricity can be fed into the power grid. Energy generation begins, for example, on the shed roof of the hall. Here photovoltaic and solar thermal systems are installed, which feed the generated heat or electricity into the corresponding storage tanks. The storage tanks are connected to the buildings so that the energy generated can be used or stored directly.

FOOD AND BIOMASS: Any biomass produced, whether from households or green waste, can either be composted or fed into the biogas plant. The latter is fed by black and gray water and passes the energy obtained to the power station, which generates heat or electricity and then feeds it to the appropriate storage facilities. In addition to the biogas system, the biomass can also be used to produce vegetable charcoal. Under very high temperatures and the exclusion of atmospheric oxygen, biomass is converted into plant carbon.

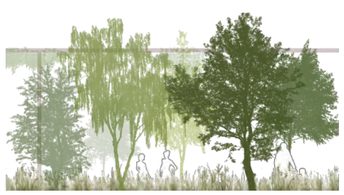


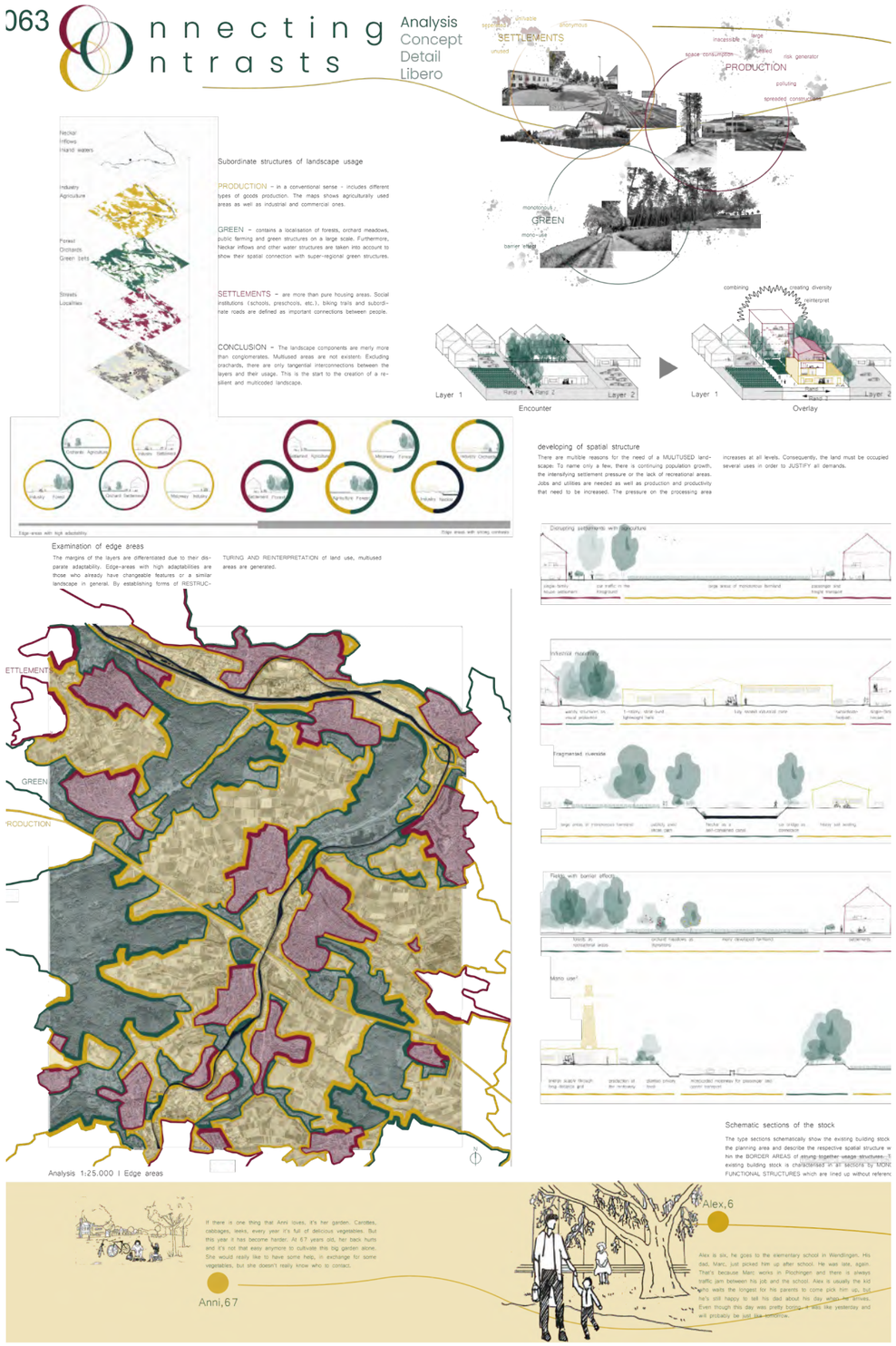
VEGETATION CONCEPT

NATURE AS INSPIRATION: The vegetation concept in the area of the Cotton Mill site and in particular the shed roof hall is predominantly oriented towards a ruderal appearance, characterized by a few pioneer species. These include Betula pendula, which is characterized by a striking and attractive bark and Buddleja davidii, which has a long-lasting flowering period and is thus an important food source for bees and butterflies. The woody plants and shrubs are supplemented by various grasses and perennials. Through the increased use of perennials, for example Verbascum spec., different vegetation patterns are constantly created.

ADAPTED TO THE LOCATION: Especially in shady and wet areas, woody plants and perennials adapted to the site are used. Particularly in the retention areas, plants are used which can cope with both a dry site and a moist site.

USE OF EXISTING STRUCTURES: In addition to ruderal shrubs and perennials, climbing plants are an important design element. Here, the focus is particularly on the existing building structures, such as the supports and the steel girders of the roof construction. These are used as climbing aids and are supplemented by horizontally tensioned nets and wires. On these, the plants entwine themselves over individual sections of the inner courtyard and thus create a natural roof.





Honorable Mention

HSWT Weihenstephan-Triesdorf, Germany

Veronika Ort, Philippine Denies, Rebekka Heeg, Melanie Hofer, Felicia Wasmeier

Connecting Contrasts

In the analysis, three different types of usages come together: green, production and settlements. They do not cross and barely overlap. The concept starts on the margin of functional spaces and offers a solution to the prospective surface pressure caused by space occupancy.

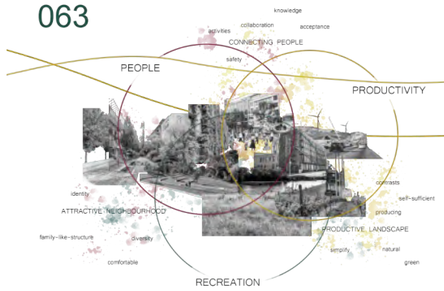
Currently, different limits have a varying adaptation tolerance and therefore differently-sized potential for overlapping uses. The idea is that contrasting usages generate interesting spaces. Since functions overlap, it´s possible to connect further usage types unconventionally.

Connecting Contrasts are being joint.

At first the edges are viewed in general sections and then equipped with possible changes in the sense of superimposition. For this, a toolbox is providing elements, which can be applied to the edge-areas. As a longterm development, it has to adapt to current aspects. There are three steps to it: Over the next 10 years, toolbox-elements are being tested and strengthened in five pilot projects. In 20-years time, additional intersections are being initiated in appropriate spots. The superimposition is being developed and individualised.

50 years from now, the development is spreading into the landscape. The concept is carried by the general public in a longterm participation concept. Spacial, it is being embedded in the Neckar-festival, which will establish the “bahn.brechend” festival in the region later on.

On festival grounds between the track area a site of participation is being created in order to celebrate the diversity and connection of the landscape elements. Simultaneously, it is the epicentre for every superimposition and the connecting axis of the region.



PRODUCTIVITY – This layer expands to include all types of productivity. It no longer designates just agriculture and industry, meaning a pure production of goods, but occupies parts of the settlement, education and recreation landscape. This includes, among others, energy production, EDUCATION and research, agriculture, CREATIVITY, industry, intellectual achievements, production at a broader level and classical trade receive the same value.

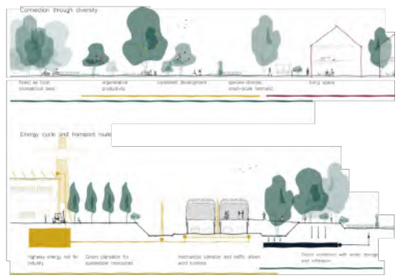
Since these functions overlap, it becomes possible for more areas to be taken into RECREATIONAL USE and to be linked unconventionally to production areas.

HUMAN – The focus lies on the human being as an INDIVIDUAL. The needs regarding everyday life will be adapted to future requirements and circumstances.

RECREATION – Green spaces as RECOVERY SPACES are made ACCESSIBLE for people and are used in a variety of ways. This also includes unconventional areas, such as newly created intermediate areas of fields.

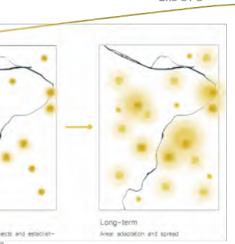
CONNECTING CONTRASTS is based on the overlay of allegedly competing usage structures. Already a current trend of land expansion in housing and production areas is to be observed. The concept reinterprets the effect of land consumption. Therefore, existing areas are being reinvented in terms of their USAGE STRUCTURE. The key to the spatial transfer of the concept is the BORDER AREA. Areas, that meet and define the transition of usage borders to monocoded areas, are going to be transition areas rather than borderlines.

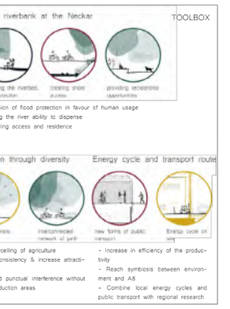
These places, due to their different usage claims, provide space with a level of DIVERSITY that makes them lively and interesting. According to the title „Connecting Contrasts" a place, where CONTRASTS meet and IDENTITY emerges, is developed. The vision is to create accessible, multicoded spaces that initiate an improved liveability and an exciting, appealing landscape in the Neckar region. People are enabled to live at the same spot where they unwind and work.

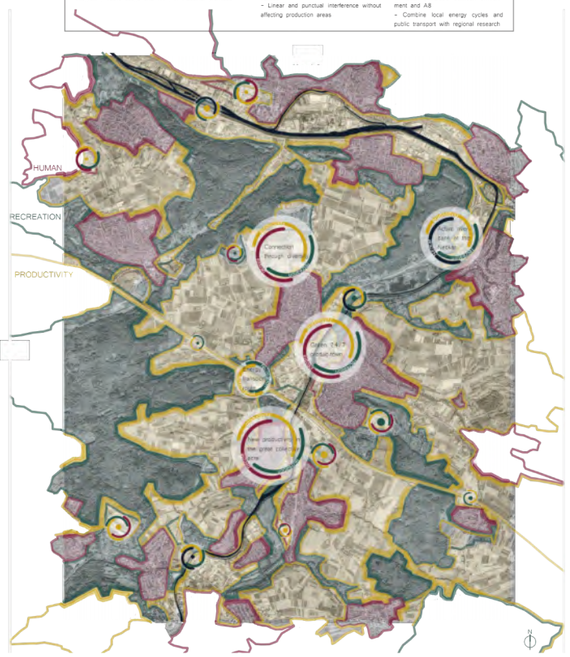


Schematic sections of the development typologies

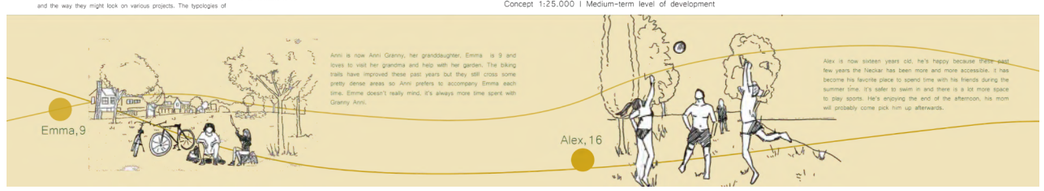
Based on selected locations, PRINCIPLES OF OVERLAPPING USAGE are explained. These types demonstrate the transformation of areas, which CONNECT the layers meeting each other and enable versatile use. They represent the functions that are superimposed and the way they might look on various projects. The typologies of the sections are INDIVIDUALIZED during the implementation depending on the situation and adapted to the places. An exemplary application of this construction kit is shown by the following design of the detailing area.







Concept 1:25.000 I Medium-term level of development



Annis now Anni Granny, her granddaughter, Emma is 9 and loves to visit her grandma and help with her garden. The biking trails have improved these past years but they still cross some pretty dense areas so Anni prefers to accompany Emma each time. Emma doesn't really mind, it's always more time spent with Granny Anni.

Alex is now sixteen years old, he's happy because these past few years the Neckar has been more and more accessible, it has become his favorite place to spend time with his friends during the summer time. It's safer to swim in and there is a lot more space to play sports. He's enjoying the end of the afternoon, his mom will probably come pick him up afterwards.

Produc.town - Areas of industrial use are additionally covered with spaces for PUBLIC AND CULTURAL USES. By transforming flat buildings to STOREY BUILDINGS, spatial potential is induced in favor for green strutures as well as residential space.

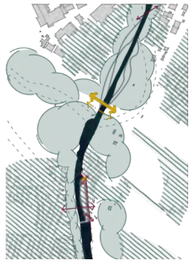
Bank.out – The Neckar is allowed to SPREAD OVER THE PRESENT RIVERBANKS. In this area, the focus lays on nature but it's planned to be ACCESSIBLE AND TRAVERSABLE FOR PEOPLE by a web of footbridges.

A.tention - biotope areas will be preserved in their character and INTEGRATED INTO THE ENVIRONMENT through changes in the surroundings.

bahn.brechend festival – The site of the festival "bahn.brechend" is also regarded as the SPATIAL CENTER OF AN ONGOING PARTICIPATION PROCESS. It's located directly betweeen two new built ICE lines and is always connected to the spinning mill.

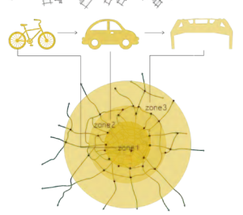
Reviving and moving – Because of the mobility concept it's possible to induce traffic-calmed zones. Those can be transformed from a traffic-only type of usage to areas with PEOPLE-FOCUSED USES like childs play or parents meeting each other.

Land use in stock
- building site
- built-up, sealed
- agricultural, large-scale
- greened, mostly natural



Spatial structuring
- Motorway bridge
- Railway line
- Foot and cycle crossing
- Energy generation
- Spotlight on people
- Spotlight on nature
- Historical course of the Neckar
- Neckar retention area

Future usage of buildings
- New multi-storey housing
- Living in former industry
- Vertical industrial buildings
- New productivity of the Spinning mill
- Productivity in former housing
- Green structures in former industry



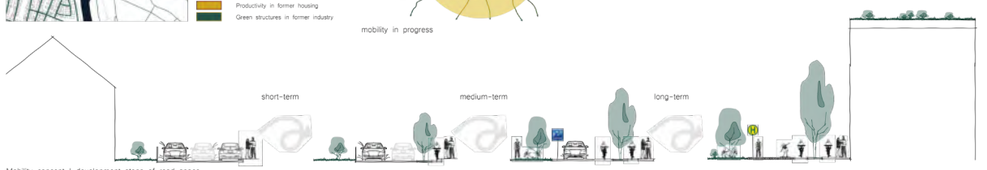
mobility in progress

From large into small scale

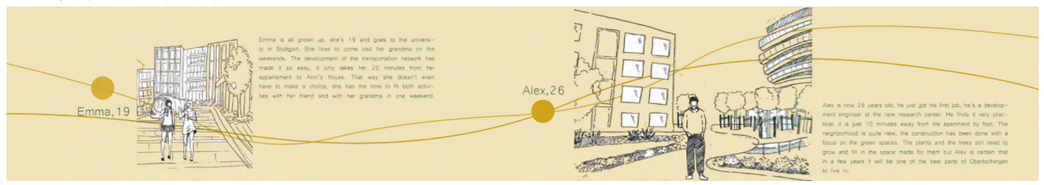
According to the larger concept, the existing borders of the detailing area are transformed by linear, punctual or even more extensive interventions. This way, the concept is followed and the tools shown in the sections can SPREAD INDIVIDUALLY AND GIVE ADAPTED ANSWERS TO THE LOCAL SITUATION. This process creates new spaces with an overlay of structures and uses. In the site of the spinning mill the former borders becomes ZONES OF OVERLAY. They become SPATIAL CONNECTIONS right in the centre of the investigation area.

From a traffic-only-use to a zone of social interaction

The structure of the future mobility divides up to three zones, orients on the DISTANCE TO COVER AND REACT WITH SUITABLE VEHICLES – The shorter the distance, the smaller and more individual the vehicle – in short-distance area like residential ones or city centres the potential space is EQUALLY SHARED by pedestrians, bicycles and cargo bikes for Transportation. These areas are free of cars and regarded as GREEN SPACES FOR RESIDENCE OR ENCOUNTERS. Thereby, the quality of life and the amount of social interaction is increased. The extended distances from out of town can be compensated by more complex but public vehicles. At mobility hubs people can change from their short-distance vehicle of choice to car-sharing, bus or shuttle. In order to manage supra-regional distances, the mobility concept uses the already existing infrastructure of highways. But the main focus lays on a for a lot of people at once instead of focusing on individuals. Tunnel-busses, shared cars or tramways are more productive and sustainable alternatives that can reduce the volume of traffic significantly.



Mobility concept I development steps of road space

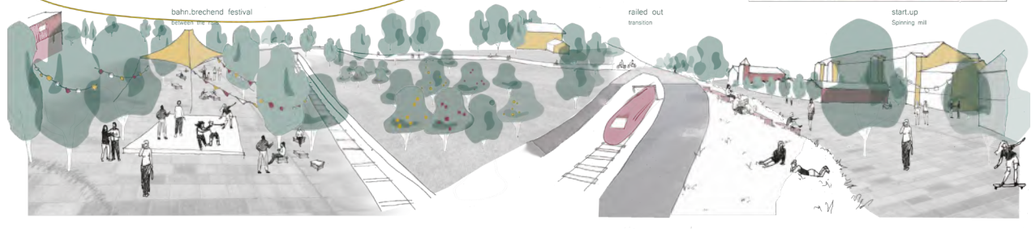


Emma is all grown up, she's 19 and goes to the university in Stuttgart. She likes to come visit her grandma on the weekends. The development of the transportation network has made it so easy, it only takes her 20 minutes from her appartement to Anni's house. That way she doesn't even have to make a choice, she has the time to fit both activities with her friend and with her grandma in one weekend.

Alex is now 26 years old, he just got his first job, he's a development engineer at the new research center. He finds it very practical, it is just 10 minutes away from his apartment by foot. The neighborhood is quite new, the construction has been done with a focus on the green spaces. The plants and the trees still need to grow and fill in the space made for them but Alex is certain that in a few years it will be one of the best parts of Oberbohingen to live in.

063 Connecting Contrasts

Analysis
Concept
Detail
Libero



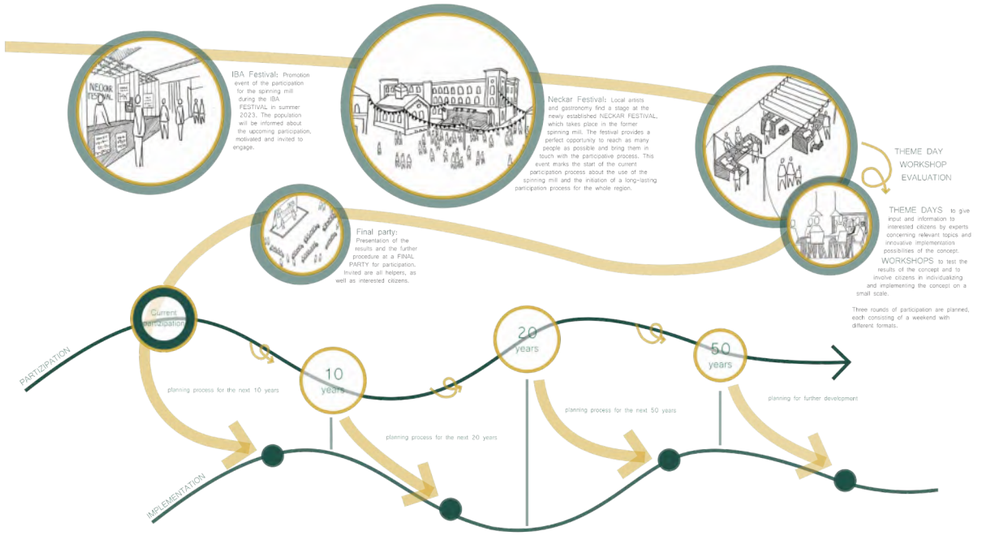
Punctual overlay of the edge areas

Open-Space-Programme Spinning Mill and Festival

Due to the building site there is no stock to be considered at this place. As a matter of fact the concept is designed for dealing with stock situations. Therefore the place is dealt with a different approach. To take the new function as well as the spatial situation seriously, it is important to connect the site with the context between the rails and with the Spinning Mill. Spatial, the concept is orientated at the context whereas in terms of content the importance of the participation is emphasized and spatially located in the „bahn.brechend" Festival.

The spinning mill represents the centre of our new productivity – versatile use with different functions generates RESILIENCE AND VARIETY. By confronting different types of professions - just like science, culture and arts - in the newly built offices, we give them space to FEEL INSPIRED and to benefit from each other. Buildings in the north of housing areas in combination with promenades along Neckar and unique green structures connect the new productivity with everyday life and recreational use. In its function as an established festival location with a connection to the BAHN.BRECHEND festival, the former cotton spinning mill becomes a GUIDELINE for democratic regional development and a hub for long-term participation as a driving force for concept implementation.

Democratic landscape design – in the detailing area at the Spinning mill, participation is started on a small scale during the IBA and future participation is spatially located in the bahn. brechend festival.
On a large scale, PARTIZIPATION starts with the transfer of the overarching concept to the small scale. The dissemination of the concept with the further location of the cuts and their individual adaptation to the spaces happens through the citizens on site. People recognize potentials on their own doorstep and are encouraged to implement the proposed measures to equivalent places in the surrounding area.
The desired participatory output thus lies concretely in two things: Further, SELF-DESIGNED INITIAL POINTS of the concept idea, as well as suggestions for locally appropriate INDIVIDUALIZATION OF THE SCHEMATA.
To keep participation going, CONTROL MECHANISMS constantly record how well citizens are still involved in the transformation process and when the next round of participation needs to be launched.



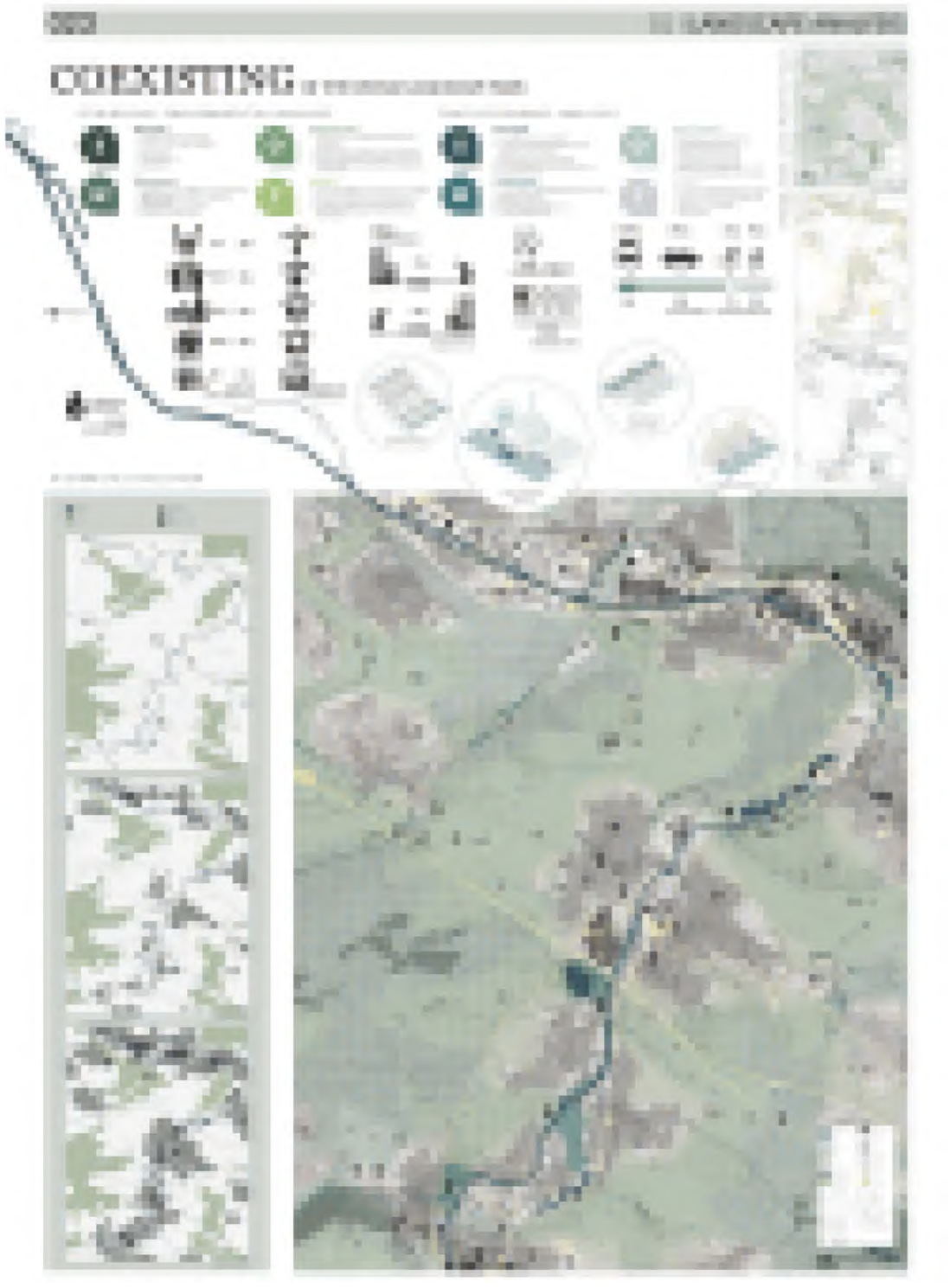
Participatory process at two levels

The following 7 projects reached the final evaluation round. This round was already at a significantly high quality level.

In total, we received 52 valid proposals out of which 25 were considered in the second evaluation round.

We aim at presenting all projects at least digitally and in different formats on site during the IBA'27 Festival and the Landscape Forum Stuttgart Region.

We will make all projects available online!



Final Evaluation Round

La Sapienza University Rome, Italy

Judith Leppert, ERASMUS Student University of Stuttgart, DE

Natacha Englebergt, ERASMUS Student ULB Brussels, BE

Clara Christiaens, ERASMUS Student ULB Brussels, BE

Stitching Together

The stitching concept of the landscape refers to the first form of the industrialization of the Neckar, the textile industry. Industrialization has shaped the Neckar river landscape. Whereas it used to appear as a calm and unified landscape, it is nowadays a fragmented landscape that needs to be stitched together. In addition to the fast industrialization, the inhabitants of the region are facing other barriers such as heavy commuting roads and railways preventing them to connect. The integration's problem is a real challenge the Stuttgart region is facing.

The proposed revitalization process starts with the identification of the centers or potential centers of the fragments. Based on the ability of the textile to unify, new enjoyable ways of commuting are used as the threads that reconnect the fragments by linking their centers.

The stitching paths aim to enhance the red thread of history by reactivating the river, reconnecting historical, cultural, recreational and natural areas and enhancing the river's initial appearance. The creation of a friendly environment for pedestrians and cyclists combined with a developed public transport network aim to incentivize a transition to low mobility. The stitching mobility network aims to reconcile the isolated communities and landscapes.

New functions punctuate the stitching network and requalify the centers. Nature based solutions that are beneficial from an economic, social as well as ecological and environmental point of view are used to stitch together the fragments and revitalize the river landscape. The stitching tools around the new recreational paths help fighting climate change while offering a new unified identity to the landscape and to the people.

The green infrastructure plan includes infiltration areas, carbon forests, floodable parks, renewable energy zones,... Urban beaches and floodable parks ensure the protection of

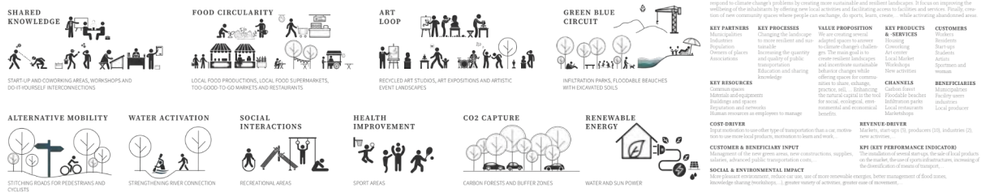

STITCHING TOGETHER


STITCHING TOGETHER
THE NECKAR LANDSCAPE PARK
ENHANCING MOBILITY
HYDRAULIC ENERGY
STRENGTHENING COMMUNITY
INDUSTRY WORKSHOP
STITCHING ROADS
NECKAR SEAM
URBAN BEACH
SPORTS PARK
CULTURE GATHERING
WATER ACTIVATION
NATURAL CAPITAL
LEGEND

STITCHING TOGETHER

THE NECKAR LANDSCAPE PARK

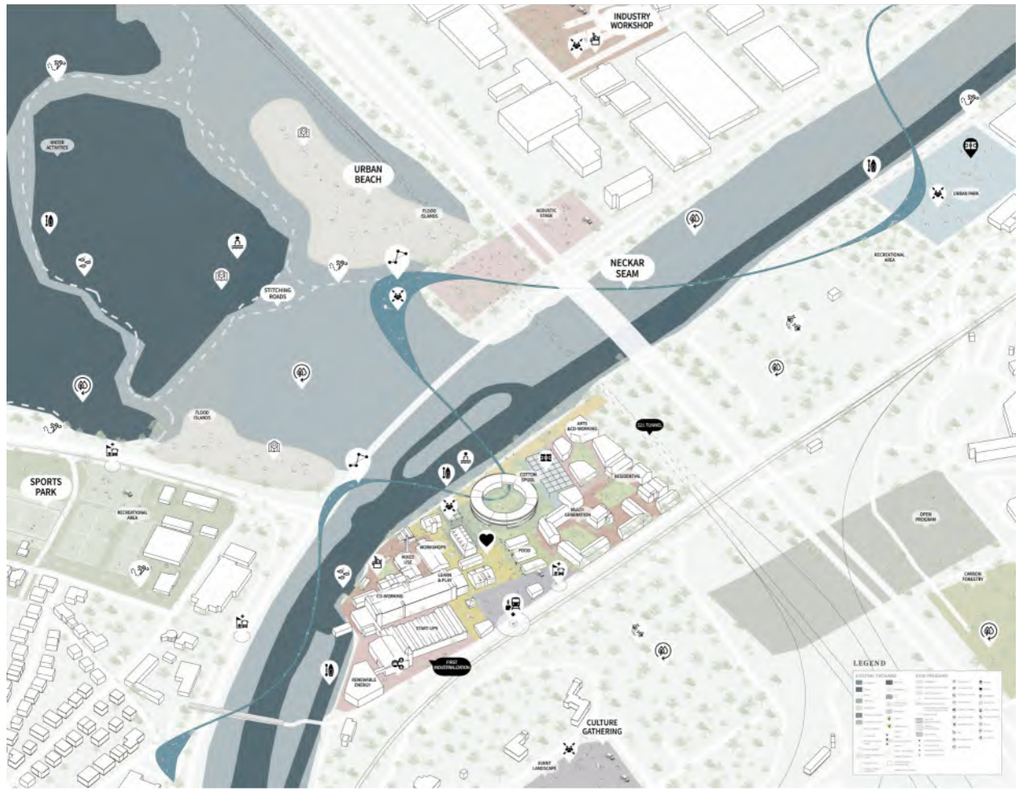
NEW CONNECTING INTERACTIVE PROGRAMS



LINKING NECKAR SEAM-BRIDGE

REVITALISED NECKARMILL-QUARTIER

NEW DIFFUSE NETWORK



the region against flood. Green areas are stitched together thanks to green corridors so that grey infrastructure is also a mean of connection. Those sustainable solutions also benefit the well-being of the inhabitants. It allows them to experience their landscape by offering green recreational areas, community parks, meeting squares, …

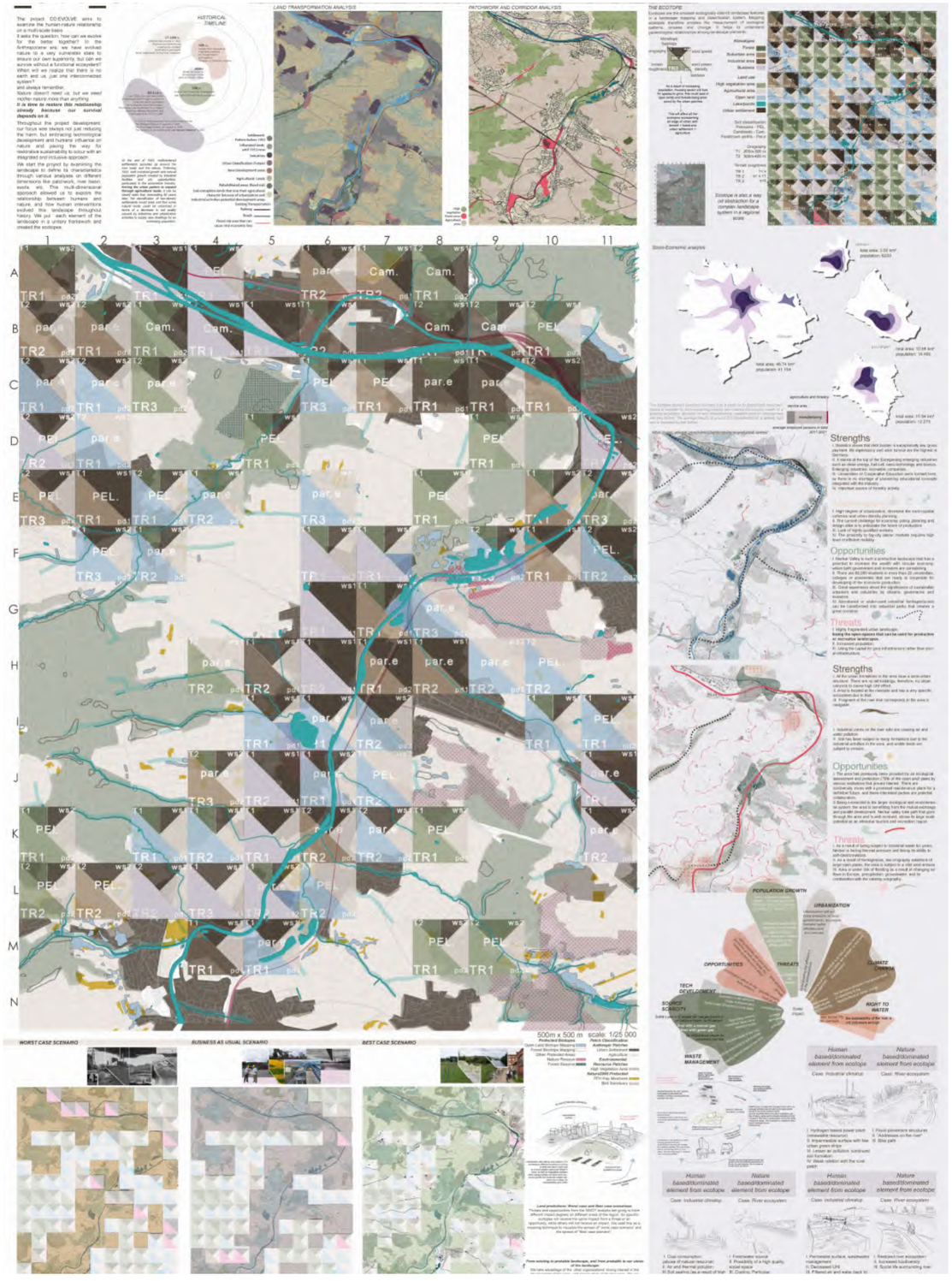
The neckar cotton mill area, that gave birth to industrial activities and the fragmentation can also be the initiator of a unified pleasant sustainable future. The proposal for the neckar cotton mill tends to demonstrate the potential of the neckar landscape. A more self-sufficient neighborhood based on circular metabolism is created.

Using water and sun energy, the neighborhood is energetically independent. Food and materials circularity take place in the cotton mill areas. The coexistence of start-up and coworking areas with housings and youth residences allow knowledge sharing that takes place in the form of workshops and do-it-yourself ateliers. Like stitching a spider's web, every program created in the cotton mill echoes in the surrounded fragments.

A connected network is created.

The neckar seam is the final stitch of the landscape. It works in direct relation with the river and its surroundings. While the river can vary in size, the walkable seam still allows direct communication between the communities. It creates passage. The river and its potential are enhanced by renaturalizing, reconnecting and redeveloping interactions.

Our proposition aims to be the start of a resilient future that promotes sustainability, growth, culture and social development to create a stronger bond between all the actors and the landscape



Final Evaluation Round

La Sapienza University Rome, Italy

Nur Sultan Karaman, Lamiya Garayeva, Haydar Akyol

Positive Anthropocene

The project aims to examine the human-nature relationship on a multi-scale basis. It asks the question, how can we evolve for the better together? In the Anthropocene era, we have transformed nature into a very vulnerable state to ensure our own superiority, but can we survive without a functional ecosystem? There is no earth and us, just one interconnected system. And we should always remember that nature doesn't need us, but we need mother nature more than anything.

Throughout the project development, our focus was always on not just reducing the harm, but paving the way for restorative sustainability to occur with an integrated and inclusive approach. We start the project by examining the landscape to define its characteristics through various analyses on different dimensions like patchwork, river basin, swots, etc.

This multi-dimensional approach allowed us to explore the relationship between humans and nature, and how human interventions evolved this landscape throughout history. We put each element of the landscape in a unitary framework and we created the ecotopes. Afterward, we move into different scales of this relationship to create a system where we can see the “missing” aspects of these relationships that prevent them from being circular; mutually beneficial.

From this point, we can compose a site specific NBS (nature-based solutions) to implement in the landscape to generate the “missing aspect”. Additionally, we take advantage of the previously approved initiatives on the landscape and build our vision from a probable landscape with the additional cross-cutting strategies that would support the existing plans for the area

_044_02

POSITIVE ANTHROPOCENE

OUR VISION

Our vision is to create a landscape system where human-Nature relationship is not one-sided, as in humans being the main beneficiary, but it is a mutually respective and beneficiary relationship. We are embracing the Anthropocene and the technological development, and reversing the negative connotations those words have in relation to the natural environment.

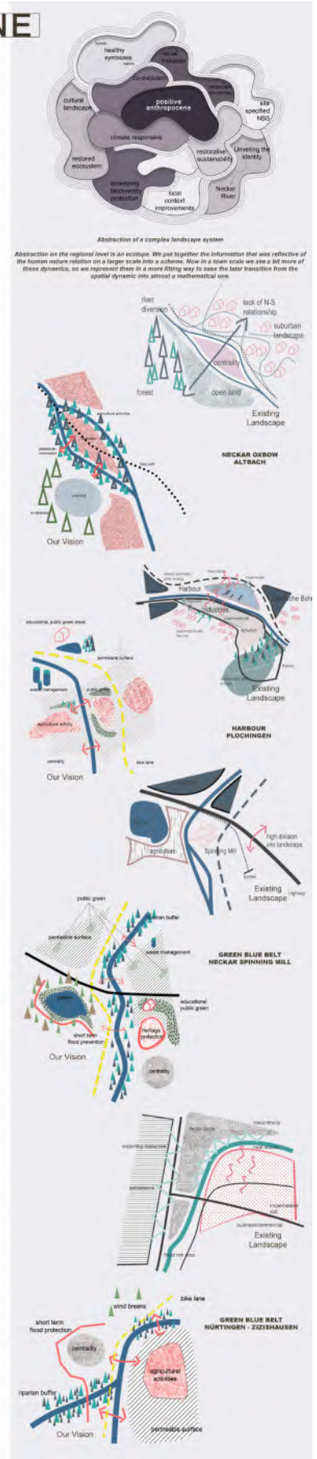
MAIN OBJECTIVES
Reduce Fragmentation
Improve Risk management
Restore rivers ability to self revitalize
Increase social inclusivity

We are taking advantage of strong interest on enhancing the area and its capabilities, and we are building our vision for the area from the "probable (business as usual)" landscape

1st we address the threats that does not have a corresponding opportunity. This is how we form our primary objectives.

2nd we address the threats that are all have a single corresponding opportunity and/or requires supporting initiatives for prevention. This wat we form our supporting objectives.

scale: 1/25 000



Abstraction on the regional level is an ecotope. We put together the information that was reflective of the human nature relation on a larger scale into a scheme. Now in a town scale we see a bit more of three dynamics, so we represent them in a more fitting way to ease the later transition from the spatial dynamic into almost a mathematical one.

Improve Risk Management
Reduce pollution
New infrastructure for accessibility for all
Flood protection measurement
Wind erosion initiatives
Water erosion initiatives
Preventing further soil sealing (leftover spaces, urban farming)
Innovative agricultural practices

Restore the Neckar River's ability to self revitalize
REDUCING THE HARMFUL EFFECT OF INDUSTRIAL WASTE ON NATURAL AREAS.
1. Reduce water pollution—save potable water from getting contaminated
one of the primary resource of water pollution- industrial waste=untreated wastewater=contamination of ground water
I. water treatment plants
Ex. Adsorption desalination
II. infiltration tanks
III. Rain gardens
IV. Adopting the strategy of waste management system
2. Reduce air pollution
I. Analyze the factory waste
II. Environmental impact assessments for the factories=creating a more
transparent management= faster and efficient actions< and
Improve quality of life
Improve the microclimate in urban areas
successful implementation of the Urban Green Infrastructure < reduce urban heat island effect

Reduce fragmentation (Urban/rural divide)
Creating a collaborative interface between agricultural and urban sectors
=>cultural activity spaces=>urban gardens
Bring agricultural practices to urban and industrial lands
<=improve productivity=>economic gain
successful implementation of sustainable mobility practices
<=reduce car dependence=<reduce environmental impacts

Increase social inclusivity
Organizing collaborative projects, like workshops that would require bringing people with different skillsets together. "Collaborative Urban farming" program that will be elaborated on the 4th entry, is an example to such projects.
New quality public spaces, specifically public places around the river side, that is also accessible to everyone
Improved accessibility, establishing a landscape democracy to ensure a cohesive social life in the region
Educational, collaborative public activity spaces, as in botanical gardens, or natural parks

Heritage conservation initiatives
Built heritage as in the building of the Neckar spinning mill and its surrounding district. Possible actions for a physical heritage : Restoration, renovation, enhancement
Natural heritage as in Oxbow river transforming into a lake over time. Possible actions are: Protection, enhancement, safeguard
Cultural Landscape of the region is the urban form and practices left as marks of big cultural changes in the region: The Industrial landscape and the harbor. Actions are promotion, conservation, enhancement

Primary Objectives
Supporting Objectives
Cross-cutting Objectives

New quality public space
Bike lane
Increased pedestrian mobility
Waste management
Innovative agriculture
Collaborative working
Agricultural center
Educational, collaborative public green
Urban agricultural practices
Flood risk prevention
Wind erosion prevention
Permeable surface
Water erosion prevention

Existing land use
High-densed Urban Settlement
Low-densed Urban Settlement
Agricultural Lands
Forest
Water Elements

Conservation Initiatives
Cultural landscape
Natural heritage
Built heritage

_044_03

POSITIVE ANTHROPOCENE

Land Transformation of the "Green Blue Belt, Neckar Spinning Mill"

Land Use

NECKAR SPINNING MILL MASTERPLAN

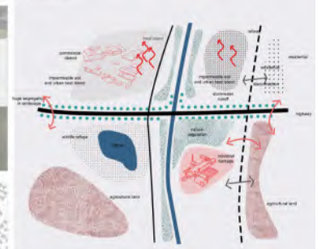
SWOT analysis

Strengths
1.Smooth urban density transition
2.important transportation node
3.Cultural landscape, heritage
4. Grünestern as a natural protection area

Weaknesses
1. Highway dividing the landscape
2. Existing in the border of 4 different municipalities
3. Underused areas along the river
4. Poor connection between natural lands and human activities.

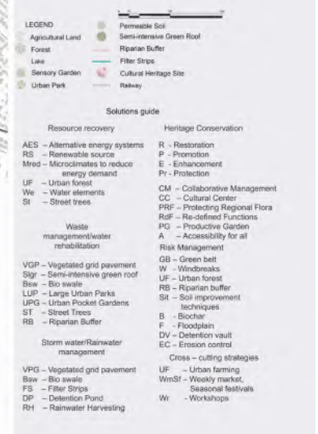
Opportunities
1.High density yet almost rural building structures
2.Many start-ups running their business in Neckar/Spinnerei
3.Governmental support for energy efficient, zero carbon district
4. The construction of the Albabstieg railway tunnel

Threats
1. Large open fields subject to wind erosion.
2. Flooding
3.Urban sprawl



STRATEGY MAP 1/5000

Abstraction of a complex landscape system; detail area scale



Solutions guide

Resource recovery
AES – Alternative energy systems
RS – Renewable source
Mred – Microclimates to reduce energy demand
UF – Urban forest
We – Water elements
St – Street trees

Waste management/water rehabilitation
VGP – Vegetated grid pavement
Sigr – Semi-intensive green roof
Bsw – Bio swale
LUP – Large Urban Parks
UPG – Urban Pocket Gardens
ST – Street Trees
RB – Riparian Buffer

Storm water/Rainwater management
VPG – Vegetated grid pavement
Bsw – Bio swale
FS – Filter Strips
DP – Detention Pond
RH – Rainwater Harvesting

Heritage Conservation
R - Restoration
P - Promotion
E - Enhancement
Pr - Protection

CM – Collaborative Management
CC – Cultural Center
PRF – Protecting Regional Flora
RdF – Re-defined Functions
PG – Productive Garden
A – Accessibility for all

Risk Management
GB – Green belt
W – Windbreaks
UF – Urban forest
RB – Riparian buffer
Sit – Soil improvement techniques
B – Biochar
F – Floodplain
DV – Detention vault
EC – Erosion control

Cross – cutting strategies
UF – Urban farming
WmSf – Weekly market, Seasonal festivals
Ws – Workshops

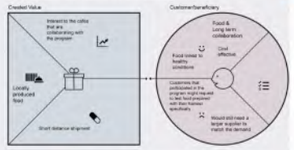
_044_04 POSITIVE ANTHROPOCENE

Creating a collaborative interface between agricultural and urban sectors
"Collaborative Urban Farming" project

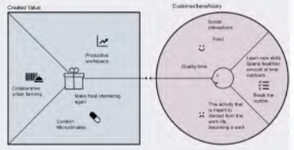
Value Proposition

SUSTAINABLE DEVELOPMENT GOALS

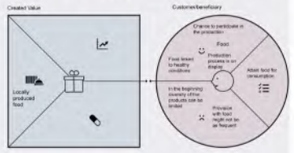
Long term relationship; customer is a caffe/restaurant

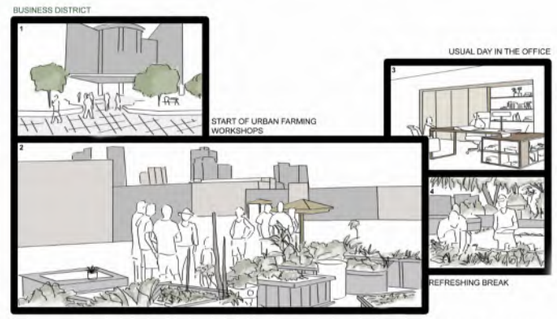


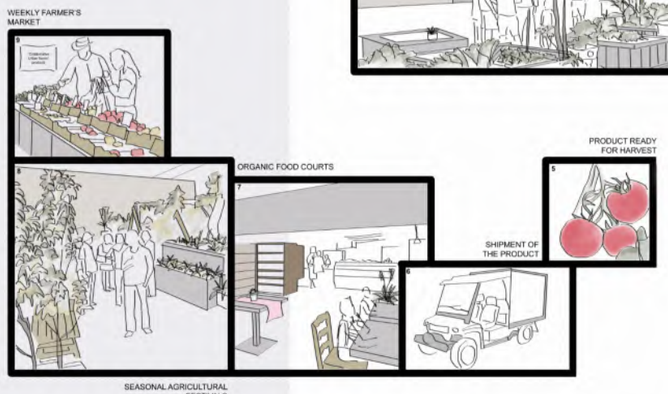
Co-creation with the customer; customer is a participant of the Urban farming program



Impersonal relationship; customer is an individual shopping from farmers market

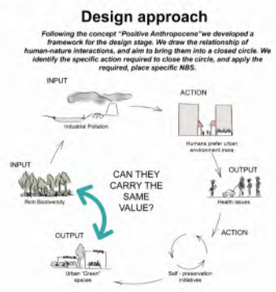


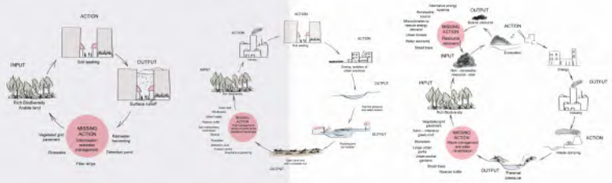


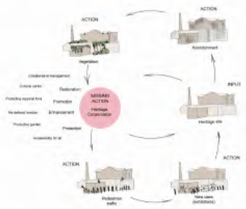


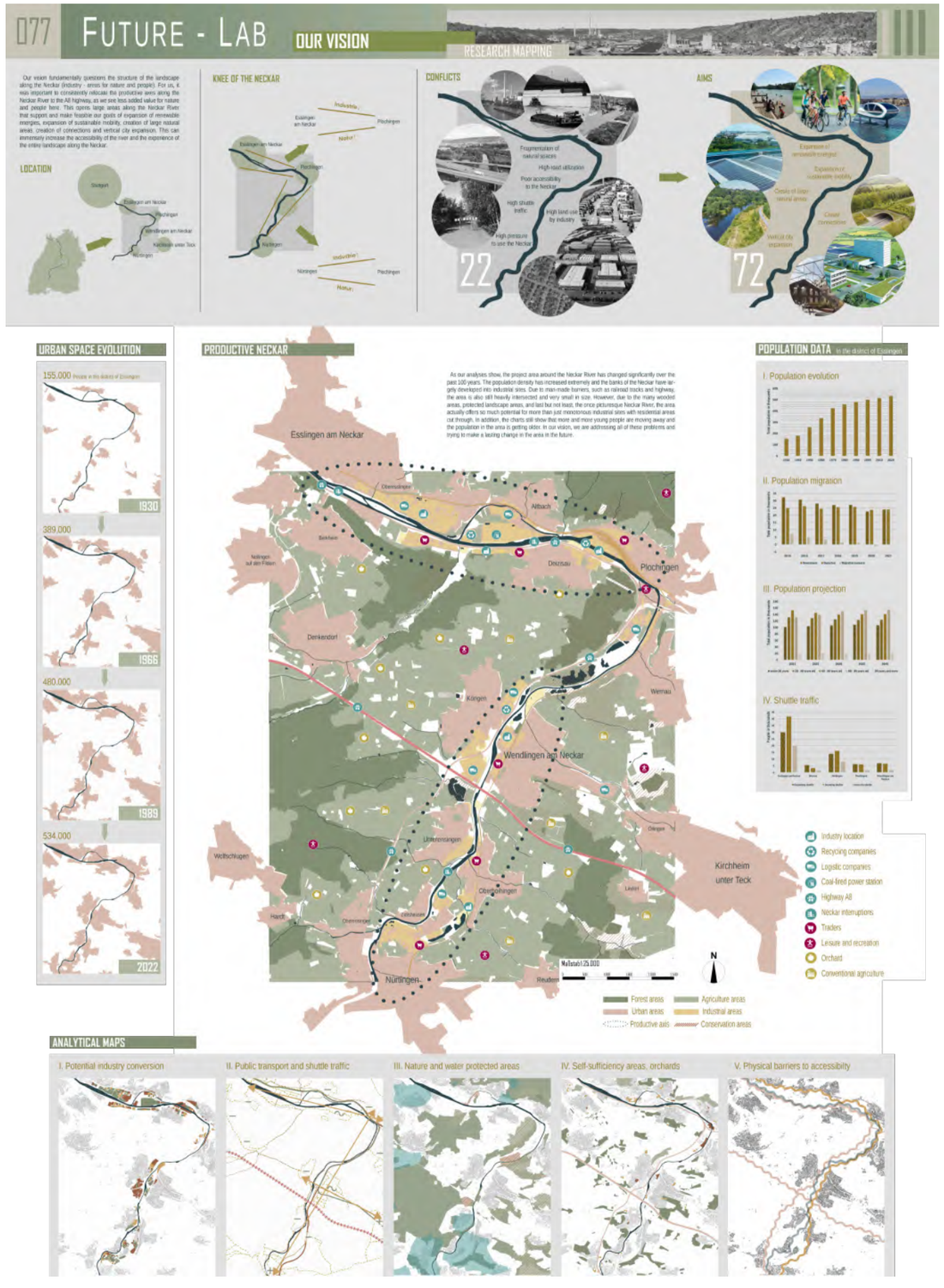
Design approach

Following the concept "Positive Anthropocene"we developed a framework for the design stage. We draw the relationship of human-nature interactions, and aim to bring them into a closed circle. We identify the specific action required to close the circle, and apply the required, place specific NBS.









Final Evaluation Round

HSWT Weihenstephan-Triesdorf

Maximilian Kaufmann, Jakob Brause, Moritz Bader,
Sebastian Fischer, Florian Berjamin

Future Lab

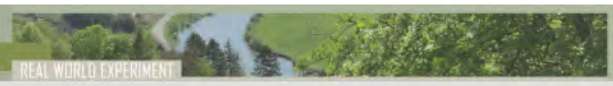
Our vision fundamentally questions the structure of the landscape along the Neckar (industry - areas for nature and people) in order to minimize the ever-increasing pressure on the Neckar. For us, it was important to relocate the productive axes along the Neckar River that had emerged from the analysis by consistently clearing and consequently claiming land and relocating them to the A8 highway.

The primary goals are to increase the accessibility of the Neckar River, to contain motorized individual traffic, and to encourage vertical expansion of cities. This vision should be viewed as a Real World Experiment for the entire region. In the individual areas, eight subordinate Living Labs (our ideas) are thus created, in which the goals of the vision can be realized in different ways. In the process, the vacated buildings are to be made attractive for future user groups through conversion, which is shown in detailon poster 3 for the Hafen magnifying glass area (our harbour).

The current character and identity of the respective loupe areas should be entirely preserved and further developed - made fit for the future. The entire Real Labor is a lengthy process that must be financially subsidized by higher-level partners. However, the people of the region are to be involved in the project primarily through a participation process tailored to the Living Labs in order to be able to contribute ideas and createacceptance as well as motivation for the restructuring (our activation)

077 FUTURE - LAB

OUR IDEAS



The basic idea of restructuring only works through consistent clearing and consistent claiming of land. This idea should be considered a Real-World Experiment for the entire region. In the individual areas, eight subordinate living labs are created in which the goals of the vision can be realized in different ways. The Areas demonstrate a clearly separate characteristic and identity that must be preserved, repurposed, and developed in the future. The relationship to the historical and existing use must never be lost - conversion instead of demolition is the motto. All Living Labs are to be seen as a lengthy process subdivided by different sub-goals.

A superordinate mobility concept serves as a supplement to the idea and ensures the feasibility and networking of the companies and the population. Mobility hubs adjacent to urban developments are to manage incoming mobilized individual traffic and connect passenger traffic to the new industrial sites and existing cities by means of public transportation and an extensively developed bicycle network. This connection is secured by the Connection Points. In the process, mobilized individual transport will be greatly reduced and completely banned from the cities and the newly emerging industrial locations.

In order to avoid relocating the problems of increasing land sealing and the unattractive quality of stay of existing industrial sites to the highway, the new industrial sites should develop further in their structure and utility function. Social facilities for workers, green corridors and large-scale recreational areas transform a purely industrial settlement into a sustainable, productive and attractive working neighbourhood.

MOBILITY CONCEPT

I. Mobility connections in the industrie buildings blocks

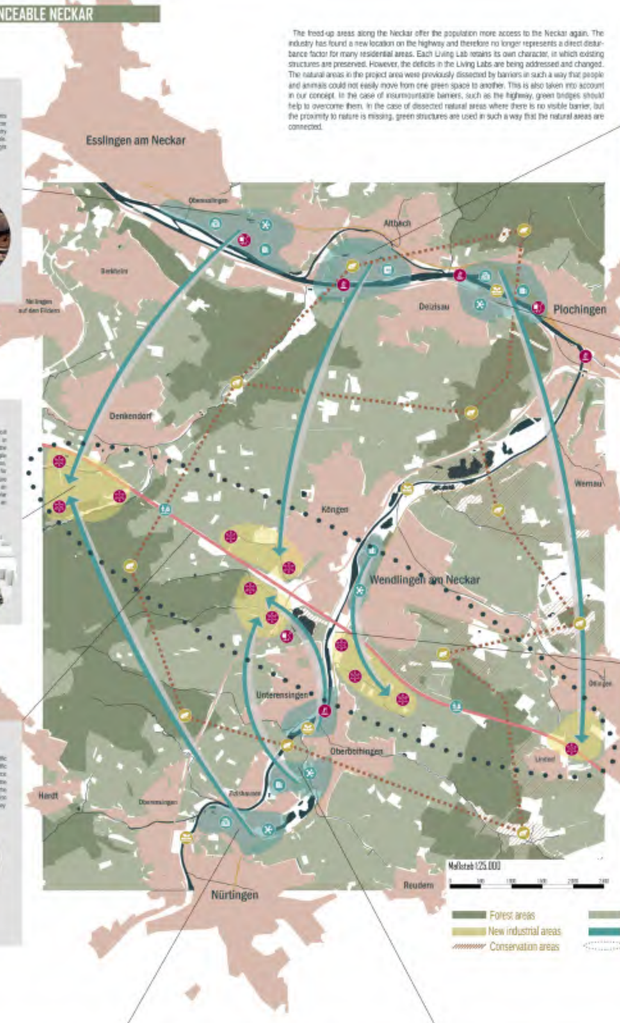
II. Mobility connections in the city buildings blocks

PRODUCTIVE NECKAR

PRODUCTIVE HIGHWAY

EXPERIENCEABLE NECKAR

The freed-up areas along the Neckar offer the population more access to the Neckar again. The industry has found a new location on the highway and therefore no longer represents a direct disturbance factor for many residential areas. Each Living Lab retains its own character, in which existing structures are preserved. However, the deficits in the Living Labs are being addressed and changed. The natural areas in the project area were previously dissected by barriers in such a way that people and animals could not easily move from one green space to another. This is also taken into account in our concept. In the case of insurmountable barriers, such as the highway, green bridges should help to overcome them. In the case of dissected natural areas where there is no visible barrier, but the proximity to nature is missing, green structures are used in such a way that the natural areas are connected.



Forest areas	Agriculture areas
New industrial areas	Old industrial areas
Conservation areas	Productive axis
Urban areas	Biotope network

- Service companies
- Multifunctional highway
- Multi-generation living
- Hydrogen power plant
- IT and research companies
- Traders
- Neckar related recreation
- Mobility Hub
- Connection Point
- Improvement of the water quality
- Biotop network

INDUSTRIAL LIVING

ENERGY PARK

RESSURECTED INDUSTRY

TIMELESS HARBOUR

PRODUCTIVE GREENWAY

ART & CULTURE VENUE

GREEN CITY

RECREATION JUNGLE

077 FUTURE - LAB

OUR HARBOUR

In the vision for the «Living-Lap Harbour Plochingen», the restructuring of the space and our ideas are shown in a concrete example. The building structures of the former port facility as well as the archiecture of the industrial buildings will be largely preserved and reused. New features are taking hold while maintaining the rough, linear, rugged character of the port facility.

The buildings will be transformed into offices and residences and will contain future forms of housing as well as services such as the IT or research sectors. The outdoor facilities with different storage, loading and transport functions retain their identity and are made accessible and experienceable for users. A marketplace (dockside dumps), an event location (Draftwerk), temporary container settlements, several recreational facilities (Silopark, Deuka Tower, BayWa Tower) as well as ecological priority areas for nature conservation are being created. Likewise, the Neckar River will be made accessible and experienceable through stepped facilities.

The functionality of the mobility concept (connection Mobility Hub - Connection Point) as well as path hierarchies for pedestrians and cyclists are also evident through concrete location. In addition, water cabs are conceivable for networking in the navigable area of the Real-World Experiment.

By linking existing, developed, and newly integrated structures, an attractive mixed-use neighbourhood can be created for existing and future residents and residents of the surrounding communities.

LOCATION

NECKAR TRANSFORMATION

CARGO SHIPPING HARBOUR

TIMELESS HARBOUR

ANALYTICAL MAPS

I. Axis

II. Original Neckar

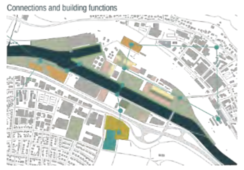
III. Buildings uses

IV. Space utilisation

V. Space utilisation

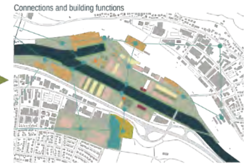
STEP I - 2032

Connections and building functions



STEP II - 2052

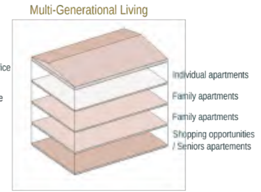
Connections and building functions



INDUSTRIAL BUILDINGS CONVERSION

Co-Working Spaces

Multi-Generational Living



STEP III - 2072

Main usage working	Multi-generation living
Leisure	Mobility connection
Pedestrian / Cycle route	Event location
Bus route	Marketplace
Boat taxi	Park
Bike highway	Skatepark
	Climbing on tanks & other sports
	Outdoor activities
	Water activities
	Connection Point
	Mobility Hub

2072

077 FUTURE - LAB

OUR ACTIVATION

With an undertaking as large as this, it is important to involve all the people who will be impacted by the development. We have come up with a comprehensive concept for this that incorporates the entire 50-year process. The entire project area represents a Real World Experiment in, which there are eight different Living Labs. In each Living Lab, we selected the key stakeholder groups and then from those groups came the people for the participation process.

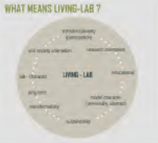
In our magnifying glass area, the Port of Pinchingen, there are participants from four different stakeholder groups that go through different processes with individual 5-year procedures over the 50 years. Within the 5-year processes, there are different participation formats adapted to the stakeholder group. After each 5-year procedure, an evaluation of the proceedure takes place, focusing primarily on the opinions of those involved.

The processes of the four different stakeholder groups do not all start at the same time, as the participation of two stakeholder groups only becomes relevant in the course of the process. The stakeholders and formats within the 5-year processes change during the 50-year period as they are adapted to the progress of the process. Participants are determined before the start of the participation process through individual invitation management, depending on the stakeholder group.

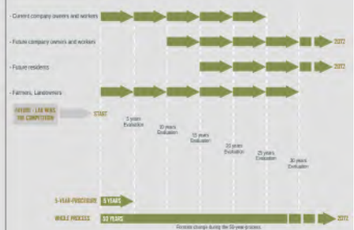
MAIN STAKEHOLDERS

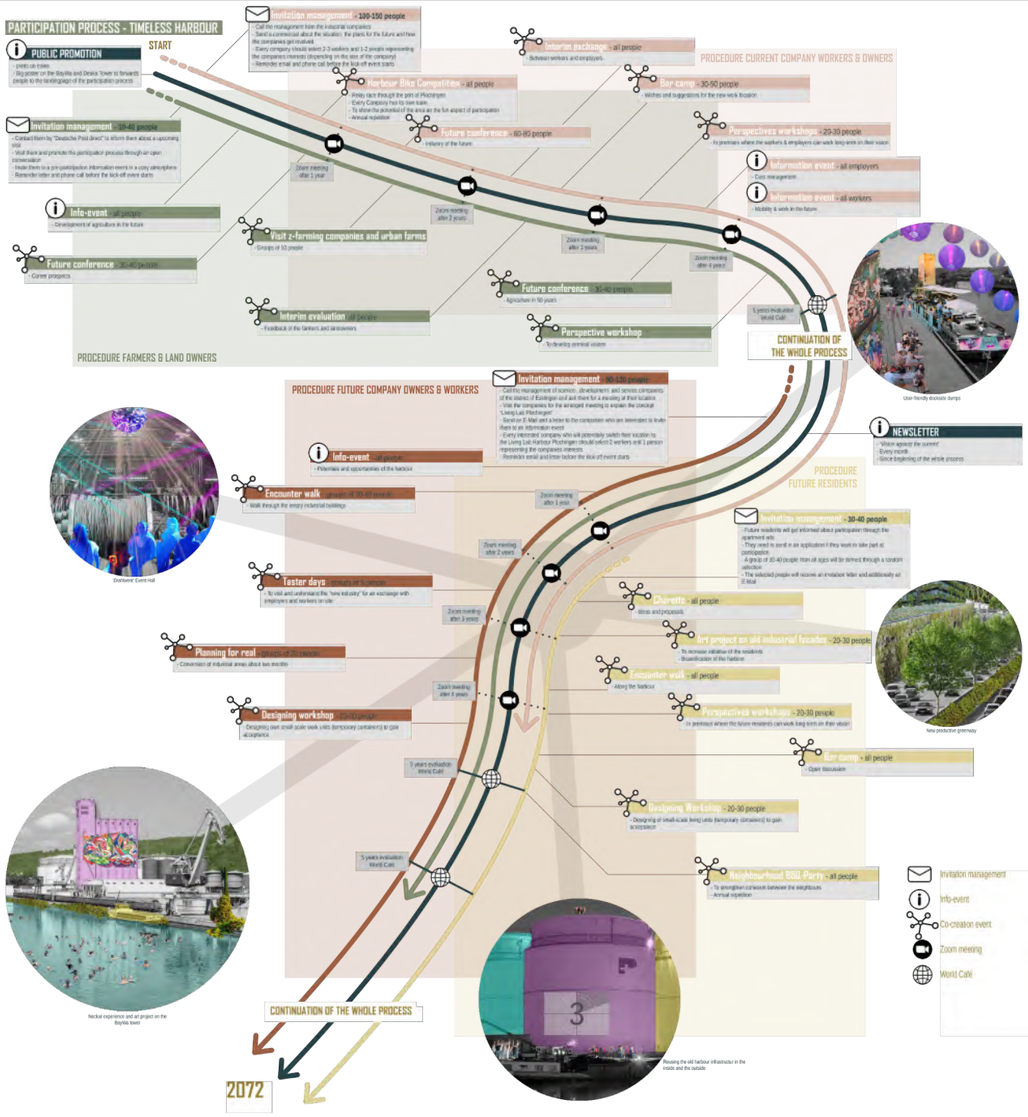
WHAT MEANS REAL WORLD EXPERIMENT ?

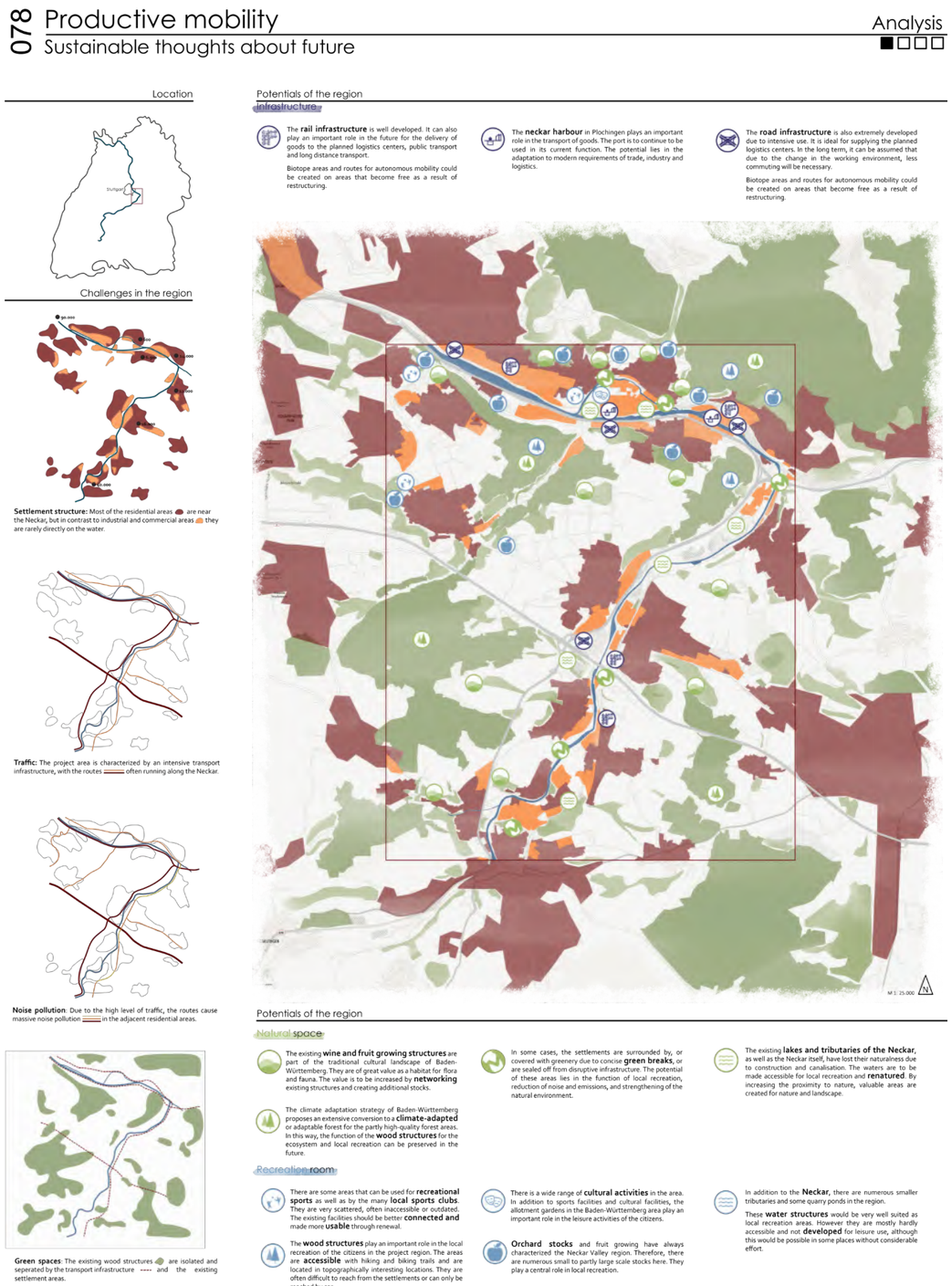
WHAT MEANS LIVING-LAB ?



WHOLE PROCESS - TIMELESS HARBOUR







Final Evaluation Round

HSWT Weihenstephan-Triesdorf

Dominik Zitzmann, Sebastian Heindl, Jakob Neef,
Korbinian Nickl, Tobias Pauleit

Productive Mobility

The greater Stuttgart area is characterized by a densely developed road and rail infrastructure. Due to the topography, the traffic roads are often located directly on the Neckar. The concept includes a comprehensive restructuring of traffic. A route is to be built along the Neckar, which will directly connect towns and local recreation areas. They are used for individual traffic and are driven at a lower speed of up to a maximum of 30 km/h. Goods will only be delivered to four planned logistics centers. From here, the goods are distributed autonomously to all consumers with small vehicles, so that heavy traffic does not have to drive to settlements. In the future, traffic will be autonomous, more efficient and space-saving. The street areas can be smaller and a larger part of the parking spaces will be eliminated. A strong gain in area can therefore be assumed.

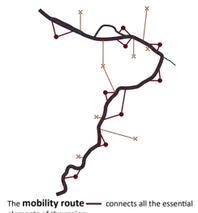
Industrial and commercial areas are also often located directly on the Neckar.

Therefore, heavy industry and disruptive trades should be combined in purely industrial areas as far as possible away from settlements and the course of the river.

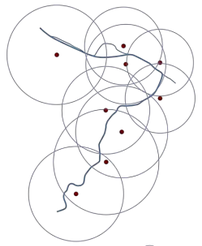
Some trades, such as logistics companies, will also no longer be necessary due to the logistics centers. The logistics centers function as central warehouses for all goods. Logistics service provider ensures that the goods are distributed to all consumers.

Sustainable thoughts about future

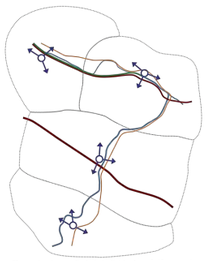
Concept blocks



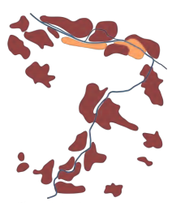
The **mobility route** —— connects all the essential elements of the region.



Autonomous public transport ● reduces the need for private transport.

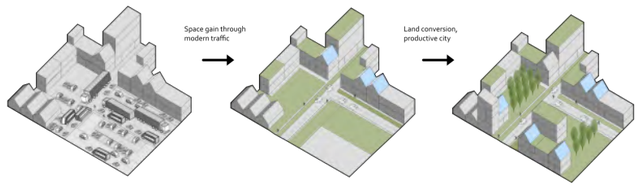


The region is supplied via individual **logistics centers** ⊂.

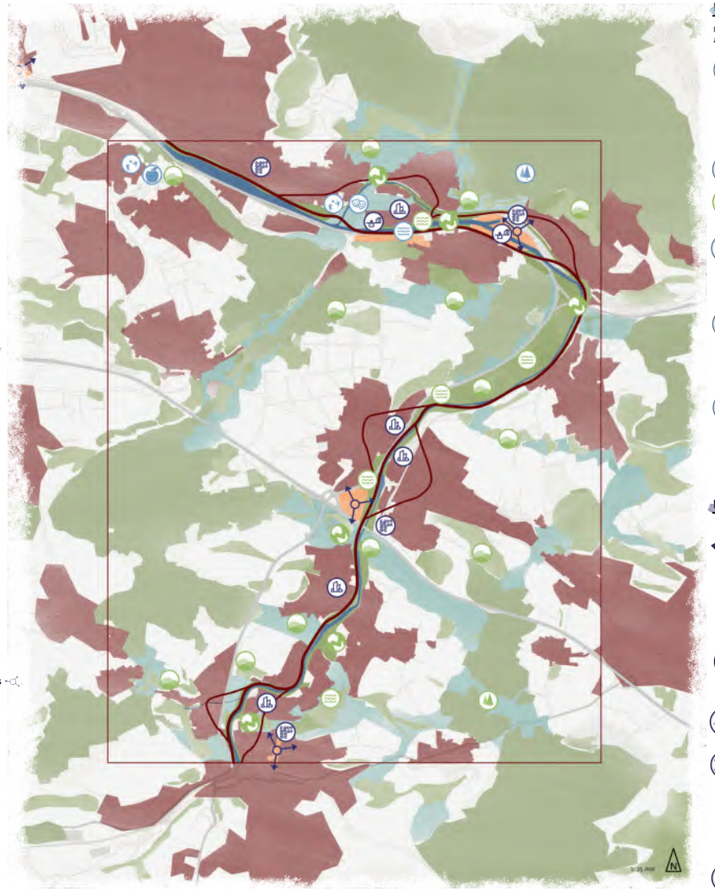


The **settlement structure** 🏠 is changing towards a productive city with individual **industrial areas** 🏭 .

Existing **wood structures** are connected ... the



The greater Stuttgart area is characterized by industry, commerce and transport. It is burdened like no other in Germany. Due to limited space and difficult topographical terrain, there is an extremely dense infrastructure along the Neckar. Through a **restructuring of traffic** and also through the **relocation** and elimination **of industrial areas**, large areas along the Neckar are free from disruptive use and can be converted for the purposes of nature conservation, local recreation and modern settlement construction in combination with nearby jobs.



Recreation space

In general, when developing local recreation areas, the aim should be better **accessibility and experience**.

The great potential of meadow **orchards** can be increased by linking existing structures with each other in order to achieve continuity for flora and fauna . New areas are to be created in a climate-resilient and natural way.

For the preservation of existing areas, the owners should be trained in professional maintenance.

Wood structures have to be **rebuilt** and adapted to climate change in order to maintain their recreational value. The conversion takes place in state, private and municipal forests under the guidance and supervision of the responsible forest departments.

In order to increase the potential of the existing bodies of **water** for local recreation, the quality of stay must be improved in addition to **accessibility**. In the course of this, riverbank renaturation can take place and the water quality can be improved.

The project area already has a wide range of leisure and **cultural activities**. The facilities are often poorly connected. The aim should be good accessibility by bicycle, foot and public transport, as well as the creation of new offers. These should be versatile and as close as possible to residential areas and workplaces.

The existing **sports facilities** must be **protected and expanded**. Where densification takes place and the population increases as a result, the supply must also increase. The main goal is to provide new, high-quality and easily accessible sports areas.

Economic area

Four large **logistics centers** are planned to bundle the delivery of goods by truck and freight train to individual locations. All goods for private individuals, trade, industry, commerce and services are to be delivered to these centers and temporarily stored there. From here, the goods are transported autonomously and efficiently to all consumers as required. They are in a logistically sensible location on the railway and motorway routes.

A **model settlement** for modern living and working under the motto **"productive city"** is to be created in the newly created area. The planned traffic concept is also included in the new design.

In order to meet the modern requirements as a **port**, it has to be converted to **autonomous** goods delivery.

The well developed **road network** also has the potential to be used to supply the planned logistics centers in the future. Therefor the transport network must be designed for **autonomous traffic** so that deliveries can be made more efficiently. As part of the conversion, it is expected that the space requirement will decrease and areas that will be freed up are available for the creation of new green structures.

The existing **railways** should also continue to be used for the delivery of goods. In the future, the need for space will also decrease. Open spaces are ideal for creating high-quality biotopes and expanding the bicycle and footpath network.

Natural space

A good **landscape** increases the quality of stay, living and leisure time. Its **protection** must be taken into account in future construction work of any kind.

The appearance of the landscape will also be improved through the expansion of the existing natural areas.

Wherever possible, existing **green structures** should be **connected** with each other by new green structures. In many places this is not possible because the existing transport infrastructure forms a barrier. If possible, these barriers should be removed.

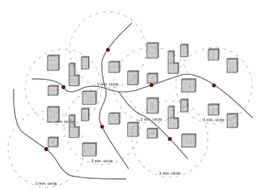
The potential of **water** bodies is to be massively increased. **Renaturations** improve the function as a habitat. Natural, flat riverbanks increase the water retention effect. The flood plains also often serve as valuable

Elements for future mobility

1. Mobility route

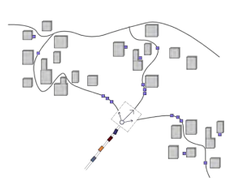
The main mobility route —— runs **along** the **Neckar**. From here **it connects** town centers and local recreation **areas** with each other. It is intended for individual traffic 🚗 at low

2. Autonomous public transport



The vehicles of the **future public transport** ● will work **autonomously** and be smaller than conventional buses. Therefore, the need of street and parking areas will be smaller. They are constantly moving on the streets and can therefore be **called up** at any time **within a few minutes**.

3. Logistic centers



All goods are delivered by heavy traffic 🚚 to the **logistics centers** in the project area. From here they are delivered with **smaller vehicles** 🚚 **to all consumers** if required. In this way, **streets** in settlements remain **free of heavy traffic** and distribution becomes more efficient at the same time.

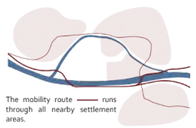
Productive mobility

Sustainable thoughts about future

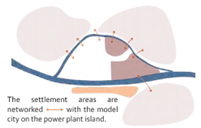
Concept

Location

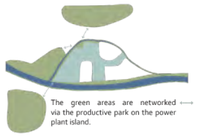
Concept blocks



The mobility route —— runs through all nearby settlement areas.

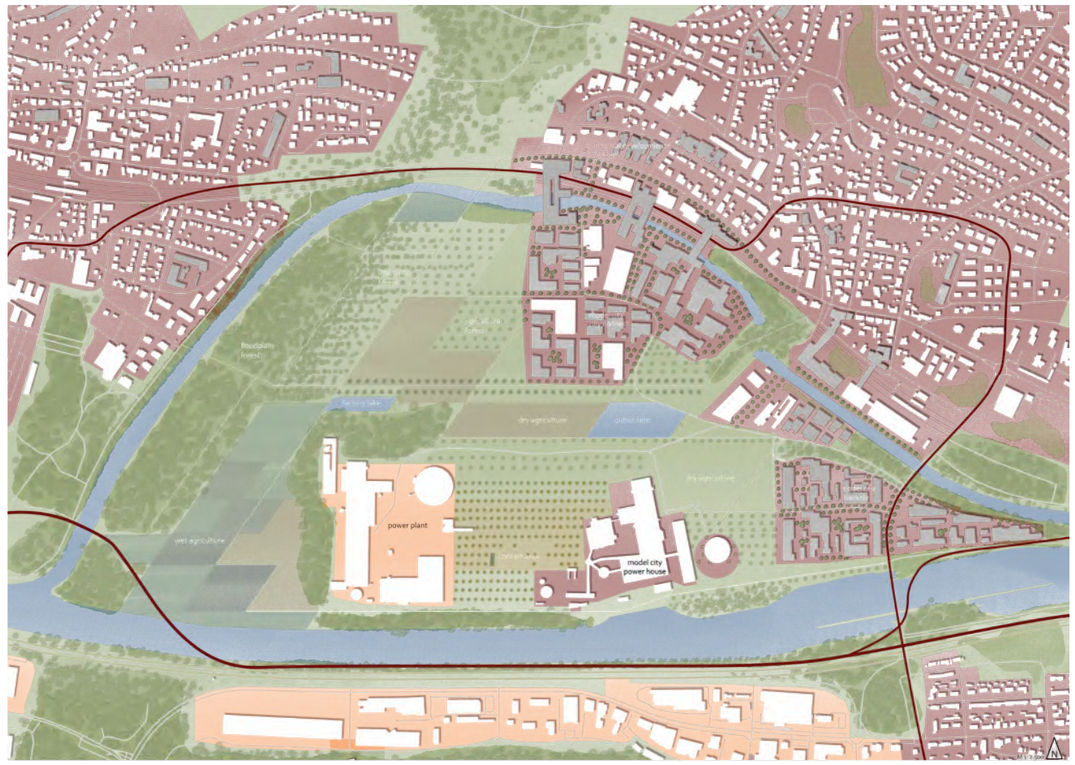


The settlement areas are networked ⟷ with the model city on the power plant island.

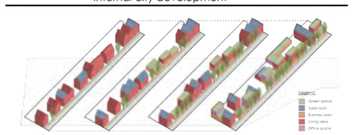


The green areas are networked ⟷ via the productive park on the power plant island.

One part of the productive park assumes the function as a floodplain of flood retention



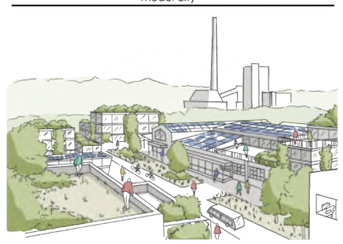
Internal city development



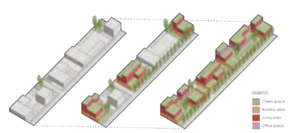
As part of the **internal development of existing settlement** areas, a similar mix of uses as in the model city is aimed for. Participatory methods can be used here.

In the existing settlement areas, there will be an expansion towards autonomous public transport. In addition, the core areas will be connected to the mobility route in order to better network them in the future via private transport.

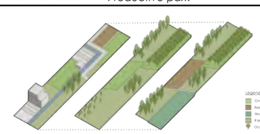
Model city



In the newly created area, a **model city** is to be created under the motto "productive city". The aim is a **multifunctional** mix of living, working, cultural and leisure activities, as well as green spaces.



Productive park

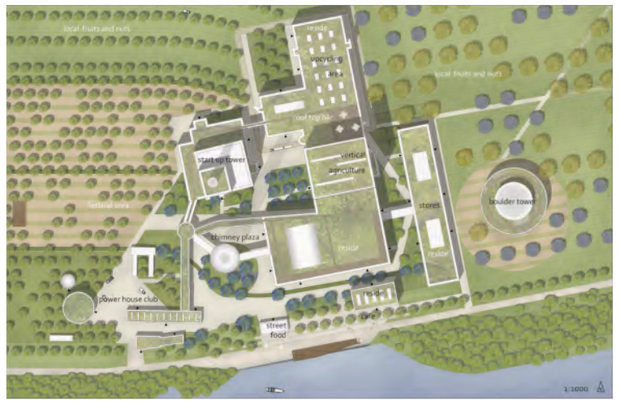


After the industrial areas have been relocated, a **productive park** will be created in here. **Wet agriculture** can take place on lower-lying areas. Conventional farming and **fruit growing** will also take place. Individual areas can be equipped with **energy wood** plantations.

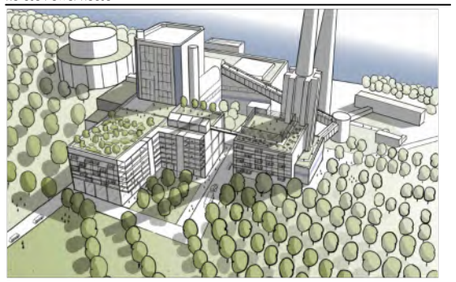
In addition to being used for food production, the entire park can be used for sports, leisure and local recreation.

Concept blocks

Detailed design

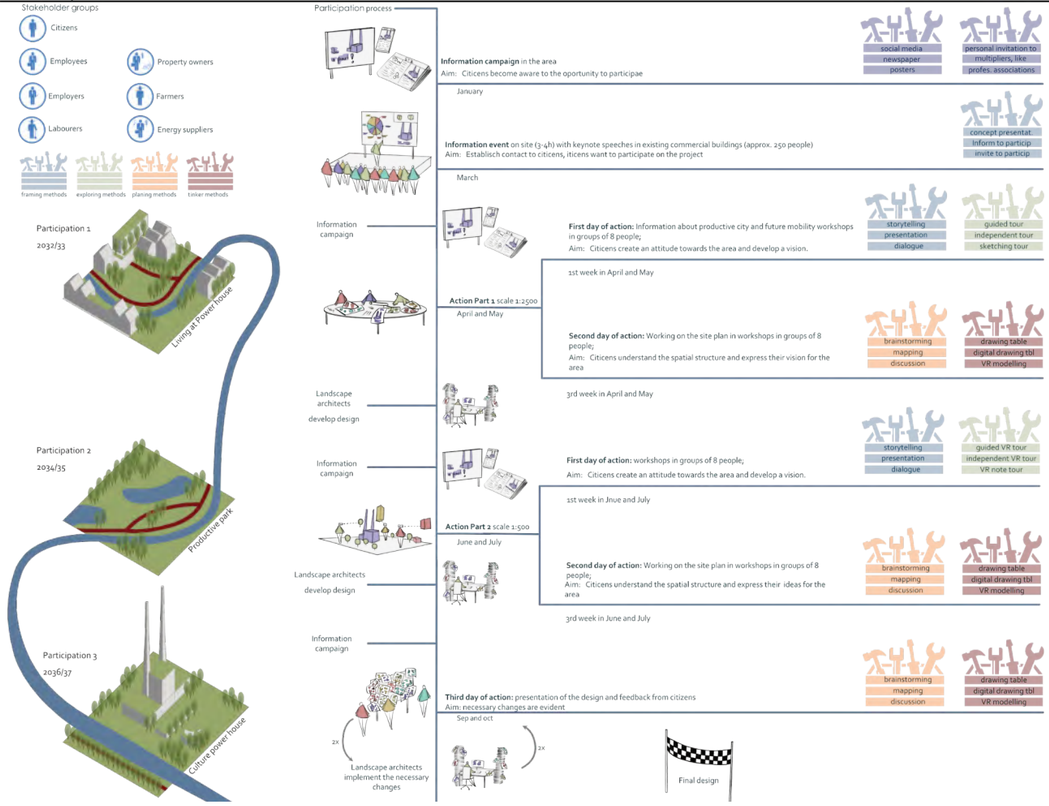


Re-Use Power house



Promenade Neckar

Participation



Information campaign in the area
Aim: Citicens become aware to the oportunity to participae

social media
newspaper
posters

personal invitation to
multipliers, like
profes. associations

January

Information event on site (3-4h) with keynote speeches in existing commercial buildings (approx. 250 people)
Aim: Establisch contact to citicens, itcens want to participate on the project

concept presentat
Inform to particip
invite to particip

March

First day of action: Information about productive city and future mobility workshops in groups of 8 people;
Aim: Citicens create an attitude towards the area and develop a vision.

storytelling
presentation
dialogue

guided tour
independent tour
sketching tour

1st week in April and May

Second day of action: Working on the site plan in workshops in groups of 8 people;
Aim: Citicens understand the spatial structure and express their vision for the area

brainstorming
mapping
discussion

drawing table
digital drawing tbl
VR modelling

3rd week in April and May

First day of action: workshops in groups of 8 people;
Aim: Citicens create an attitude towards the area and develop a vision.

storytelling
presentation
dialogue

guided VR tour
independent VR tour
VR note tour

1st week in Jnue and July

Second day of action: Working on the site plan in workshops in groups of 8 people;
Aim: Citicens understand the spatial structure and express their ideas for the area

brainstorming
mapping
discussion

drawing table
digital drawing tbl
VR modelling

3rd week in June and July

Third day of action: presentation of the design and feedback from citizens
Aim: necessary changes are evident

brainstorming
mapping
discussion

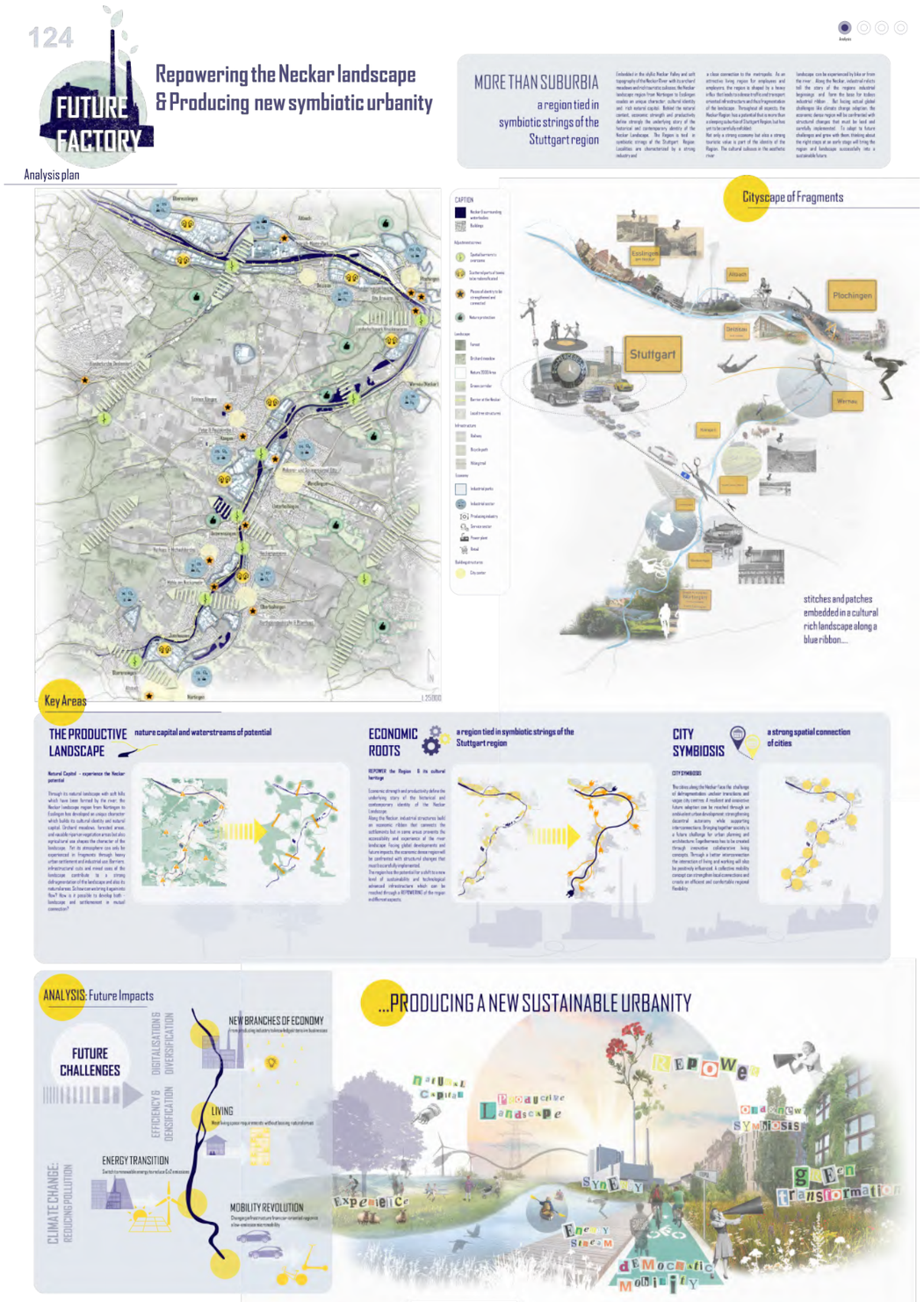
drawing table
digital drawing tbl
VR modelling

Sep and oct

The restructuring of the commercial areas also ensures a large gain in space within towns and along the Neckar.

Within the framework of inner development and densification, a mix of uses is ensured in the settlement areas. Multifunctionality is achieved by locating jobs, (energy) production, housing, leisure activities and local recreation close to each other. The number of commuters is falling, commutes are becoming shorter and the quality of life is improving. Autonomous public transport ensures good and efficient accessibility. The areas gained through the restructuring of traffic and trade are used for densification, greening and buildings for modern living and working.

On the power plant island, a model city will be created in the space gained, which will demonstrate the mixing of the most diverse forms of use, as well as a modern way of living. The model city serves as a model for internal development. The layout of the model city and the inner development of existing settlement areas reflect a modern understanding of a sustainable and productive city



Final Evaluation Round

Hochschule Geisenheim University

Annika Jeschek, Anahita Hartmann, Kiara Pape, Michael Senck

Future Factory

Our concept of Future Factory – metaphorically referring to the industrial identity of the region - considers the landscape as a complex and dynamic product of diverse processes, that are intertwined like gears in a factory. Central gears that fuel and shape the landscape are not only its ecological capital, but also the community of the urban population, its economic capital, and the cultural heritage.

The Repowering of the Region can only be successful through a dynamic development of all aspects:

Living: For a sustainable development of the city the main aim is to build on the existing, condense and stop the extension of its outlines.

Working: The future of economy will be shaped by new knowledge intensive work fields and a hybrid digitalisation. Working hubs and a network to connect are necessary.

Landscape: Connecting the green is the key to a spacial symbiosis of the region & future conservation of biodiversity.

Cultural heritage: Taking responsibility for the cultural and economic heritage of the region while carefully transforming the existing substance.

NECKAR NORTHWEST – a social city in-between nature and industry

As a model for a new sustainable living that intertwines the four gears of Future Factory, the island district of Altbach/ Deizisau is developed as a model district for a sustainable Neckar Region: where living, working and an experience of nature are closely connected - an autonomous city in a region where everything is in close reach.

124

CONCEPT
Repowering Capital of the Region

Repowering the Neckar landscape & Producing new symbiotic urbanity

The Neckar Landscape - an interdependent network:

Considering landscape as an interplay and diverse network of ecological, social, economic and cultural processes, the idea of Future Factory is to develop the Neckar Landscape as a sustainable symbiotic machinery. Each aspect plays an integral role and its consequences influence the interconnected wheels of ECOLOGY, SOCIETY, ECONOMY & CULTURAL HERITAGE of the Neckar Region.

Future Factory: The Productive Landscape

Productivity is a key element of the economic landscape of the Neckar Region. Yet it is still highly underrated that landscape itself is a highly productive collective for society. Its ecosystem services play an integral role in supporting our every day life and therefore build an important base for a stable and liveworthy future. Regarding the futures biggest threat - climate change - the landscape has several important key roles to play, that are highly important for adaption like...
- production of cool air to stabilize city climate
- flood prevention and soil stabilisation
- clean water supply & conservation of biodiversity.

Conserving the touristic value for the future

Regarding the touristic meaning, the landscape plays an important role for recreational quality and the attractivity of the region. Altogether, these services can only be efficiently provided if the system is kept stable and functioning: Only through a sensible landscape approach and a support of the complex interdependence a sustainable future can be produced.

To create an overview over the complex structures of the future landscape, the definition of superior structural and spacial aims will help to redefine the character of the urban landscape of the future.

Concept

Defining the PRODUCTIVE LANDSCAPE

ECOLOGY

Landscape as productive recreational landscape: Recreation in nature is seen as an important base for a well balanced life and productivity. Therefore the aim is to create the space and infrastructure to experience nature and the highlights of the landscape. Green veins and Green gates connect the cities to the landscape and allow an easy access.
Sustainable forms of agriculture: New forms of agriculture like agroforestry are resilient to efficiently produce in a changing climate. Additionally interactive communal small scale agriculture next to home creates a new contact to the roots of foodproduction in the city.

SOCIETY

Landscape as productive unity of different aspects of life: To unify work, living and recreational space can produce a balanced productive environment in which the well-being of the individual is supported.
Landscape as a space for **production of community**: Coming together for social and cultural events creates togetherness and strengthens the social contacts and community.

ECONOMY

Landscape as space for production of sustainable energy:
Landscape is the base for growth of ressources like wood through agroforestry and space to harvest wind, solar or water energy.
Landscape as unity of economy and nature: To create a sustainable future, economy and nature must be thought and developed together while giving them their own space.

CULTURAL HERITAGE

Landscape as product of the past and future:
The productive landscape has to be a combination of old and new, taking responsibility for the cultural and economic heritage of the region while carefully transforming the existing substance. To keep the identity of the region and its 'genius loci' means conserving the marks and memories of an **"industrial productive past"**.

REPOWERING

To produce a sustainable future, the central four aspects must be repowered:

Repowering the LANDSCAPE as GREEN CAPITAL
- Identifying & supporting green capital of the region
- connecting green structures in local and regional scales
- developing & adding infrastructure to experience the landscape
- developing the Neckar river as blue capital and touristic attraction
- supplying information about trails, highlights and biodiversity (through NeckarNET)

Repowering the SOCIETY as SOCIAL CAPITAL
- local city centres & autonomy: reviving & creating attractive centres
- Repowering regional social structures & exchange through NeckarNET

Repowering the economy / the energy sector as ECONOMIC CAPITAL
through sustainable energy supply:
- identifying existing structures to redevelop (e.g. Alt Deizisau)
- combining different energy sources (solar, water power & wind) in small scale interventions
- striving for energetic autonomy in the living sector (solar power)
- create common logistic structures and train connections
- supply strong fiber optic internet connection and support for digitalisation
- support connection and easy workflow through NeckarNET

Repowering the architectural & cultural heritage as CULTURAL CAPITAL
- keeping & redeveloping the buildings & green structures: unifying sustainable building practice & way to display the past
- supplying easy accessible information as part of a "cultural heritage tour" in NeckarNET

HOW WILL WE LIVE?

- TRANSFORMATION from individual to collaborative living through public community building initiatives
- SHIFT from dominant anonymous forms of living (appartment houses, family homes) to improve integration and social community
- CHANGE to modular structure of buildings: private individual rooms + communal spaces + additional renting of space possible

Social and affordable housing + collective organised co-living space
Social & intercultural inclusion
Mixed used: living and working united
Modularity of building plans allows efficient inexpensive building and material efficiency

BUILDING // SMART REDENSIFICATION:
- REDEFINE life & work balance: interconnected spheres
- SYMBIOSIS of old & new: sensitive modular solutions
- REUSE instead of REBUILD: sustainable use of existing buildings

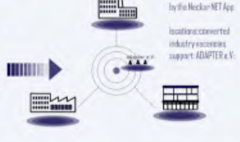
SYMBIOSIS & METAMORPHOSIS
1 sales building + intergenerational appartments / offices
2 producing industry + office complexes
3 old fossil fuel industry to mixed use

PROVIDING ATTRACTIVE GREEN LIVING SPACES IN TOWNS
- LIVING QUALITY: Equal access to green infrastructure for work-life-balance
- CONNECTED: green infrastructure as connecting bond between living and working area

Decentral green mixed living-workspace reduce distances to small radius

HOW WILL WE WORK?

WORKING TYPOLOGIES: INTELLIGENT SWARMS



Digitally organized service industry
Flexible project-oriented collaboration as digital swarms
Home office & temporary meeting

temporary working hubs
provided & organised by the NeckarNET App

locations: converted industry vacancies
support: ADAPTER e.V.

HOW WILL WE SHAPE THE LANDSCAPE?

GROW TOGETHER: Landscape connection & development manifest

Green Veins: implementation of green structures that connect the city-centers with the recreational landscape

Green Gateways: Connect regional green structures - overcome barriers through green bridges, green tunnels to create spacial ecological continuity for local biodiversity & fauna

Green connection of cities: Greened streets and greened bikelanes diversify infrastructure and promote sustainable & active transport or walkability

Landscape as natural capital: strengthen the experience of the Neckar Landscape & topography through infrastructural touristic offers regarding viewpoints & bikelanes

interconnected sustainable agriculture: providing & connecting flower strips, hedge structures and integrated nature conservation measures

landscape as heritage: strengthen nature protection areas and meadow orchards as aesthetic, ecological and touristic heritage and extend nature protection measures

Innovative forms of agriculture: Agroforestry as future proof, climate resilient and biodiverse form of cultivation concerning climate change & biodiversity crisis

shared farming concepts: small scale, decentral implemented and locally organised by associations in between city regions

HOW WILL WE FUEL THE REGION?

REPOWER THE REGION with renewable energy

- FUEL SWITCH & DIVERSIFICATION: combine different sources of renewable energy
- INFRASTRUCTURAL SYMBIOSIS: connect and power local economy along the river with fast internet, sustainable energy and efficient infrastructure for the use of industrial waste heat
- DECENTRAL AUTONOMY: solar energy as main source for private housing sector and industry till 2030

HOW WILL WE MOVE?

MICRO-MOBILITY IN THE DISTRICT

MOBILITY - Connect and grow together

Mobility transition: diverse and decentral solutions

Promote electromobility and offer enough charging stations to meet demand

Turning redundant parking spaces into raingardens

Direct Bicycle Highway: alternative fast connections with added accompanying green structures

CONCEPT
Implementation

NECKARNET: CONNECTING the Neckar Region on different scales

The App NeckarNET builds a digital base which bundles & connects the region in the central four categories. As a platform for social, economical, ecological and cultural concerns it reflects the diversity of the Region and creates a symbiosis between the individual and the collective, the cities and the Region. NeckarNET contributes to the idea that the Neckar Landscape is a dynamic product continously shaped by a diverse collective and that everyone plays an integral role in producing the future.

COMMUNITY ▸▸▸
CULTURE ▸▸▸
NATURE EXPERIENCE ▸▸▸
ECONOMY ▸▸▸

WORK
This appliance creates a local job exchange platform to search for accessible jobs & employees. It helps digitally organized employees or freelancer to find the ideal individual or group working space. To stay informed it offers informations about local career events, or supplies space to exchange & extend your professional knowledge.

CULTURE
This section focuses on exploring the region: Scan locally installed QR codes & get informations about the cultural and local heritage of the Neckar Region. Stay informed about the latest events or get to know local artists, singer and cultural institutions ("Locals").

COMMUNITY
This part of the app is meant as common social exchange platform: It offers space to ask for local information or support, to get in touch & exchange offers. The category "Go local" offers news about your city centre, to support the local community and local stores.

NATURE EXPERIENCE:
This section offers you the informations to explore the landscape of the Neckar Region: get the best tours for biking, hiking or watersports and learn about its landscape highlights and biodiversity. Additionally it shows possible ways to volunteer and help protecting the local diversity.

CAPTION

- Neckar & lakes
- Buildings

Landscape
- Forest
- Orchard meadow
- Agroforestry
- Cultivate Forest
- Green bridge
- Natura 2000 Area

Infrastructure
- Biking ways
- Bike Highways
- Sluglane
- Neckar Bicycle way
- Viewpoint
- Railway
- Noise Protection Walls
- Rail reloading point
- Resource Hub

Economy
- Working hub
- Central IT Axis

Building structures
- City center
- Redensification potential

Energy
- District heating
- Wind park
- Solar park
- Hydroelectric power station

CONCEPT PLAN

RIVER DEVELOPMENT CONCEPT

SPACIAL AIMS

1. **RECONNECTING FRAGMENTS to a spacial symbiosis**

Connection of...
- **Urban area + landscape structures** for more continuity & landscape experience through green veins
- **Landscape stepping stones**: connect green structures through green gates to support landscape continuity and biodiversity
- **Urban green infrastructure**: Greened streets and bikelanes as interconnection of city parts
- **Cities**: Greened infrastructure creates a green network in between cities
- **Infrastructure**: Create efficient sustainable mobility connections & flexible micro mobility access

2. **REMOVE BARRIERS to support flowing processes**

- **Flowing economic potential**: Create communal energy circles & infrastructural network
- **Liberate the flow of the Neckar river**: Opening barriers, strengthen touristic and recreational use, taking back room for partial natural development
- **Infrastructural flow**: Break down barriers and strengthen interconnection of the region especially for sustainable infrastructural use
- **Support workflow**: Create digital and spacial infrastructure for a dynamic workflow of the future

3. **REPOWER & REFUEL existing structures**

Sustainable development building upon existing structures:
- **Building sector**: Sensitive densification and addition upon existing buildings
- **Infrastructural sector**: Reinforce communal transport & diversify existing infrastructure to a micro mobility system
- **Energy sector**: Converse existing fossil energy supplies and add multiple sustainable energy sources: Altbach/Deizisau as hydrogen power plantation + water energy + solar energy along highway

FUTURE FACTORY
ZOOM: NECKAR-NORTHWEST
Producing a new form of sustainable urbanism

Zoom

NECKAR-NORTHWEST
Overcoming barriers, reshaping the future

Modularity, sustainable restructuring and coexistence

Nature and Economy

Overcome social barriers:

Overcome river barriers:

Overcome building sector barriers:

View from the dock to the River Terrace, "Heizkraftwerk" and Power Plantation

NECKAR-NORTHWEST: the catalyst of sustainability

ZONES

LIFE ON THE ISLAND: activities & places to be

1:2000

ECOLOGICAL POTENTIAL
EXPERIENCE THE LANDSCAPE
- Experience of the Neckar River & characteristic landscape
- Providing natural rooms for leisure activities

ECONOMIC POTENTIAL
REBOOT & STRENGTHEN
- Preservation, strengthening & redevelopment of the economic buildings
- Rebooting the power plant with hydrogen fuel and creating a sustainable regional power supply (solar power + water power)

SOCIAL POTENTIAL
COME TOGETHER
- Create a district with a strong social community through communal parks and more for contact, social activities and community identification
- Establish an association as a communal organisational structure

EMBRACING THE HERITAGE
RESPECT & REDEVELOP
- Preservation of the industrial heritage & responsible redevelopment of existing building structures
- Redefine the use of existing structures & complementing them with a modular building strategy

GREEN LOOP

NECKAR EXPERIENCE ▸▸▸

GREEN GATE & RIVER TERRACE ▸▸▸
As a highlight and expansion of the Heinrich - Mayer - Park, the Green Gate connects the Old and Main Neckar: Inbetween the industrial relicts of the power plantation it allows a panoramic river access and nature experience through the River Terrace. It functions as leisure ground and social platform to come together and is revived with a permanent and changing gastronomy for a vivid and comfortable stay at the river front.

URBAN FARMING & AGROFORESTRY

RIVER RONDELLE

RIVER WALK ▸▸▸
Scenic river boardwalk through a renaturated river front of the Neckar that allows a deep natural river experience and is accessible for people with impairment. It is directly connected to the River Terrace and its gastronomy.

DISTRICT CENTRE ▸▸▸

MIXED LIVING "RIVER BANK"/"RIVER LOOP"/"OLD NECKAR" ▸▸▸

ALLOTMENT PARK
The Allotment Park forms a social gardening ground that unites community and ecological aspects. Cautious opening of private property ground, restructuring the green space and communal use organised through an association creates a diverse and vivid social location.

NUCLEUS

MOBILITY HUB ▸▸▸

RECYCLING HUB
The Recycling Hub is an advancement of the existing waste industry at the island: It deals with recycling of waste material as a local circular economy infrastructure. Through the process of regaining resources & supplying it for regional production it forms a stepping stone in a successful circular economy of the region.

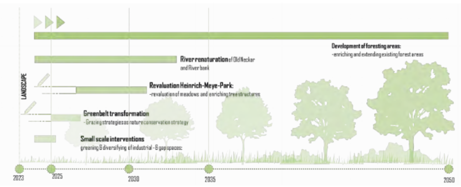
HEIZKRAFTWERK ▸▸▸

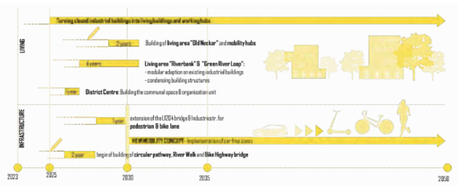
RIVER STAGE
In the existent Heinrich-Mayer-Park the River Stage revives existing structures and builds beside the Heizkraftwerk the second cultural nucleus for upcoming social and cultural outdoor events. With the background of the Old Neckar and embedded into the green ribbon, it forms a highlight of the island. Its diverse programm throughout the year has the potential to attract overregional guests.

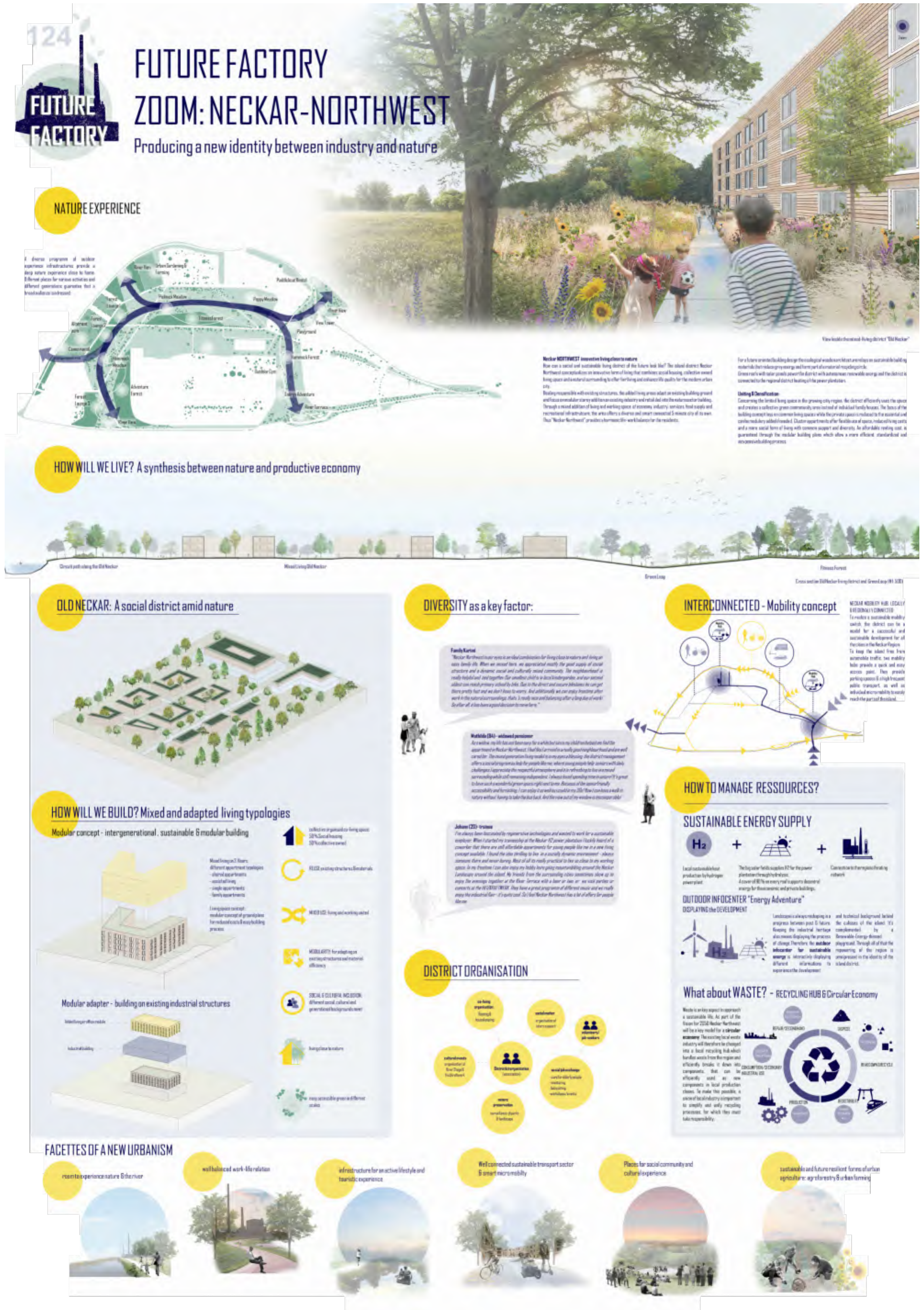
ENERGY PARK
The Energy Park is an outdoor visitor centre located in the Green Gate that is created as informative and interactive play & learn station on sustainable energy. It is combines with theme playground and an outdoor Energy sports gym for all ages.

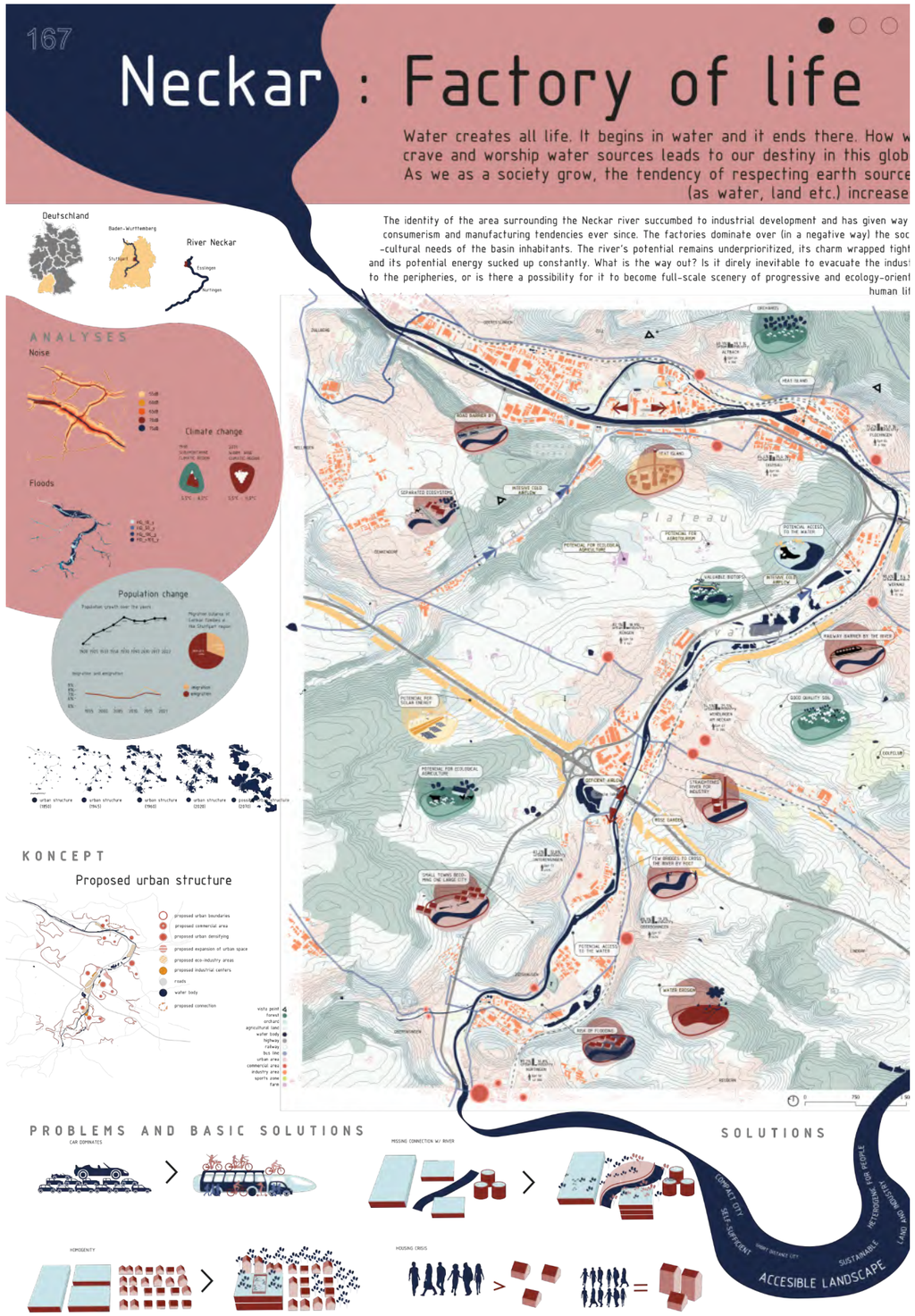
VISION 2050
Development Strategy

To progressively realize the structural changes for the siteplan from the status quo in a realistic timeframe, the planning content will be seperated into smaller steps: Therefore two timescales structure different steps for the development of the natural capital as well as the basis of social structures & infrastructure.






124
FUTURE FACTORY
FUTURE FACTORY
ZOOM: NECKAR-NORTHWEST
Producing a new identity between industry and nature
NATURE EXPERIENCE
HOW WILL WE LIVE? A synthesis between nature and productive economy
OLD NECKAR: A social district amid nature
DIVERSITY as a key factor:
INTERCONNECTED - Mobility concept
HOW WILL WE BUILD? Mixed and adapted living typologies
Modular concept - intergenerational . sustainable & modular building
Modular adapter - building on existing industrial structures
HOW TO MANAGE RESSOURCES?
SUSTAINABLE ENERGY SUPPLY
H2
OUTDOOR INFOCENTER "Energy Adventure"
DISPLAYING the DEVELOPMENT
What about WASTE? - RECYCLING HUB & Circular Economy
DISTRICT ORGANISATION
FACETTES OF A NEW URBANISM



Final Evaluation Round

Mendel University Brno and Brno University of Technology, Czech Republic

Sofya Issakova, Andrea Durčáková, Johana Kratochvilová, Marie Školová, Mária Kačalová, Zuzana Fialová; Markéta Kubíková

Neckar - Factory for Life

The most prominent elements of the region are industry and the river Neckar. Industry > Buildings/Employment > Factory. River > Water > Life. Factory for Life. The river works as a factory which brings life not only in the sense of fauna and flora and the blue-green infrastructure, but it also brings life for people as a source of water, a source of energy, a source of livelihood.

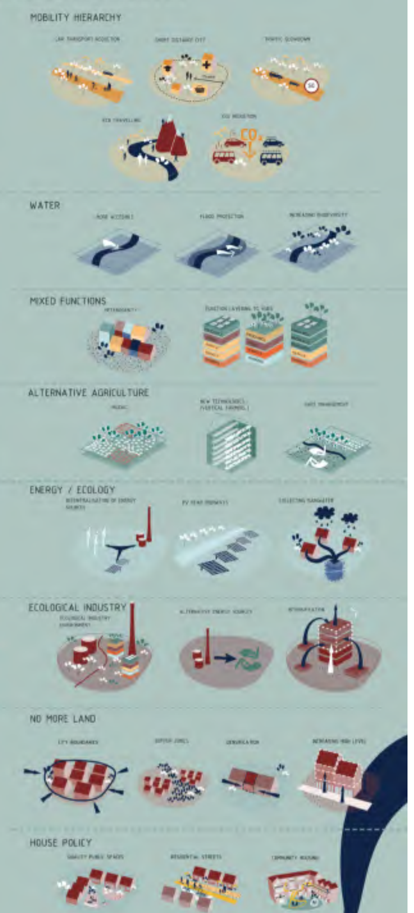
Even though the study area includes the river floodplain as well as the plain above, the greatest problems occur in the floodplain due to the concentration of life there. The dominance of car traffic, monofunctionality and low intensity housing, which leads to lack of development areas for industry and to a housing crisis, or barriers that lower the permeability and accessibility of landscape are just a few to mention.

Our concept focuses on several principles which support sustainability and viability of this region. We propose increasing heterogeneity of space and buildings (hubs) by mixing different functions, not only in industrial and urban areas but also in agriculture by creating a rich mosaic and by using new technologies e.g. in stacked farming.

Support for mixed functions and intensification of the use of already built-up areas ensure compliance with the no-more-land policy, the city boundaries are strictly defined, and construction is allowed only for densification or increment of height. Industrial sites should create a place for alternative energy sources and support ecological principles, just like within the energy industry where we support decentralization of energy sources and

NECKAR : FACTORY OF LIFE

SITE PLAN 1:25000



PRINCIPLES

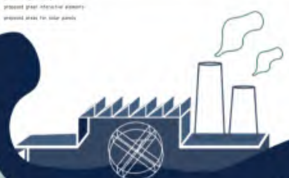
LEGEND

● urban area	◌ proposed urban boundaries
● industry area	● proposed commercial area
● farm	● proposed urban densifying
● forest	▨ proposed expansion of urban space
◌ agricultural land	● proposed eco-industry area
● orchards	● proposed ecologically stable ecosystems
◌ sports green	● proposed agroforestry
● water body	◌ proposed green interactive elements
● road	◌ proposed areas for solar panels
◌ railway	

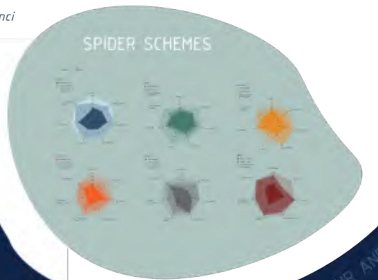
0 750 1 500 m

Water is driving force of all nature.

Leonardo da Vinci



SPIDER SCHEMES



PRIORITIES FIRST.

TREAT RIVER LIKE AND OLD LADY – WITH HONOUR AND RESPECT.

GET CLOSER TO THE RIVER BANKS.

WATER REFLECTS US

WATER IS LIFE

VEGETATION

AGRICULTURE / FORESTRY / ENERGY

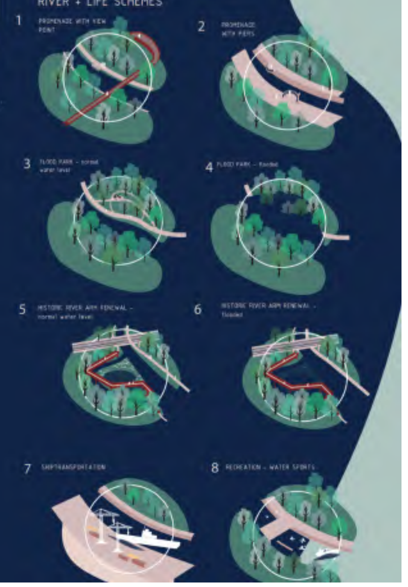
CONCEPT

PASTURE / FORESTRY / ENERGY

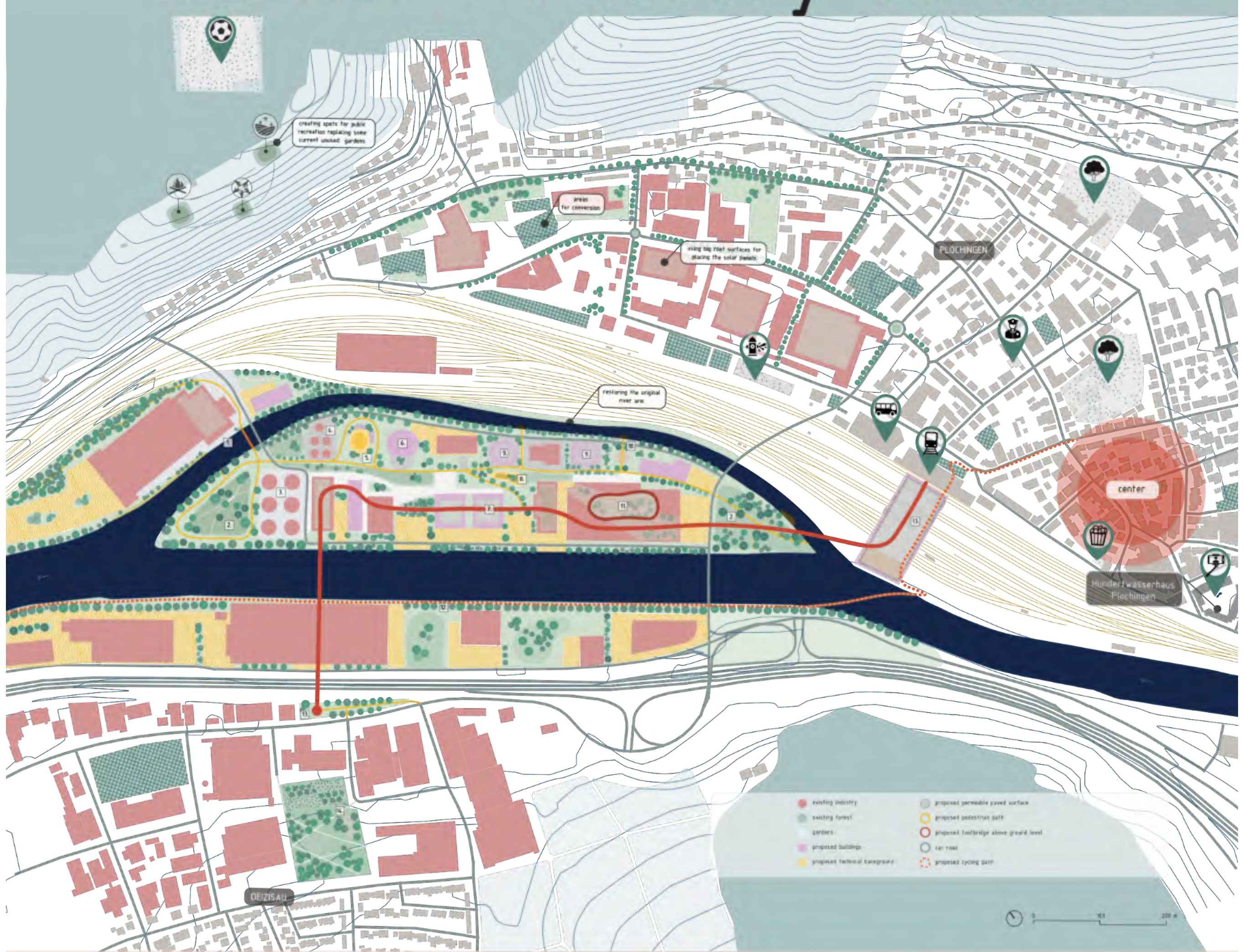
CARPARK / INDUSTRY / FARMING – HUB

BUILDING / FORESTRY / ENERGY / ADAPTING FARMING

RIVER + LIFE SCHEMES



Neckar : Factory of life

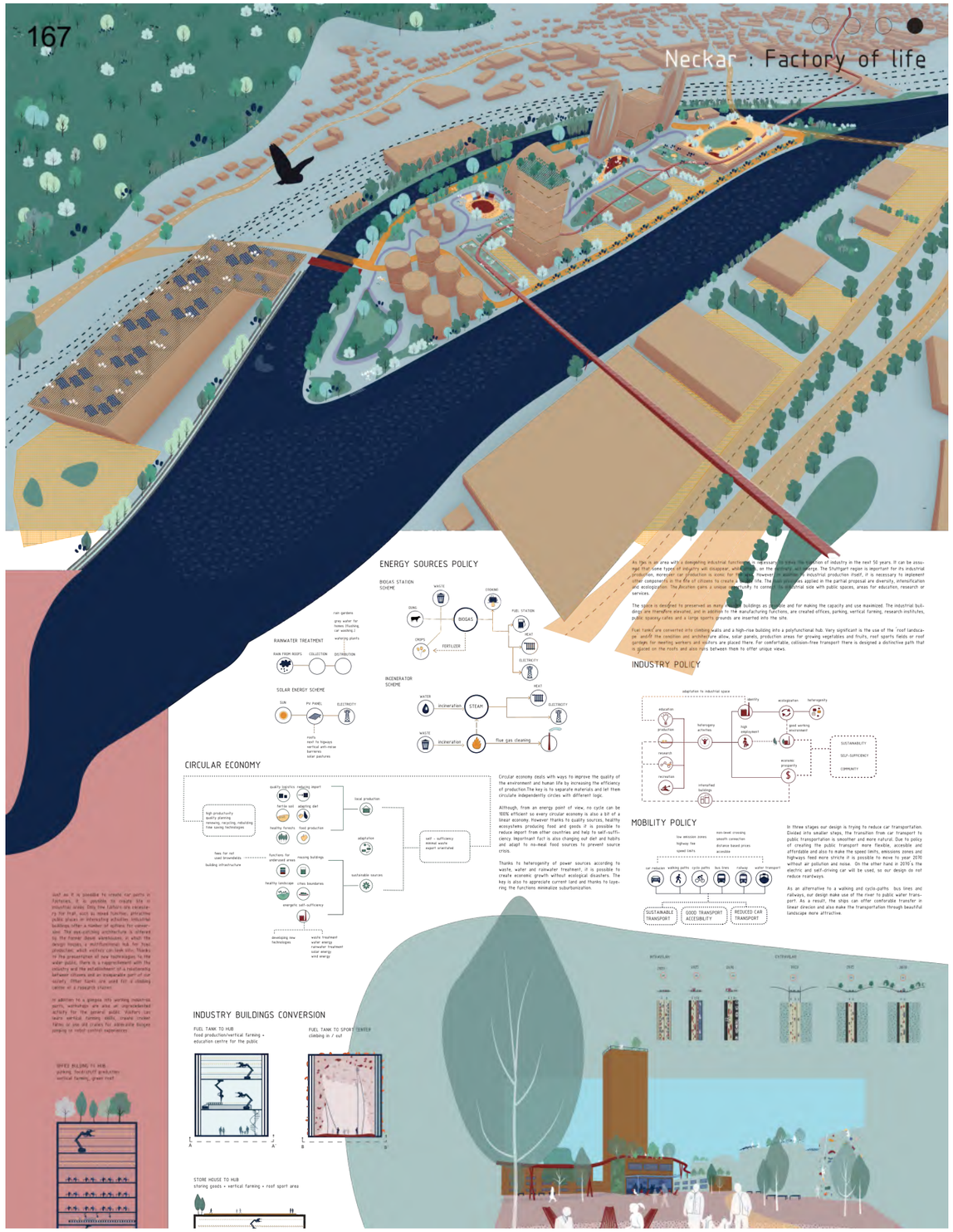


1. RESTORED ARM OF THE RIVER NECKAR offers many opportunities, such as water sports. Part of the existing industrial building is transformed into Water Sports Centre.
2. Since the use of industry space is made more efficient (by moving part of the production to the upper floors), there is created space for POCKET PARKS which cool down the warm microclimate.
3. Part of the industry is left for current use, with the buildings being ECOLOGISED by the use of new technologies. The industry is served by an access road for cars separated from the pedestrian route.
4. Cylindrical fuel tanks are transformed into a CLIMBING CENTER and EDUCATIONAL CENTERS for the public.
5. THE MEET POINT serves as a small square for the public, where it is possible to have a coffee or watch a movie in the summer cinema while walking around the island.
6. Proposed ideas with plenty roof serves as the vertical FOOD PRODUCTION HUB and is a showcase of the modern trends in farming.
7. The proposed RED FOOTBRIDGE links the entire area and creates connection between all of the offered roof programme.
8. Freely accessible area for kids as an ENTERTAINMENT ZONE.
9. MULTIFLOOR BUILDINGS with narrow platform are connecting various purposes such as parking infrastructure, open office space, insect farming etc.
10. RIVERSIDE ACCESS with little piers.
11. The important part of our design is creating a MULTIFUNCTIONAL ROOFSCAPE that should supplement the already taken ground level area. One of the most significant elements is a running track.
12. The riverside is left for the industrial use, however we added CYCLING INFRASTRUCTURE and extensified the green spaces.
13. The endpoint of proposed footbridge CONNECTING PLOCHINGEN AND DEIZISAU.
14. Farming land is recreated as PUBLIC GREEN SPACE offering a picnic area or a place for community farming.

Industrialized areas have always been evasive of wide public access, but perhaps we reached a point where we should sacrifice less space for concrete or asphalt surfaces in favor of widely accessible and enjoyable landscape. Our design takes this as the priority, along with underlining the importance of industry itself through letting people find themselves surrounded by it – and giving them opportunity to soak in the atmosphere of these areas.

PUBLIC AREA in the industrial zone

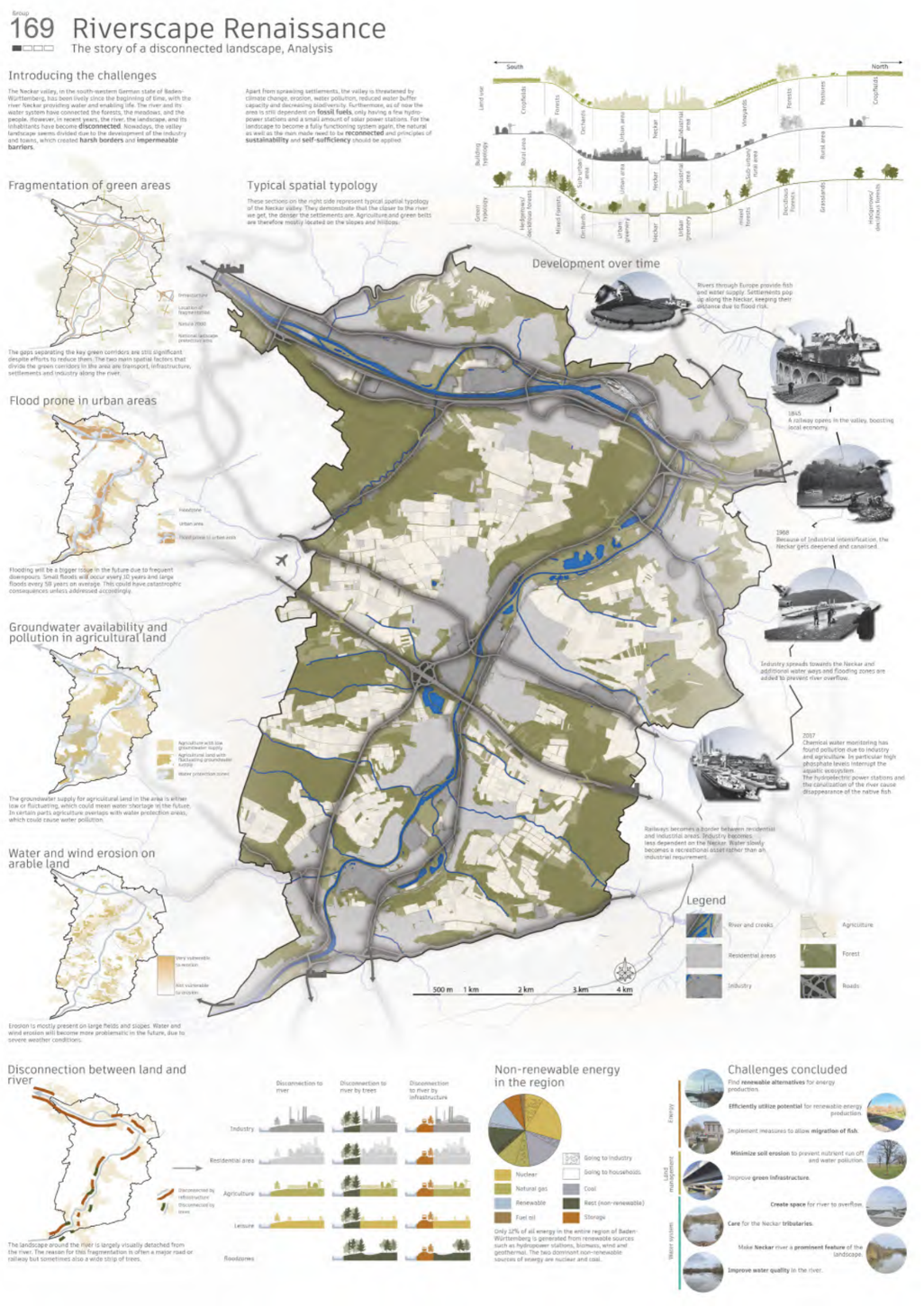
ROOFSCAPE supplementing the program on the ground level



accumulation of potential energy. The support of public and shared transport or the creation of short-distance cities should help reduce the number of cars and create an appropriate mobility hierarchy.

One of the proposed ways of acquiring space for residents should be to promote the river - making some segments accessible and supporting biodiversity in its surroundings. In addition, the development of public spaces and streets within urban areas should be supported.

In the same manner these principles are implemented in the focus area to bring life there. The previously industrial site is made available to people by creating collision-free access or defining industrial, recreational,natural and multifunctional areas. Life is brought also above ground by constructing green roofs and an aboveground pedestrian footbridge connecting Plochingen and Deizisau.



Final Evaluation Round

Van Hall Larenstein University Velp and Breda University of Applied Sciences, The Netherlands and Agricultural University of Nitra, Slovakia

Souraya van Helmond, Hylke Vonk, Margaréta Baňasová, Tara Murk, Dean Lahaije, Jenna van Gemert, Iki van Koningsbrugge,

Riverscape Renaissance

The goal of our design is to achieve a gradual revival of the river landscape through thoughtful interventions across three fields: Energy, Land Management and most importantly, Water System. It is water that ties the whole valley together, therefore regenerating the Neckar and its tributaries means transforming the riverscape as a whole.

First, we strive to create more space for fluctuating water levels, which will provide new landscapes along the Neckar for socializing, production and for biodiversity. The areas at the river will eventually become multi-functional, supplying space for living, working, leisure and wildlife. Our next step is to rejuvenate and expand the creeks and thus form a strong green-blue infrastructure across the urban and agricultural areas.

We also suggest sustainable water management practices to improve the quality of aquatic habitats, which will make the river safe to swim and to fish in. To tackle the energy problem, we propose changes in infrastructure and urban planning to reduce energy consumption, as well as several options for local renewable energy sources, mainly agrovoltaics and biomass production making the region largely self-sufficient.

Our design also proposes revised land management that combines diverse agricultural practices and extensive green corridors to address soil degradation, uneven rainfall distribution and growing demand for food. The solutions in our design will make the riverscape productive, accessible and attractive, while also restoring the Neckar River to its rightful place as the lead aspect of the landscape.

Group 169

Riverscape Renaissance

Bringing the Neckar riverscape together, Master plan

The revival

We based our design around three pillars: **Energy, Land management** and most importantly, **Water system**. Focusing on these three aspects will accomplish a gradual **revival of the Riverscape**.

Within Energy, we are looking at satisfying the growing local demand **without adverse effect on the environment**. Generating renewable energy will be the key to achieving a **productive landscape**. Proposed sources of energy include solar power, hydropower and biomass.

The most extensive pillar is Land Management. It includes agriculture, where we want to **boost food production**, **improve soil quality** and **enhance biodiversity**. Hand in hand with agriculture comes ecology as it involves restoring and improving existing habitats, but also creating new ones. Land Management also includes **urban development and infrastructure**, where we are striving for a more convenient, people-friendly design.

The most significant pillar is the Water System, since water is **involved in every other aspect** of the design. Our approach revolves around improving water quality, creating **space** for the river and making water more **accessible** to both wildlife and people.

People have **lost touch with water** and the land, therefore our goal is to create a landscape that people will care about once again. We want to achieve this through **restoring connections and creating multifunctional spaces**. Restoring connections involves creating physical links such as green and blue infrastructure, but also breaking down barriers. Wherever direct access is not possible, we are attempting for a **visual connection** and for a feeling of **undivided space.**

A truly connected space is multifunctional as it brings together numerous activities and **naturally draws in visitors** – both humans and wildlife. This is manifested uphill in the farmlands where food and energy production, biodiversity and recreation come hand in hand. The same goes for towns in the valley, because they **bring together** living and working environment, space for leisure as well as valuable habitats.

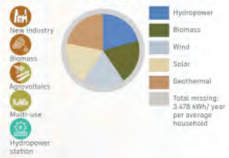
Water, the driver of rebirth

The story of water starts **uphill** under the trees, where springs emerge to the surface and begin their journey through the **Riverscape**. First they **flow** over the farmlands where water is an essential ingredient for a **successful harvest**. After leaving the fields behind, springs enter the urban landscape, where they **provide a cool refuge from the busy towns** and bring nature into people's everyday lives.

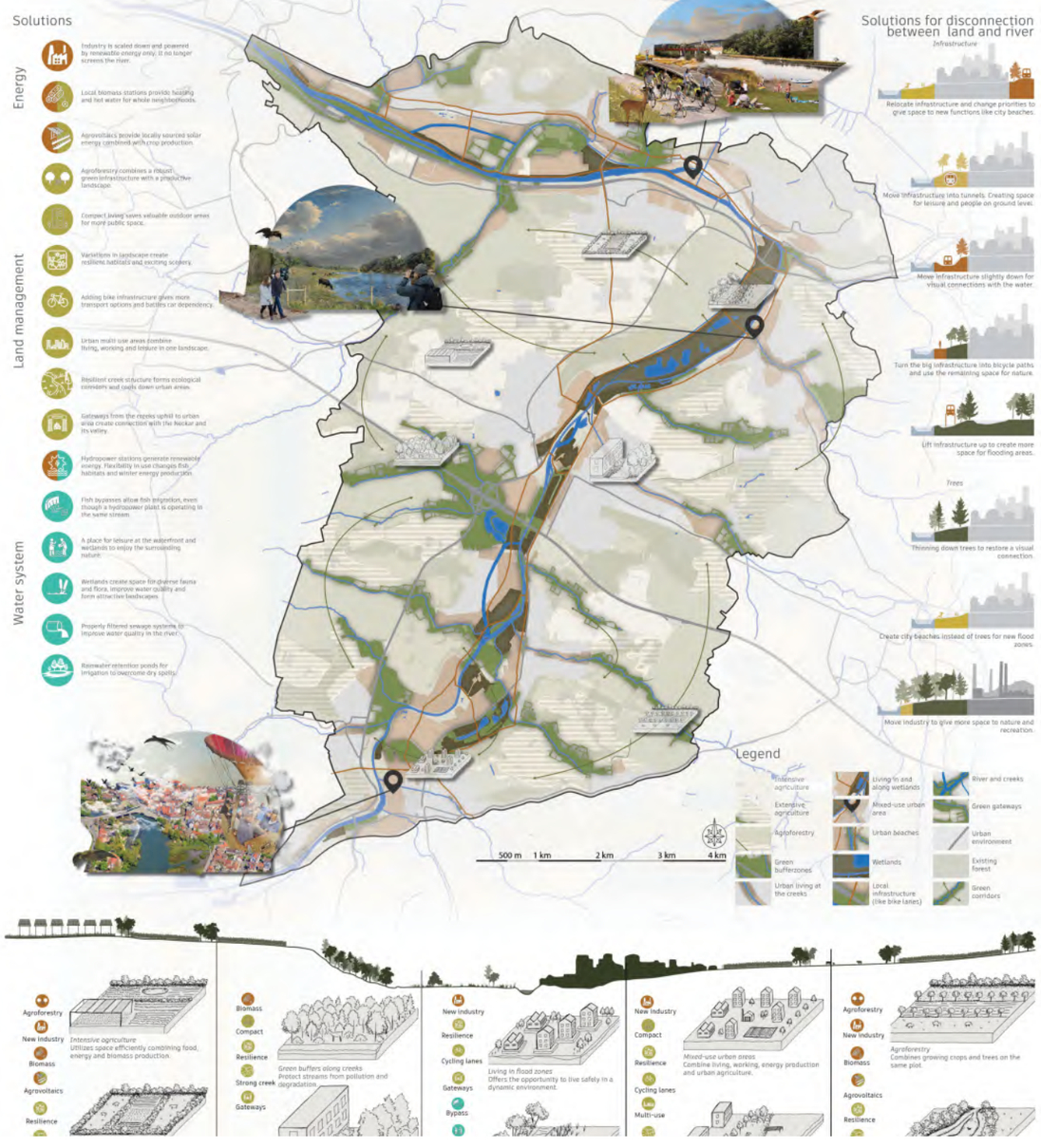
They are now just a small distance away from their destination. The River Neckar, where water is free to expand, move around and is the focal point, the **backbone of the region.**

Through revitalizing the tributaries and the river itself, we shall bring about a **Renaissance of the whole Riverscape**, because the water system connects everything from the highlands to the wetlands and creates an amazing landscape along the way for us to **experience and enjoy.**

Energy in the future



Solutions



Solutions for disconnection between land and river

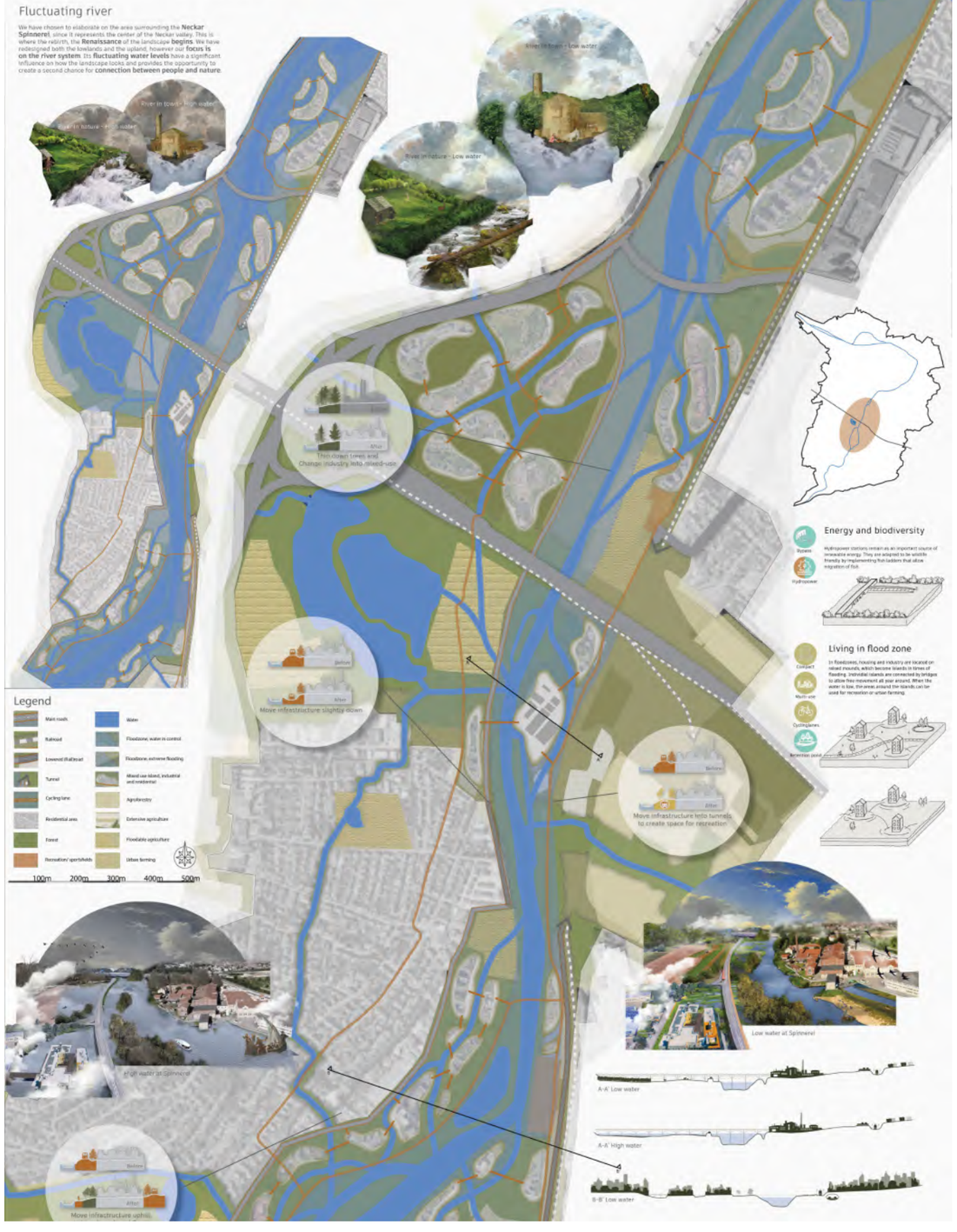
Group 169

Riverscape Renaissance

The Neckar in Depth, Elaboration

Fluctuating river

We have chosen to elaborate on the area surrounding the **Neckar Spinnerei**, since it represents the center of the Neckar valley. This is where the rebirth, the **Renaissance** of the landscape **begins**. We have redesigned both the lowlands and the upland, however our **focus is on the river system**. Its **fluctuating water levels** have a significant influence on how the landscape looks and provides the opportunity to create a second chance for **connection between people and nature**.



Group 169

Riverscape Renaissance

Neckar's next chapter, Strategy

Resolution

Our vision for the renaissance of the Neckar valley cannot be implemented all at once. Therefore, we propose a **timeline**, which introduces the major design moves **step by step** over the next 50 years. The steps are distributed over three main areas, namely the **river valley**, the **towns and hillsides** and the **rural areas uphill**. The timeline also functions as a graph, in which the **investors, costs and benefits** of the project are illustrated over the years. The costs and benefits include **economic profit, ecological gain** and the **participation** of the stakeholders. The final part is a visualization of the **ideal riverscape**.

Legend

Economy
Ecology
Participation

Personal involvement and small business
Corporations and NGOs
Governmental organisations (Local, regional, national and European)

Investment
Profit
Reinvestment
Channelling

2030

2040

2050

2060

2070

River Revealed

The Renaissance of the riverscape begins with revitalizing the river and its tributaries. Once the water gets more space, the landscape gradually transforms, and new functions are introduced. The Neckar is no longer just a body of water, but a space for social activities, sports, and a place to explore and study nature. This alters the way people look at the valley and becomes the driver for future changes.

Connection restored

Radical changes in infrastructure and reduction of traffic along the river restore visual connection and unhindered access to the river.

Build up, not out.
Urban development no longer sprawls beyond its current borders. Urban expansion rather takes the form of high-rise buildings. The transition between landscape and city will be transparent. Build up, not out!

Creeks rejuvenated

Improved creeks

Socializing near the water

Existing creeks in the valley are restored and new waterways within the urban space are constructed. This brings water closer to people and not only acts as a recreational space, but also has a cooling effect on the city. Green buffers along the creeks protect water quality and provide corridors for wildlife.

To boost support from locals, more space for leisure and socializing is created by constructing urban beaches and expanding the areas along the creeks. Their main function is to bring people together and create a connection between the locals and the water.

Sewage systems
Water quality is improved and the river and creeks are suitable for swimming thanks to water protection measures. New sewage systems recycle filtered water to be used locally.

Rural landscape regenerated

To allow locals get used to changes in the agricultural landscape, a pilot farm will introduce practices such as agroforestry, agrivoltaics and rainwater retention ponds. Local farmers will get the opportunity to learn new techniques and see their economic and environmental benefits. Agrotourism will bring more people to the area and provide opportunities to enjoy fresh produce, attractive landscape and biodiversity.

1. *Rainwater retention ponds*
Man-made ponds collecting rainwater to be used during dry spells for irrigation.
2. *Green corridors*
A network of hedges and trees that allow migration of fauna, protect streams and prevent soil erosion.
3. *Agrovoltaics*
Solar panels installed on agricultural land with crops growing underneath.
4. *Agrotourism*
Farm open to visitors, with a shop and restaurant offering local produce, accommodation and space for social gathering.
5. *Stream system*
Storm water detention ponds installed along the streams to prevent flooding.
6. *Orchards*
7. *Pastures*

Dynamic living

1. Impermeable surfaces, some infrastructure and industry are removed from around the river and become valuable space for further development. For example, by freeing up space for a more accessible river people will experience the water again. Therefore be more connected to the city and local economy.

2. Soil is removed in certain parts to allow water to seep in and for the river to expand. New developments are built on mounds and the area in between the islands is used for leisure and social activities. Remaining space is dedicated to wetlands that increase biodiversity and make the area more resilient. These wetlands along the river are also used for agriculture and willow farming for biomass production in low water season.

3. The river is given the space it needs throughout the year. Islands make the housing and industry structures less susceptible to flood damage, which prevents future costs. Individual islands are interconnected with bridges and thus social cohesion and mobility are maintained.

Transport reconsidered

Availability of public transport and cycling infrastructure reduces traffic and allows more space for pedestrians. Multi-functional neighborhoods decrease distances between living and working environments, making it possible to commute to work on foot or by bicycle.

Diverse countryside

Hedgerows in the rural areas provide green corridors, through which species can migrate across farmland. The creek system also serves as a migration route from the valley uphill. This exchange of genetic material keeps local populations healthy and strong, which in turn makes the riverscape resilient and future-proof.

Target species
Large mammalian species like the Eurasian wolf (Canis lupus lupus) and the Roe deer (Capreolus capreolus) and herbal plant species such as the Perennial goosefoot (Chenopodium bonus-henricus) can once again be found in the area. This is thanks to improved environmental conditions and sustainable management of the landscape.

Energy revised

Transition towards exclusively renewable energy is a gradual process that takes place over several decades. This is an essential transition for the resilience of the riverscape and all its industry and inhabitants.

Less energy used
Car dependency is reduced thanks to new cycling routes and convenient public transport. Housing is more energy-efficient and industry is scaled down.

Renewable energy production upscaled
Only renewable energy is produced in the area and the rate of production is increased.

Residential areas adopted to renewable energy
Local biomass stations provide heating and hot water per neighborhood.

Diversified energy sources
Agrovoltaics, biomass and water power are the main energy sources in the area. Geothermal energy, solar panels on roofs and wind energy are also part of the plan.

Challenges resolved

The valley landscape is restored through **rehabilitating the entire water system**, from the river itself to the smallest of creeks in the uplands. **Renewable alternatives** for energy production include solar power, biomass, and hydropower. Agrovoltaic systems and biomass production in wetlands and green corridors **utilize potential space** for renewable energy production **efficiently**. Improved **green infrastructure** in the countryside **minimizes soil erosion**, improves biodiversity, and protects creeks. The Neckar **tributaries are revitalized** and act as green-blue corridors through the urban landscape.
The **river** itself is a **prominent feature** of the landscape with plenty of **space to overflow** thanks to new wetlands and permeable urban spaces. **Water quality is excellent** and safe to swim in because of responsible water management and protection of water sources. **Fish population is healthy** as a result of fish passages and improved aquatic habitats.

The newly formed connection between the people and the river creates an awareness and desire to **live in harmony with the Neckar** and the surrounding nature. This makes the **Neckar the lead aspect of the landscape** once again.

Resilient agriculture

Agroforestry
Agroforestry combines growing crops and trees on the same plot. Trees stabilize slopes, reduce wind speeds and can be used for production of fruit or biomass.

Extensive agriculture
Broad network of green corridors and extensive pastures prevent soil erosion, protect vulnerable areas and retain water.

Intensive agriculture
Intensive agriculture utilizes space efficiently combining food, energy and biomass production. Solar panels installed over arable land protect crops from excess sunlight and torrential rain. Rainwater retention ponds and irrigation systems ensure stable water supply.