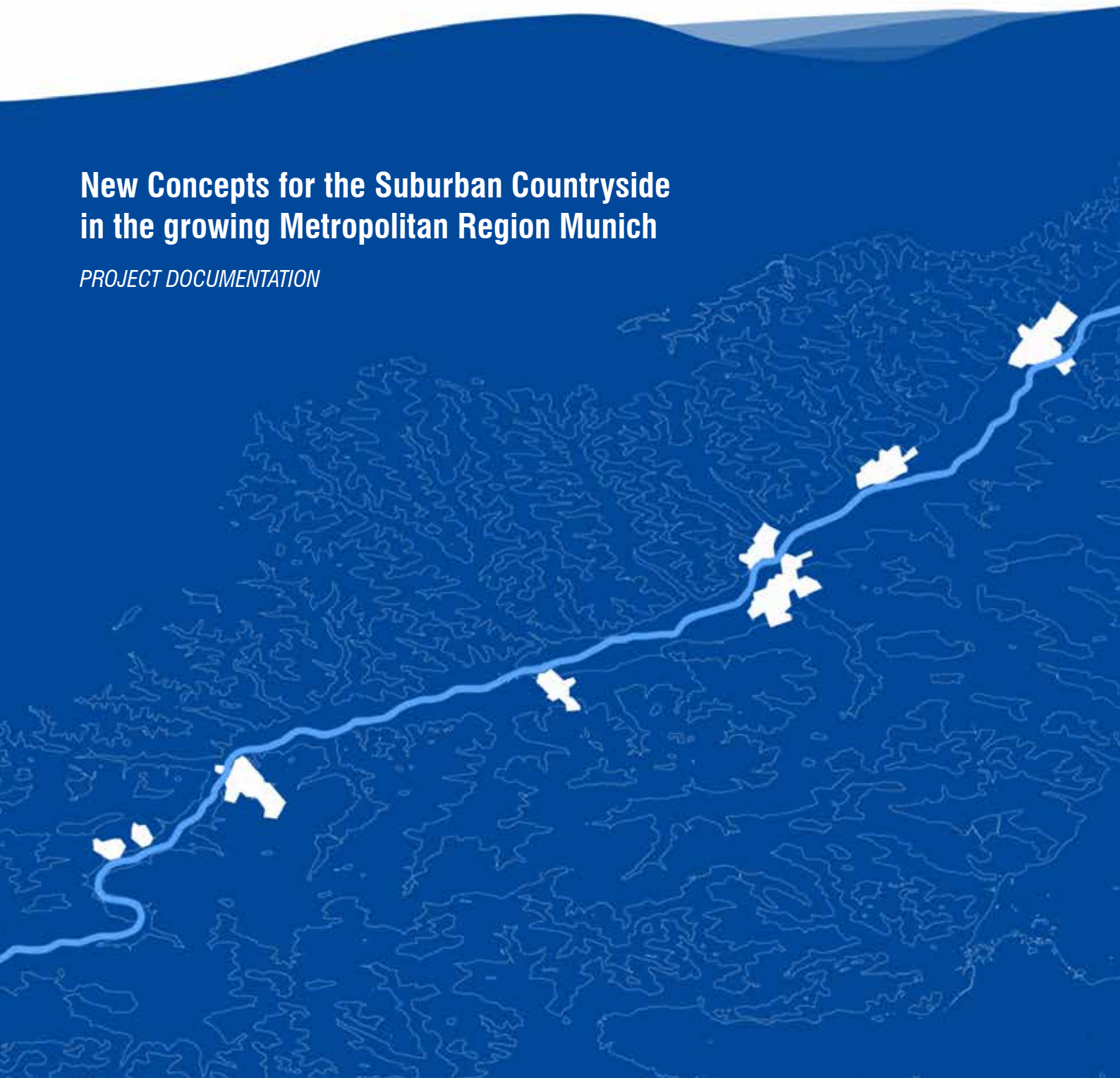
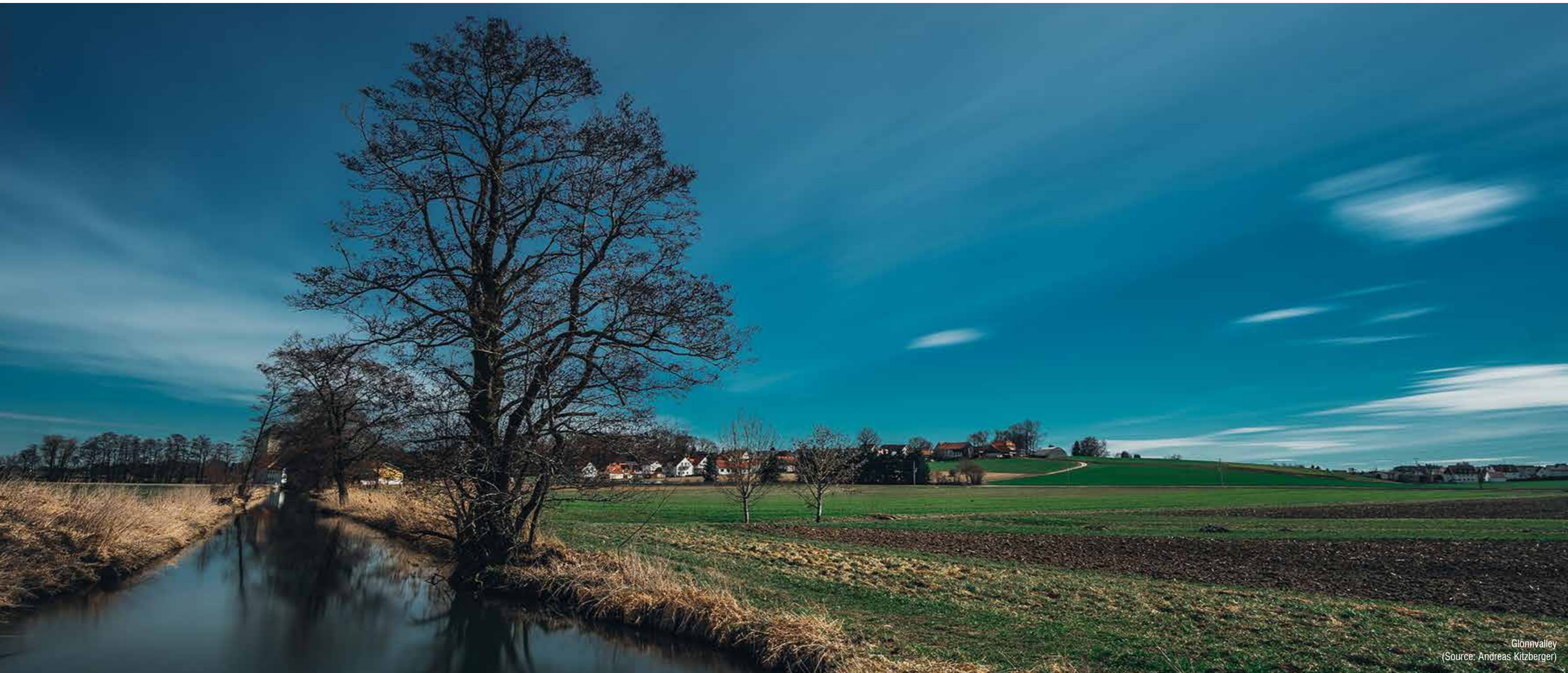


# GLONN VALLEY

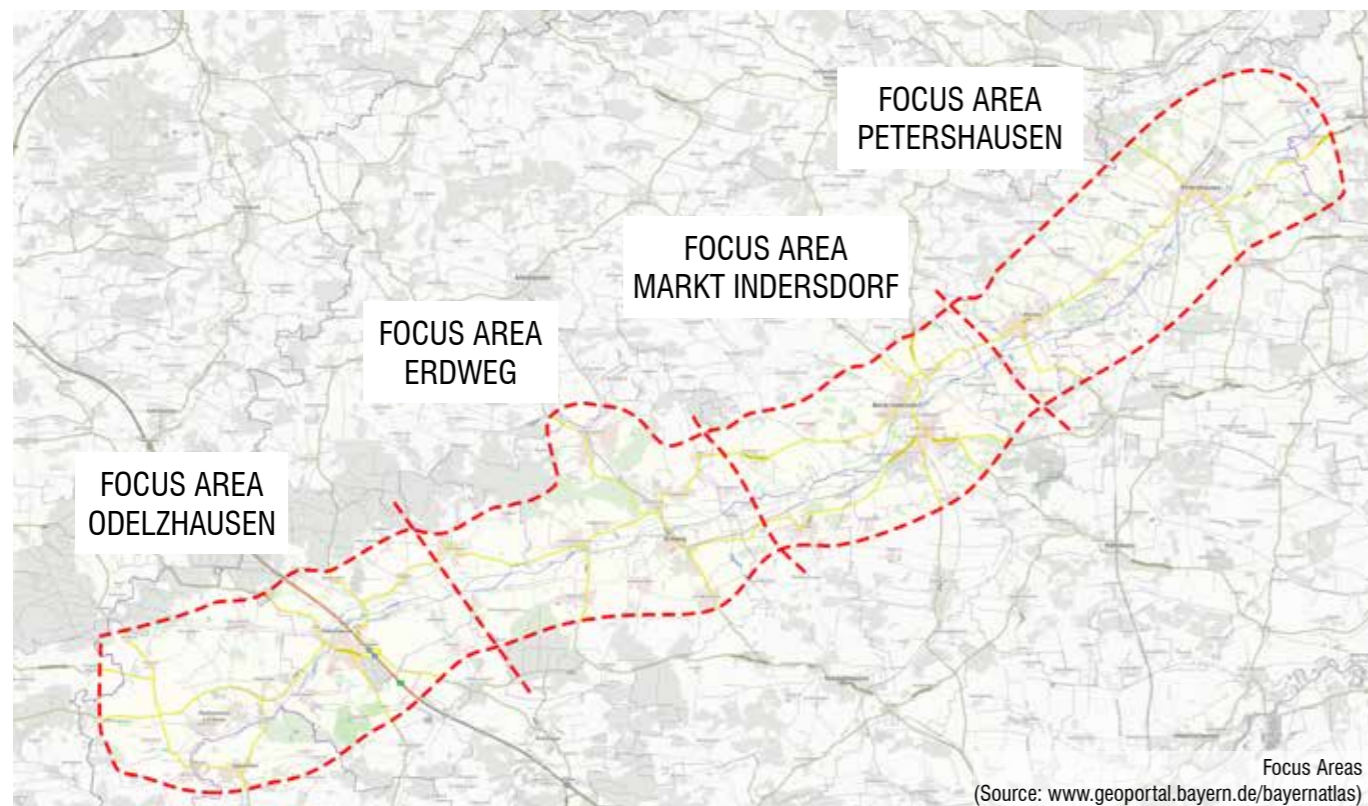
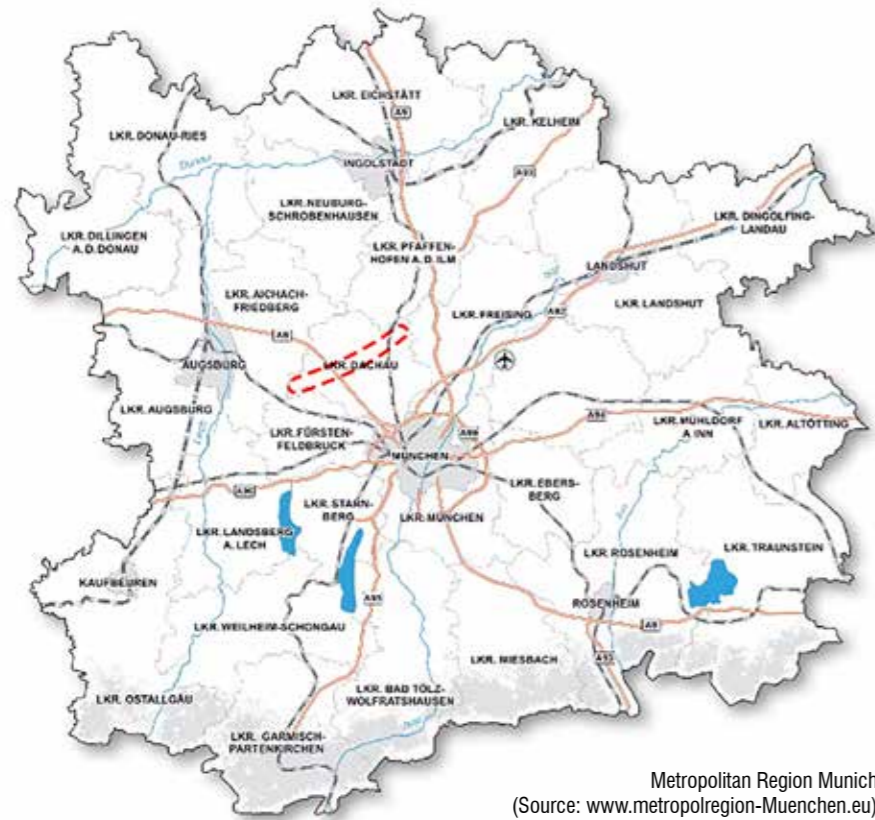
**New Concepts for the Suburban Countryside  
in the growing Metropolitan Region Munich**

*PROJECT DOCUMENTATION*





# INTRODUCTION



## Frame conditions and student composition

The project was the task of the so-called „Main Project I“, a module in the first semester of the master programme „International Master of Landscape Architecture“ (IMLA) in summer semester 2018.

This master programme is operated by the Universities of Applied Sciences Weihenstephan-Triesdorf (HSWT) and Nürtingen-Geislingen (HfWU).

About 30 students from about 20 different countries (from Asia, America, Middle East and Europe) in 8 teams worked on this project.

They have a first degree in Landscape Architecture, Architecture, Urban Planning or related disciplines.

## Metropolitan Region Munich

The Munich Metropolitan Region is one of the most successful economic areas in Europe.

It extends from Eichstätt in the north to Garmisch-Partenkirchen in the south, from Dillingen on the Danube and Ostallgäu in the west to Altötting in the east. That adds up to a lot more than just Munich and the surrounding countryside.

Almost 6 million residents live in 31 counties and cities in this nearly 25.000 km<sup>2</sup> large region.

Roughly, every 14th German citizen thus calls the Munich Metropolitan Region home.

## Region 14

The planning region 14 is consisting of eight counties around Munich.

It has a great dynamic in development, caused by the city of Munich.

The fast growing economic conditions are causing a very fast growing population (related to European conditions).

This has very big influence on the space because of the need of areas for settlements and infrastructure, the need of new housing for people and possibilities of mobility and recreation in the landscape. At the moment the planning region 14 has about 2.85 million inhabitants (2015) and will grow until 2035 more than 12.5% (min. 3.2 million inhabitants).

## Regional Plan Region 14

The state regional plan 14 includes the regional state targets for the development of the region.

The instrument of regional planning in Bavaria is - in an intercommunal context - very weak.

Four communities of the project area are located in the so-called „Ländlicher Teilraum im Umfeld der großen Verdichtungsräume“ which means „rural area in connection to a big urban agglomeration“. The area closer to Munich including the community Petershausen belongs to „Äußere Verdichtungszone“ which means „outer agglomeration area“.

## County of Dachau

The project area belongs to the county of Dachau. The main data are listed below. The whole county is very much influenced by the growth of the Munich area.

The County of Dachau is proposed to grow from 2015 until 2035 about 17.2%.

## Project Area Glonnvalley

The project area covers six communities: Pfaffenhofen a.d. Glonn, Odelzhausen, Erdweg, Markt Indersdorf, Weichs und Petershausen.

The project area is part of the Metropolregion Munich, of the Planungsregion 14 and the county of Dachau. The project area is part of different administrative and strategic areas.

The Glonnvalley is characterised by:

- rural character
- long history - which is implemented in settlements, landscape and traditions
- high and regional specific landscape quality in the Glonnvalley as well as in the neighbouring valleys
- regional types of settlements and buildings, including farmhouses and religious buildings
- renewable energy production, intensive agriculture and regional marketing
- increasing importance of recreation for inhabitants

## Main question of the project assignment

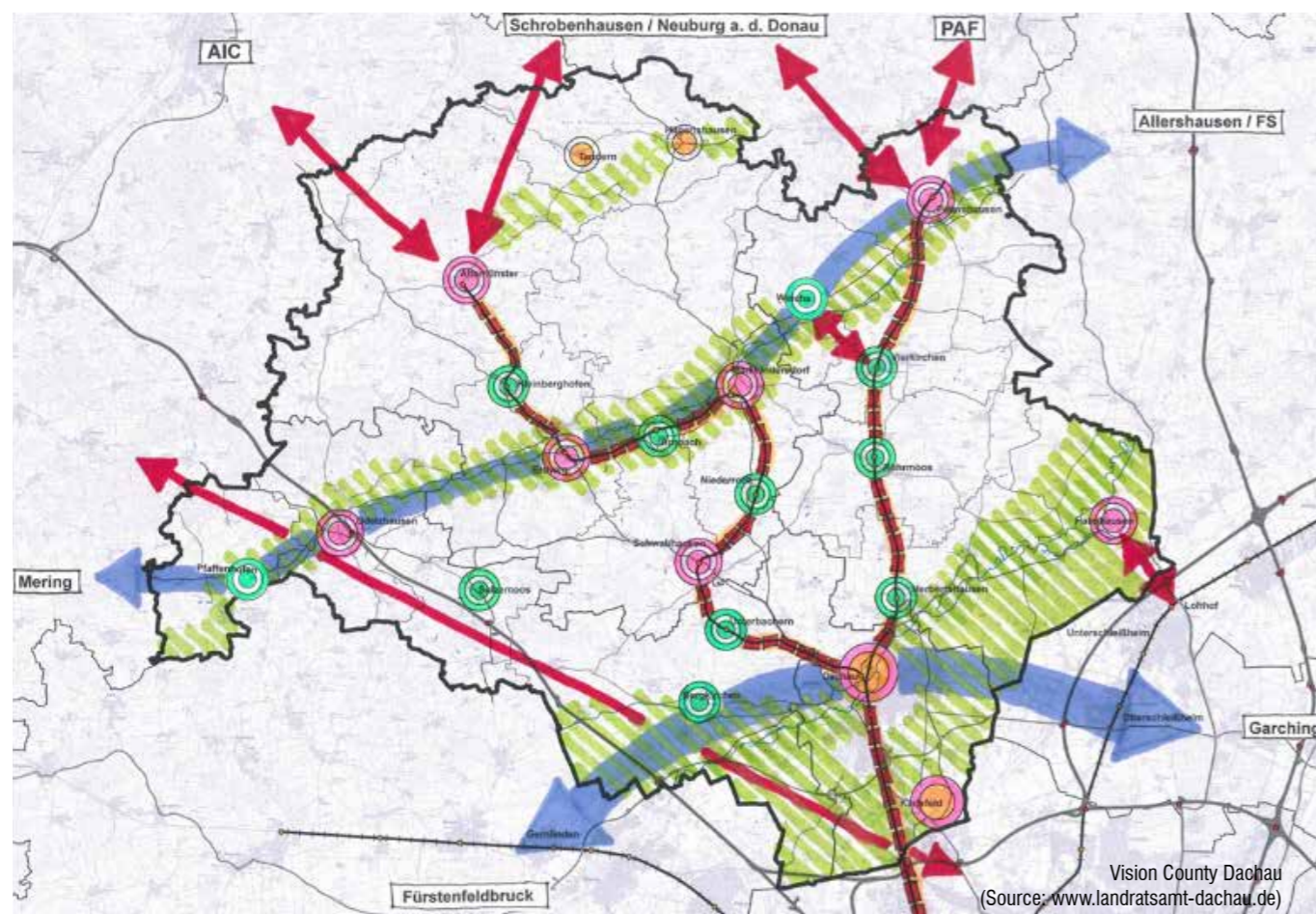
*How to keep the historic identity and social and ecologic quality of the area on the one side and to develop it for the needs of future as homeland, living, working and recreational space in a growing metropolitan region?*

## Challenges related to the project area

- Reduction of land loss in growing metropolitan areas
- Sustainable land use and protection of biodiversity
- Increasing needs for recreation in the landscape and in settlements
- Regional marketing and healthy food
- Further development in settlements with rural background
- Landscape tolerable commercial development near motorways
- Protection of the regional identity in settlements and existing and new housing areas
- Densification of housing in rural areas
- Increasing traffic in individual as well as in public traffic and needs for innovative mobility concepts
- Working with different planning methods (DPSIR, SWOT, ...)

# CHALLENGES

## FROM THE COUNTY PERSPECTIVE



The project area “Glonnvalley” belongs to the county of Dachau. The whole county is very much influenced by the growth of the Munich region.

It is the most growing county in all over Bavaria and is proposed to rise from 149.400 inhabitants in 2015 to 175.100 inhabitants until 2035.

This situation implicates great challenges. In order to tackle problems for the future the district has developed guidelines for safeguarding and further developing the attractive living conditions.

These guidelines are the result of an intensive two-year process with public participation, participation of the local governors / elected parliaments and integration of special work groups.

The guidelines are intended to provide a structured and strategic response to the development in the future.

Especially because of its proximity to Munich the Glonnvalley is an attractive place to live for employees all around Munich. Therefore, the south of the district is very densely populated and has a suburban character. In contrary to that, the north of the district is mostly characterised by rural communities.

Two urban railway lines provide the Glonnvalley inhabitants to reach Munich city centre relatively quickly which considerably increases the attractiveness of the rural areas of the district, too.

But additional highways make it attractive and convenient for residents to commute by car, too. This causes big traffic problems on the roads.

An increasing number of inhabitants causes the need for new housing areas. Additionally, the lifestyle has changed: Instead of classical detached houses which were perfect for the living conditions

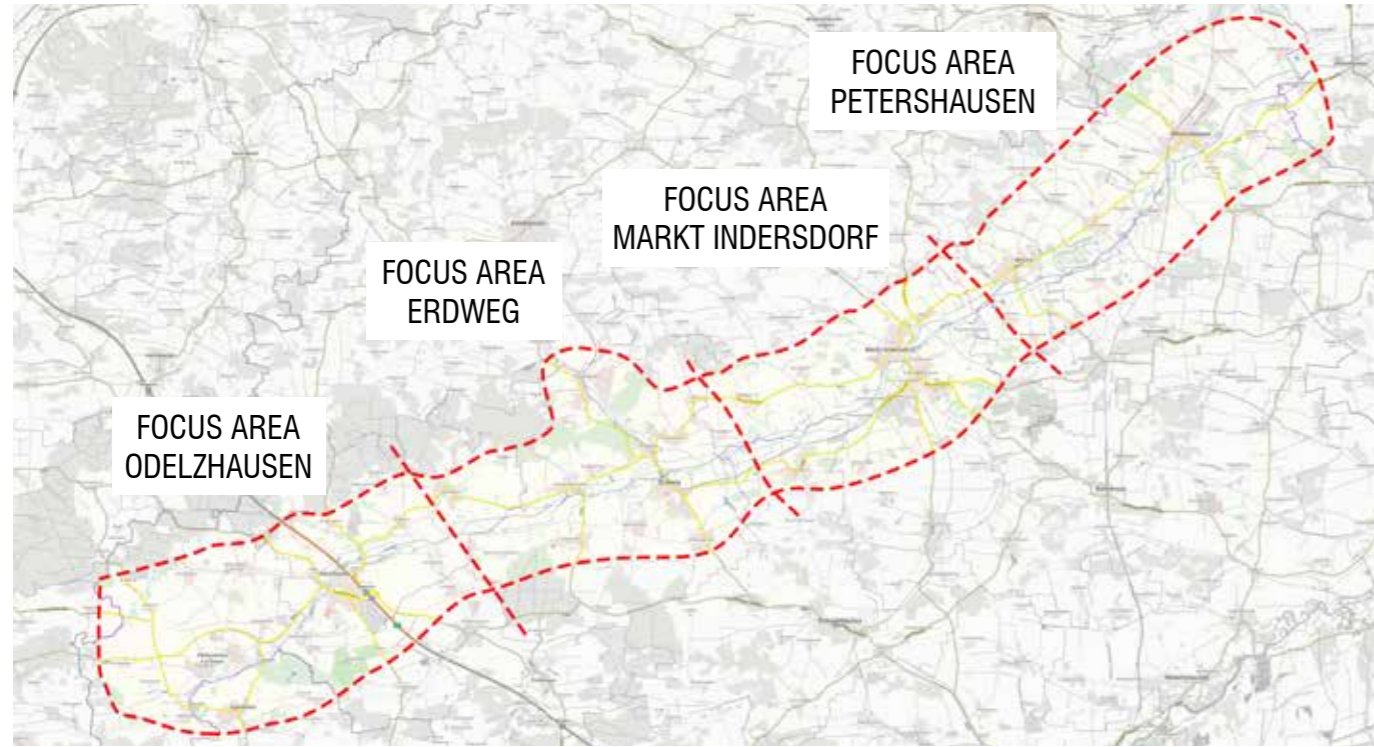
in former times, there is an increasing number of single person households and therefore, a need for an increasing number of smaller apartments.

Due to the high settlement pressure the settlement activity in the district of Dachau grows steadily. Because of the low supply of affordable living space the current settlement development is bringing some relaxation into the housing market by creating new residential areas. On the other hand it seals landscape and irreversibly destroys natural spaces.

This trend heavily affects the region-specific landscape of the Glonnvalley. Therefore, each community is already trying to tackle the challenges of the future with its own strategies in order to be able to continue offering its citizens a home worth living in.

The innovative project results of the students could bring new aspects and solutions into the discussion.

# CONTENT



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# SUPERVISORS

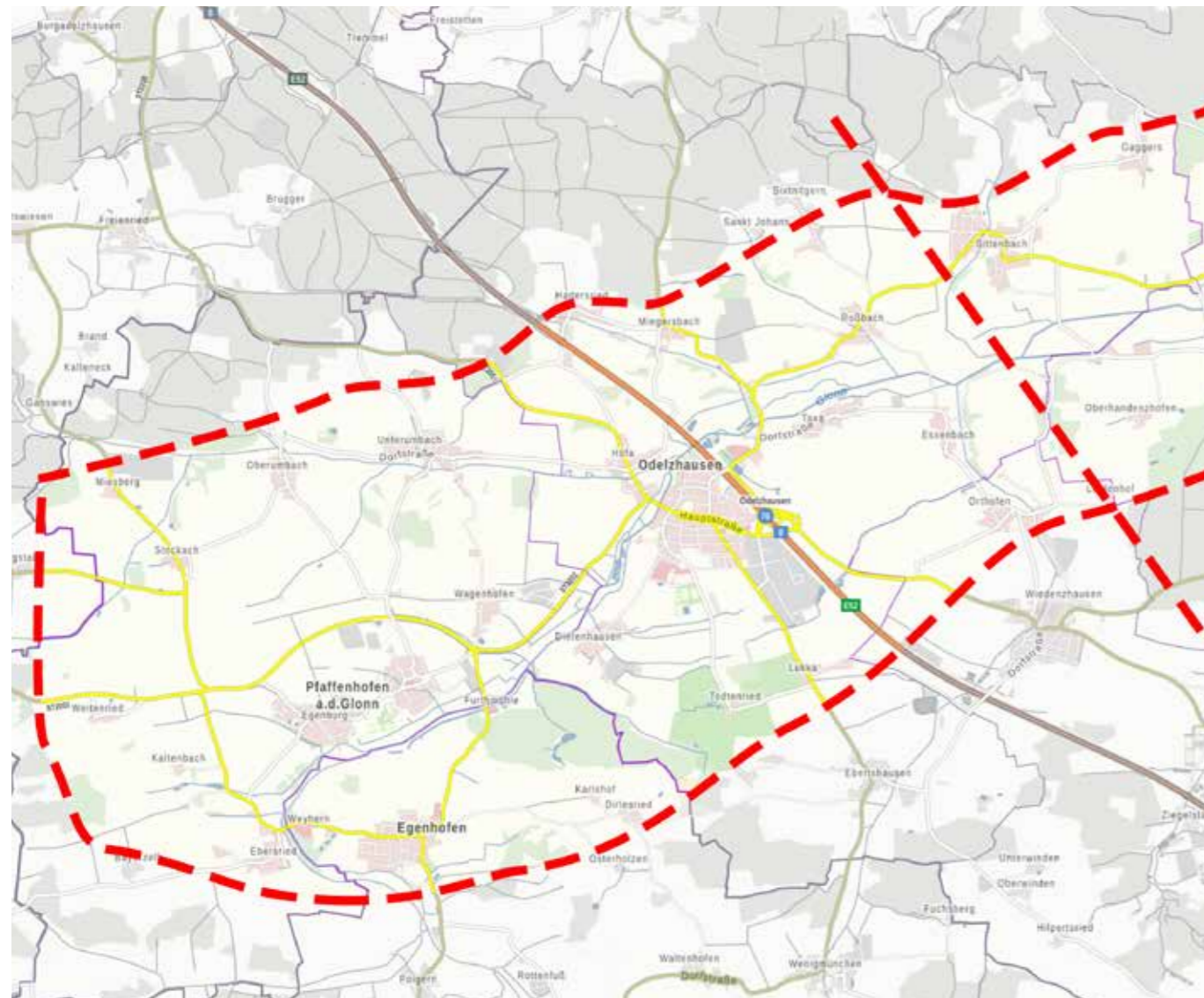


Additionally a special thank goes to:  
 Dr. Brigitta Unger-Richter (cultural heritage consulting)



# FOCUS AREA 1

## PFAFFENHOFEN / ODELZHAUSEN



The focus area includes the communities of Pfaffenhofen/Glonn and Odelzhausen. The administrative collectivity of Odelzhausen consists of Odelzhausen and the townships of Sulzemoos and Pfaffenhofen an der Glonn. Odelzhausen is a 1200-year-old region comprising of a distinguished natural identity. The landscape identity has a unique touch to it with some historical elements as well as some very important functional elements. This place acts as a major link between the two cities Augsburg and Munich. Additionally, intensive agriculture also plays a crucial role in defining the identity of the region. The area is well defined by

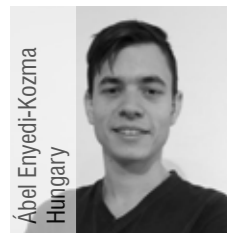
the Glonn River and forests on its periphery making it a strong natural identity. While in Pfaffenhofen strong agricultural structures in settlements and landscape are still relevant, Odelzhausen is changing very much because of the closeness to the motorway A9. More and more flats and new housings as well as commercial areas are growing. The Glonn River is in Pfaffenhofen still very small and growing to the east.

**Themes:** agriculture/cultural landscape in suburban area, regenerative energies, development and identity of settlements, development of commercial areas,

open-space development, connection of urban green and surrounding landscape, accessibility for recreational use, housing development in different settlement types, project Glonnisland (LEADER).



# BALANCE OF CONTRAST



“Balance of Contrast” is a project of spatial development of Odelzhausen and Pfaffenhofen suburban countryside areas in Dachau County, in the Western part of Glonn valley.

Our vision is to balance the opposites that are occurring in this area - rapid urbanization due to population growth and proximity to large urban centers on one hand, and rural identity and countryside lifestyle on the other.

After several site visits, we approached the spatial analysis of the location using the data derived by GIS Software, information that we could gather from the internet sources and our own observations. Spatial analysis showed us the land use organization and layer structure of the area.

Having the vision of balancing the contrast, we continued with the settlement typology analysis which was done using the GIS data and spider diagrams. The five indicators were set up: population density, built structure density, landscape variety, distance from the main road and distance from the industry – that would at the end estimate whether certain settlements were semi-urban or rural. The results helped in the end, to develop scenarios and finally the concept. Furthermore, analysis of statistical data has been done in order to help us establish the problems and further steps in our work. Two great issues that came out of it were: the growth of population and daily commuting since this area is located along the motorway between Munich and Augsburg.

Establishment of the issues leads us further into analysis - SWOT (Strengths-Weaknesses-Opportunities-Threats) and DPSIR (Drivers-Pressures-State-Impact-

Responses). Application of SWOT analysis helped us to figure out the main concerns of the area and things that needed attention while applying the DPSIR method, we managed to establish the chain of causes that were linked to each other and the responses to them. The responses were later developed as scenarios for the future development of the area.

## Scenario 1: “Money Makers”

The focus is put on the economic development of the area. The goal is to attract new investors and businesses, build more factories, and invest in high intense agriculture, urbanize the settlements and to increase the mobility. To achieve this, it is necessary to convert: low-density living areas into high-density living areas, agriculture land into an industrial area, agriculture land into new road infrastructure, pastures and low-intensity arable land into high-intensity agriculture, and forest and natural areas into arable land.

## Scenario 2: “Happy Tree Friends”

The focus is put for the most part of the area on the biodiversity and nature protection and the development of recreational areas in environmentally sound way, in order to increase social and general well-being of people living there. The goal is to preserve existing and introduce new nature protected areas, limit urban growth and industrial development and improve quality of life through encouraging green lifestyle and recreation.

This is accomplished through: Introducing green belts to prevent urban spread, extending nature protected areas, developing Glonn green way with recreational routes and parks along to it, adding the value to agricultural landscapes by adding recreational functions and



features, and limiting road connectivity development to preserve rural identity of landscapes and settlements.

**Scenario 3: “Blooming Society”**

The focus is put on the social connection and nearness of nature through balancing the opposites. The goal is to interconnect working and living in order to reduce the number of commuters and strengthen the connections with living spaces and surrounding landscapes. Achievement of these goals should be done through: transfer from single family houses to social housing (flats), developing the urban growth along the highway, blend different uses such as residence, commerce, industry and recreation to create lively neighborhoods, introduce spatial possibilities for business and start up incubators, improving mobility within the area by introducing new types of transportation/or improving the existing ones.

**Concept**

The concept for the Pfaffenhofen and Odelzhausen areas was derived from two proposed scenarios „Happy Tree Friends“ and „Blooming Society“. By combining these two, the focus is put on all three aspects of sustainable development - economy, environment and society, while at the same time, respecting the vision of BALANCING THE CONTRAST - development of semi-urban center and preservation of rural areas.

A recreation area is developed along the Glonn river and one of the main features of it, is a bicycle route, that serves as a buffer zone between the river and arable land which currently doesn't exist.

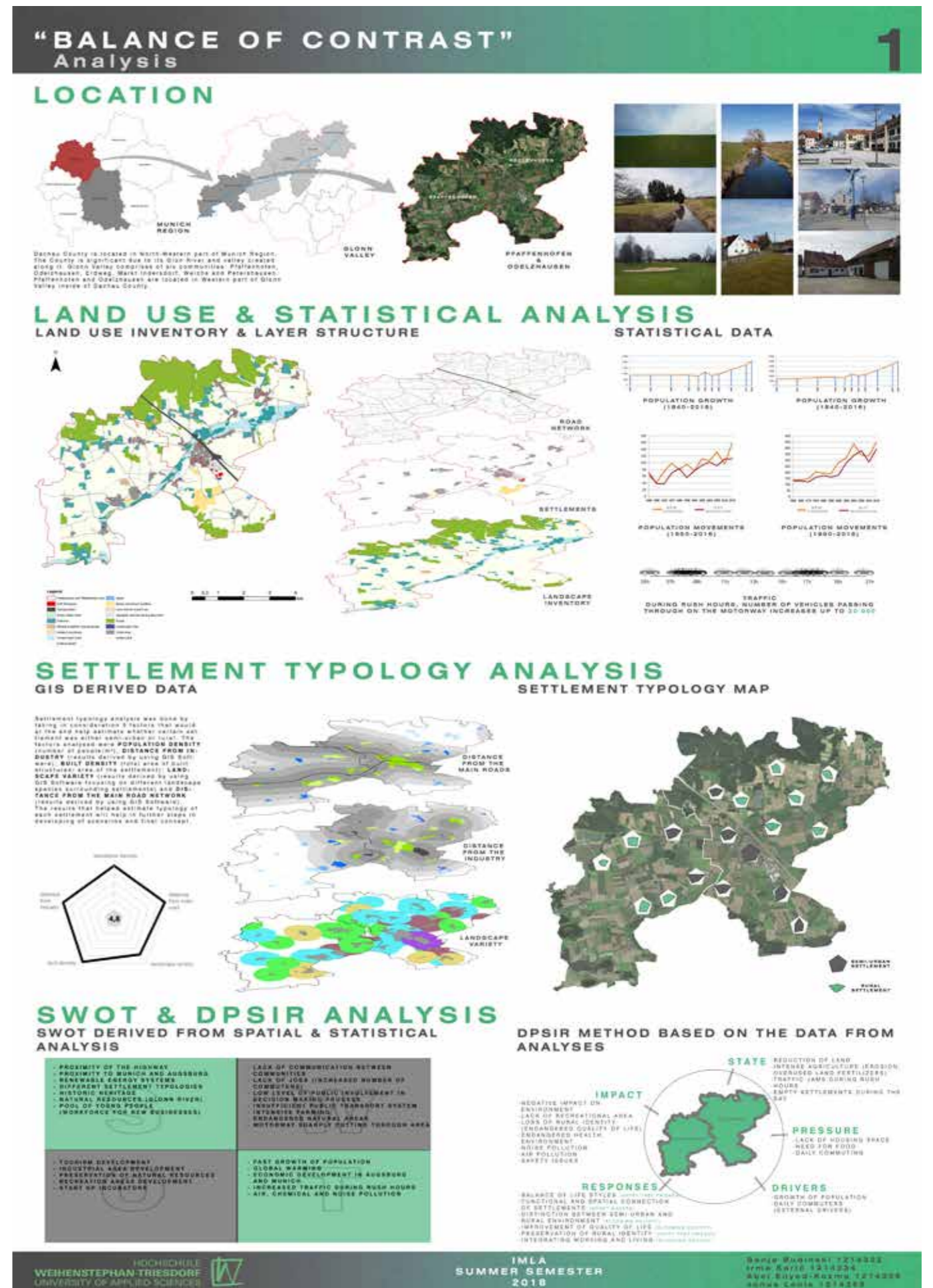
Landscape features were added within the urban fabric to balance the overall structure and to help improve the lifestyle of society. The examples of those features are green pedestrian bridges connecting the settlement areas that are at present

being roughly separated with the highway. As for the built fabric within the semi-urban center, social housing and mixed-use structures have been introduced,

as well as, integration of working and living. Due to continuous growth of population and need for living space, the spread of urban tissue in three stages has been planned as well. Rural areas are being preserved as they are at the present, encouraging the rural lifestyle to remain intact.

The focus area has been zoomed in to mainly Odelzhausen settlement that is located next to the highway and by the size, it's the largest settlement in the area. The main goal here was to efficiently plan the future development of the land around the highway that is currently unused but with great potential. The reason why we have chosen the urban development around the highway is that the land there is directly connected to the main road infrastructure – especially good for the businesses and industry but also for the living if natural buffer zones are provided.

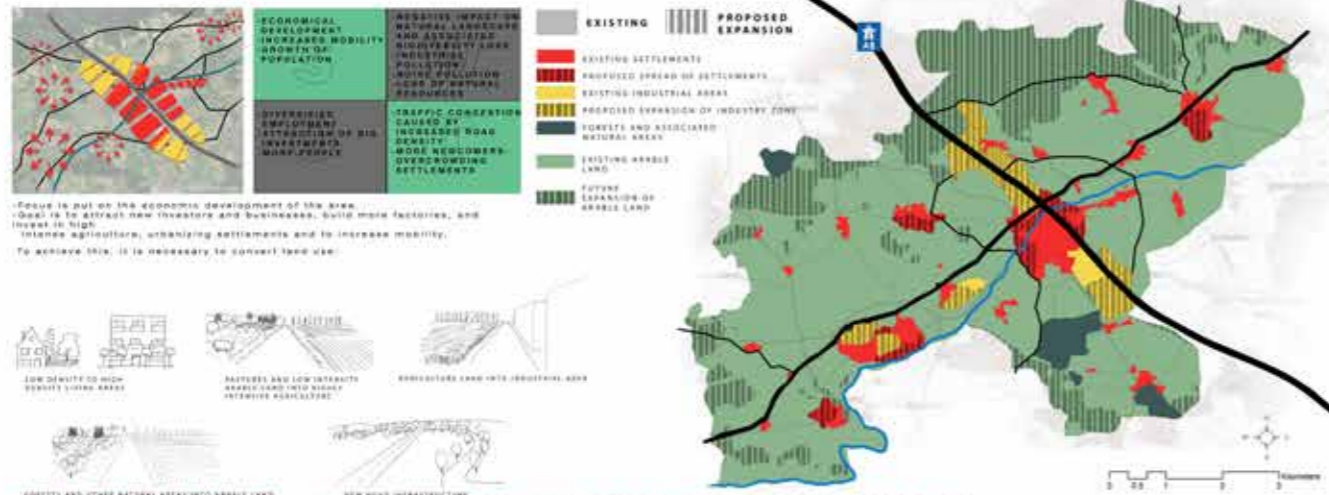
The expected outcome of our solution for the development of the area is that the “sleeping city” phenomena will no longer exist here. Instead of commuting, people will be able to reach their workplaces by walk or by their bicycles, younger people will tend to stay and form their families here, while people that want a peaceful and quiet life can enjoy the countryside without the fear that modernization might ruin it.



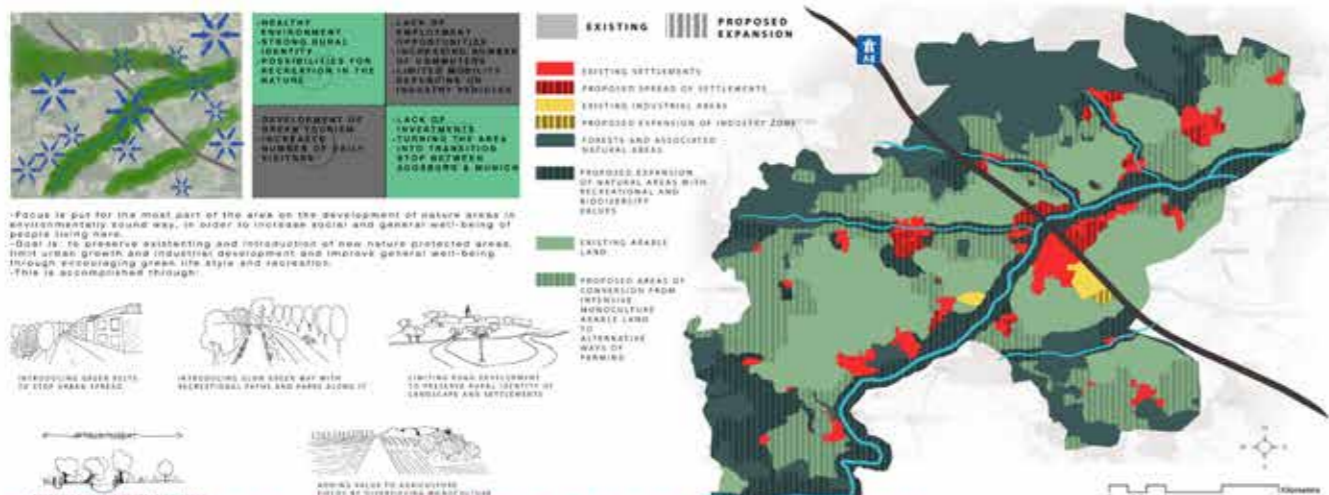
# "BALANCE OF CONTRAST" Scenario Development

2

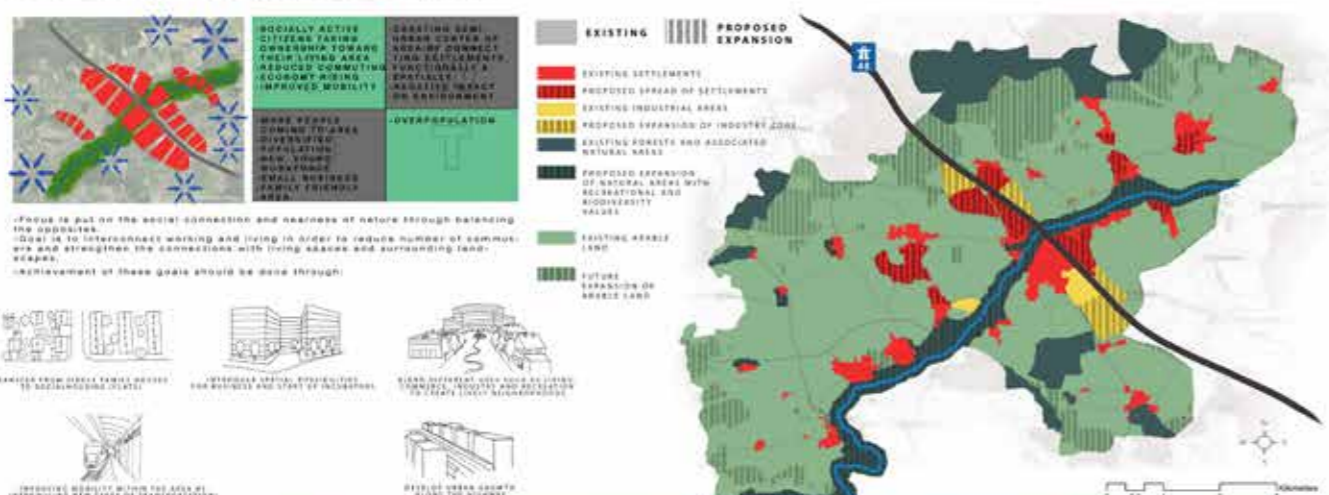
## SCENARIO 1 - MONEY MAKERS - ECONOMY DEVELOPMENT



## SCENARIO 2 - HAPPY TREE FRIENDS - SOCIETY & NATURE DEVELOPMENT

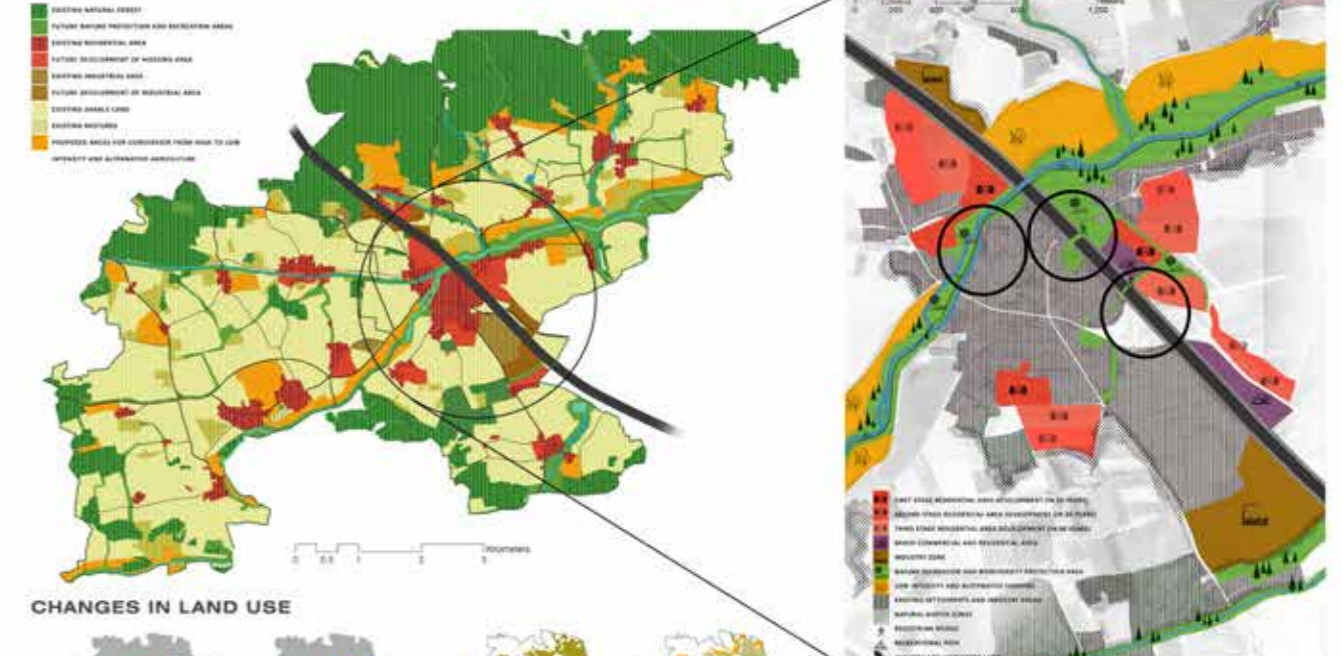


## SCENARIO 3 - BLOOMING SOCIETY - SOCIETY & ECONOMY DEVELOPMENT



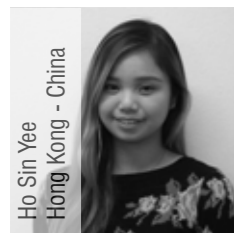
# "BALANCE OF CONTRAST" Concept

3



# THE NATOPIA

## ESTABLISHMENT OF NEW IDENTITIES



Ho Sin Yee  
Hong Kong - China



Rana Shukayr  
Lebanon



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Germany



Abhishek Passan  
India

The process to our project started with the basic survey for the region accompanied by some information given by the Mayors and what would they like to have in their respective region. A series of collection of basic information took place which made us describe the basic strength, weakness, opportunities and the threats prevailing in the area. This SWOT analysis led to the formulation of the vision for the area further leading to a detailed analysis in terms of DPSIR. The process of DPSIR was further strengthened by the analysis maps generated by GIS which incorporated the most basic issues as well as the spatial understanding of the area. We divided the analysis in two parts i.e.

- Spatial and Environmental Analysis (Forest, Protected Area, Settlements, etc.)
- Functionality and Accessibility Analysis (Transportation, Industry, etc.)

“Conserve identity, revitalise landscape, stay close to nature and it will never fail you.”

The next part to this analysis was establishing the three scenarios that are possible considering the current situation for the above-mentioned parameters.

This prediction for the future of Odelzhausen lead to the formulation of spider diagrams depicting the most prominent features of the area in particular scenario. The three scenarios possible are:

1. Business as Usual
2. Urban Tin Can
3. Natopia (Nature and Utopia)

These scenarios are specific in respect to their outcomes and parameters. The first scenario is the most prominent scenario in terms of reality, as if there is no change to the outcomes as well as the on-going

changes it would ultimately lead to this scenario which we call it “Business as usual”. It consists of settlements with moderate density and low-rise housing structure. Moving towards the industrial sector it is having a moderate density with no green buffer making it a prominent issue and the last part of environment and mobility are in a deteriorated condition as they lack public transport as well as it is quite visible for the lack of bio-diversity and vanishing Glonn through climate change.

The second scenario which we call it “The Urban Tin Can”, is also a realistic approach to Odelzhausen, comprising of high-density settlements and industrial area with fixed no expansion from the existing boundaries. The environment quality somehow remains same with low bio-diversity but a significant preservation of the Glonn and an improved network system by the proposal of new connection to Auto-Bahn reducing the traffic congestion within the core areas.

The last or the most important scenario which we think for Odelzhausen in the coming 30-40 years is “Natopia”. It means a utopia with nature at its core parameter. This concept reveals the importance of the natural and the rural identity for Odelzhausen.

This scenario would incorporate moderate density settlements with a lot of green spaces around them and same for the industrial with a green buffer and high environmental quality and more sustainable mobility options. The scenarios will be accompanied by basic analysis as SWOT depicting their features and possible outcomes. The scenarios act as a base for the conceptual part depicting the maximum possible outcomes and a better habitable area.

“Practice safe designs, use a Scenario.” These scenarios put the basic possible outcomes for the area which can be further exploited in a positive way so as to enhance the identity for the area. The scenario which we chose for our concept was Natopia which is a combination of features from the second and the last scenario. Starting with the concept we established a vision focused on four parameters i.e. Environment, Recreation, Transportation and Land use. So, starting with the establishment of identity we identified the major components which could be utilised to have a connection throughout the area improving the environment as well as to establish better sources of recreation and interaction for the dwellers of the area. Odelzhausen is a prominent location connecting two major cities, so it could also be utilised as a regional tourist site. We tried to impart Odelzhausen a better recreational structure, by including a cycle network connecting the heritage structures as well as exploiting the benefits of natural features such as Glonn and Forests. To impart a better and sustainable landscape, we introduced the concept of sustainable agriculture and organic farming that create an aesthetic and environmental up gradation for the area. The cycle and hiking track is introduced so as to incorporate a better way of recreation as well as to improve the mobility aspect for the area. The track also acts as an interconnection and intra connection to the surrounding areas as it follows the footsteps of natural corridor i.e. the rivers and the forests. To establish a better understanding of the area, we had some models done so as to formulate parameters. To define new location of settlements, we developed a physical infrastructure model which considered existing settlements, connection through public transport, etc. Further we had a similar model analysis for the proposal of cycling network which incorporated a restriction area model

(areas which are restricted for new development), visibility model (places visible when on the track according to the physiographic conditions for the area), and the density model (connecting high heritage density areas). This guided us to have a better evaluation of the area and to propose a suitable structure for the same. To maintain and sustain the local identity of the area we incorporated the Glonn in every possible way in terms of bio-diversity, recreational elements, connectivity and environmental conditions. The concept also focuses on the settlements thus aims to improve the housing scenario. The concept also considers better functional and environmental working spaces by introducing green buffer throughout the settlements and connecting them. Nature is a key factor, thus introducing local flora and fauna would give it a better recreational landscape, therefore leading to a better and sustainable Odelzhausen in the coming years.

# THE NATOPIA

## Establishment of New Identities

International Master in Architecture, Hochschule für Angewandte Wissenschaften  
Summer - Wintersemester 2018 / 19 Master Project  
Altkönigstr. 100 | 10585 Berlin | Germany | www.haw-hamburg.de

WE HENSTEF AN-TRE SDORF  
LIFE-CITY OF APPLIED SCIENCES

I ANALYSIS II SCENARIO III CONCEPT

### BASIC INFORMATION

Odelzhausen is located in the district of Dachau in the south-west of Bavaria. It is also a part of the so-called Glonn valley. Despite its small size and a water level of about 100 centimeters, the Glonn shapes the landscape around Odelzhausen. Its community includes the villages Ditzelsheim, Eberzhausen, Esserbach, Gaggen, Habersried, Hils, Laka, Tscherned, Miesgenbach, Neibach, St. Jakob, Sittenbach, Sittenberg and Taxa.

Although the nearest S-Bahn connection is in Markt Indersdorf, about 18 kilometers away, Odelzhausen is directly located on the motorway A8, leading to a high traffic density in the center of Odelzhausen, which leads to traffic jams, especially in the morning and evening rush hours. A possible solution is the planned north bypass for additional motorway access.

Its proximity to Munich and Augsburg is contributing to rapid population growth. As of New 2017, the population has increased to 3,455 inhabitants and exponential growth is expected to continue in the future. This pressure of population growth leads to the need for more living spaces, schools, retirement homes, shopping opportunities etc.

Gradual degradation of rural characters is another challenge that Odelzhausen is currently facing. Traditional farms, historic castles and monasteries such as the cloister of Taxa are replaced by commercial areas, modern houses and apartments.

It is planned in the future to revitalize the area and foster more community life by, for example, creating a small park with fitness facilities, play areas and sports facilities directly in the center of the village, which at the moment does not provide any incentive for social activities, thus gradually losing the function of a social meeting point.

### IDENTITY

**ENVIRONMENTAL**  
- Decreased Biodiversity  
- Increased Population  
- Lack of Habitat  
- Conservation

**RECREATIONAL**  
- Lack Activities  
- Lack Social Interaction  
- Poor Connectivity to Glonn  
- Golf Course

**TRANSPORTATION**  
- All Motorway  
- Poor Public Transportation  
- High Traffic Density

**LANDUSE**  
- New Settlements  
- No Buffer Zones

### SWOT

**Strengths**  
- Industrial Area  
- Close to Motorway  
- Strategic Location  
- Agricultural Area

**Weaknesses**  
- Lack of Biodiversity  
- Absence of Public Transport  
- High Traffic  
- Concentration  
- Glonn is not accessible

**Opportunities**  
- More cultural and knowledge exchange  
- More diversified job market  
- Presence of Golf Course  
- Presence of Heritage Structures

**Threats**  
- Heavy pollution from cars  
- Lack of Activities  
- Low fertility due to climate change  
- Low social connection  
- Increasing aging population

### DPSIR FRAMEWORK

### SPATIAL / ENVIRONMENTAL ANALYSIS

**FOREST TYPE**  
Most of species that can be found in the forests of Odelzhausen are spruce, because this fast-growing tree has a high economic importance. Rising temperatures and low rainfall now endanger the stock of trees.

**PROTECTION AREAS**  
In order to preserve the recreational value of the Glonn valley for the general public, 1974 large areas were designated as a landscape conservation area, as along as the Glonn in Odelzhausen.

**SETTLEMENT AREAS**  
Due to the motorway connection the population is continuously increasing and will increase even more in the future. Therefore, the previously rural settlements composed of some farmhouses and single-family houses get bigger and bigger, and change to a more urban character.

**FARMS & ARABLE LAND**  
In Odelzhausen still a few traditional farms are present, some of which are even under monument protection. About half of the area is used for agriculture, although a strong decline in agricultural areas and farms can be observed.

**INDUSTRIES**  
There are numerous companies in the community, for example in the sectors of electrical engineering, construction, planning, and also some supermarkets. Above all, the commercial park has a high economic importance for the region.

**CONTOURS**  
Topographically, the Glonn is located in the shallowest parts of the region. In general, it can be said that only small height differences of up to about 30m can be found in the area.

### FUNCTIONALITY AND ACCESSIBILITY ANALYSIS

**SCHOOL & ENERGY PARK**  
The community boasts basic and secondary schools. In addition, there is currently being built a new school center in Odelzhausen. Energy is produced, among other things, in the large wind farms in the northern forests and the solar plant in Miesgenbach.

**RIVER & RECREATIONAL**  
Odelzhausen is subdivided by the Glonn, which characterizes the landscape. A large recreational area for the citizens of the community, but also for Munich, represents the Golf Club Munich-West Odelzhausen e.V.

**HERITAGE MONUMENTS**  
There are some sites and buildings of historic importance in Odelzhausen, which are under monument protection.

**CIRCULATION**  
Odelzhausen has a prime location with respect to the transport route. It is connected to Augsburg and Munich through Auto-Bahn. The place lacks connection through public transport and is having high traffic density because of it.

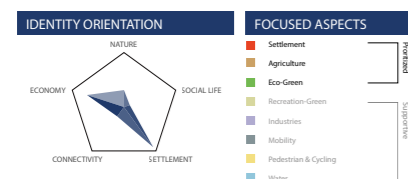
## CONSERVE IDENTITY, REVITALISE LANDSCAPE,

## I ANALYSIS

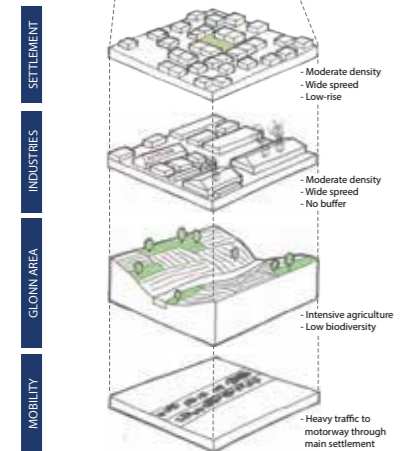
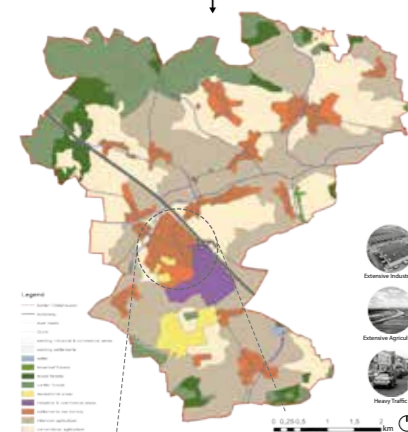
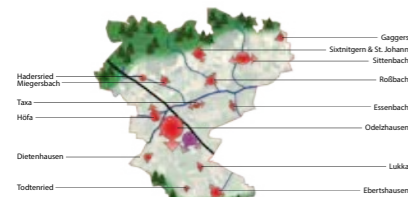
## II SCENARIO

## III CONCEPT

### SCENARIO I - BUSINESS AS USUAL



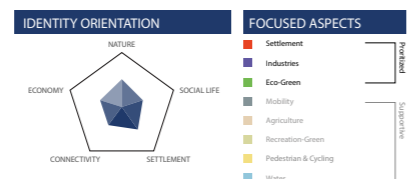
#### SCENARIO INDICATION



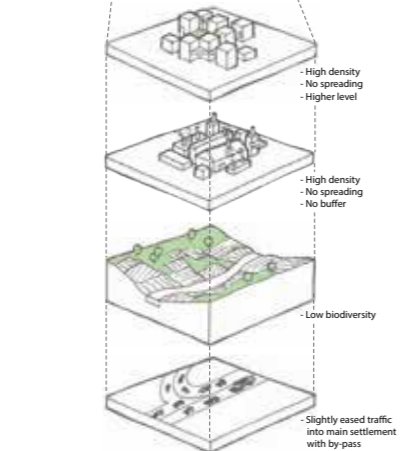
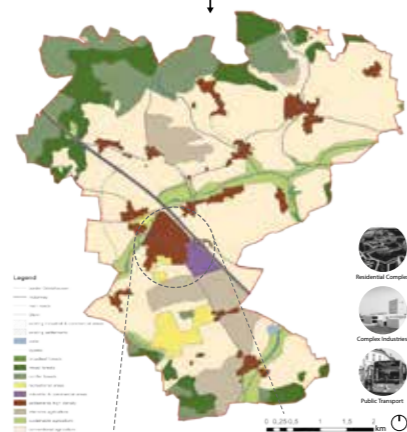
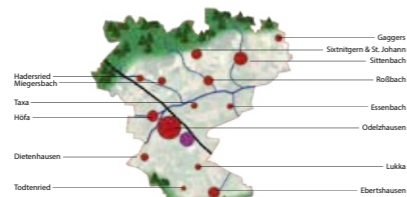
#### SWOT - SCENARIO I

- Strengths**: Proximity to Aueburg and Mönch; Diverse industry leads to better economic growth and more jobs provided.
- Weaknesses**: Lack of public transportation; Lack of connectivity in Glonn area; High traffic concentration.
- Opportunities**: More cultural and knowledge exchange; More diversified job market.
- Threats**: Heavy pollution from cars and industries; Low biodiversity in Glonn area; Climate change; Low social connection; Increasing aging population.

### SCENARIO II - URBAN TIN CAN



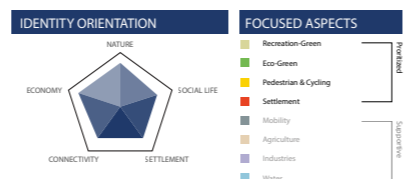
#### SCENARIO INDICATION



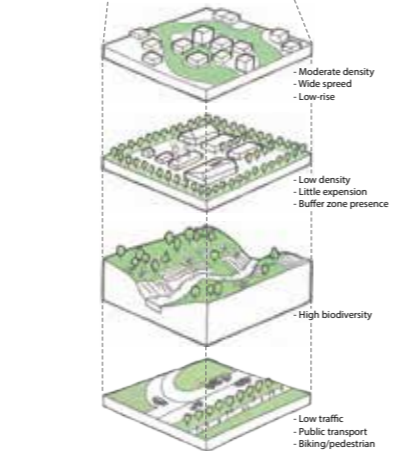
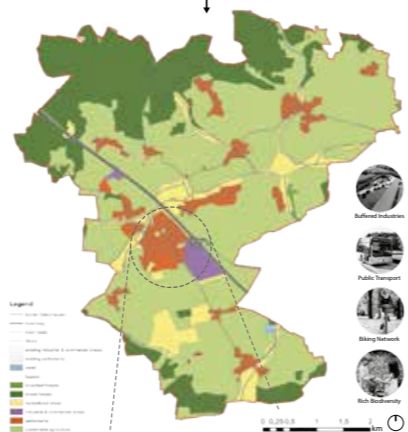
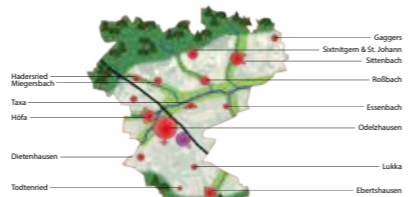
#### SWOT - SCENARIO II

- Strengths**: Minimalizing settlement areas; Less conservation of natural areas; Presence of historical sites.
- Weaknesses**: Lack of public transportation; No options for social interaction.
- Opportunities**: Presence of industrial area; More recreational open space; Presence of Glonn Valley.
- Threats**: Change in urban design; Lack capacity of job market; Expansion; Over burdening of infrastructure.

### SCENARIO III - NATOPIA



#### SCENARIO INDICATION



#### SWOT - SCENARIO III

- Strengths**: Presence of Glonn Valley; Presence of heritage sites; Cultural diversification.
- Weaknesses**: Decreasing arable land.
- Opportunities**: More diversified activities; Existing solar and wind farms; Presence of industrial area.
- Threats**: High living standard; Low living standard; Low living standard.

STAY CLOSE TO NATURE & IT WILL NEVER FAIL YOU.

## I ANALYSIS

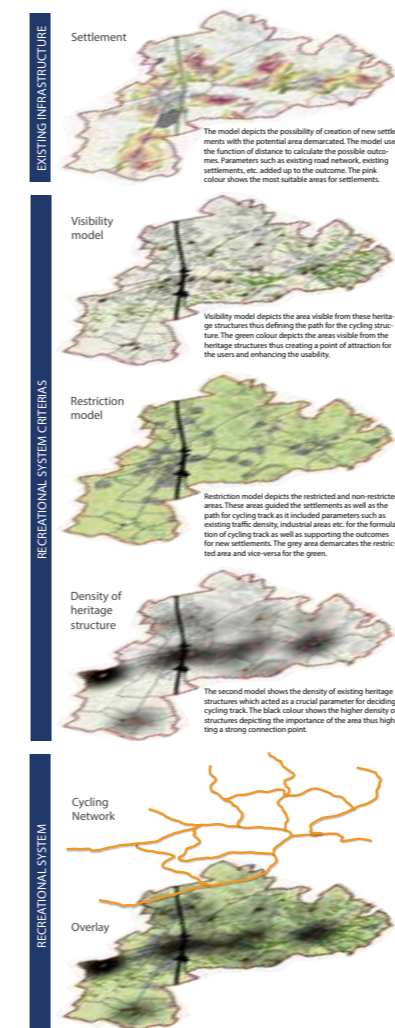
## II SCENARIO

## III CONCEPT

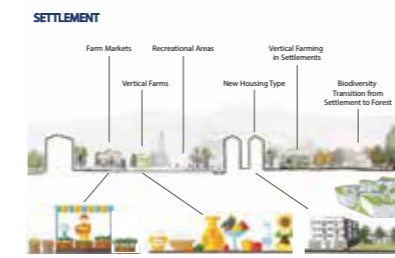
### OUR VISION



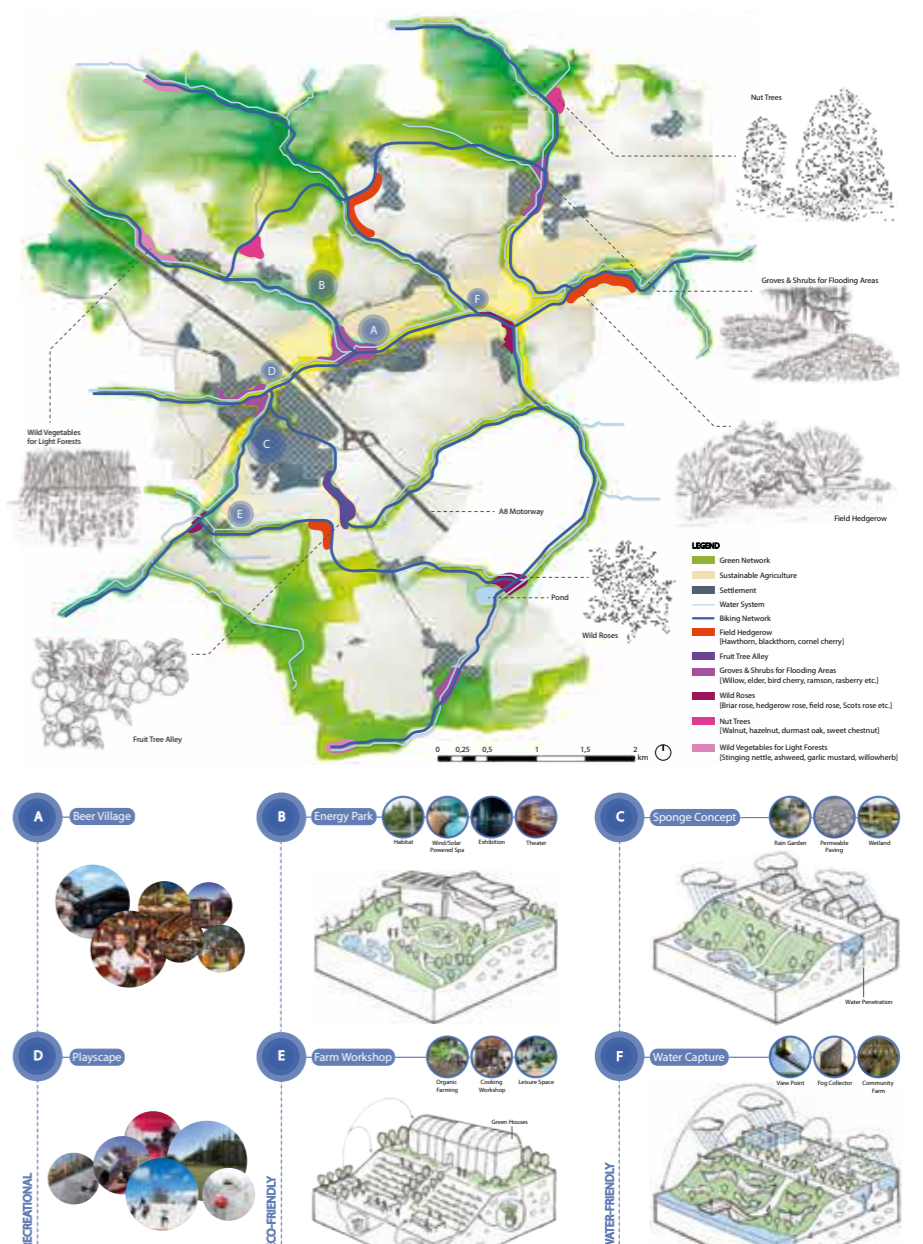
#### SUSTAINABLE RECREATION



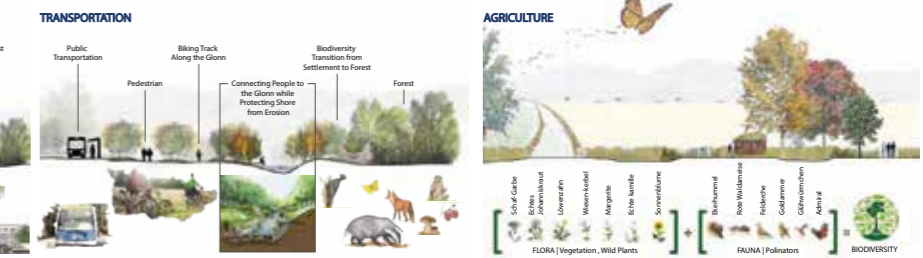
#### SECTIONAL PERSPECTIVES



### NATOPIA - A DESIGN CONCEPT FOR NEW IDENTITY



#### SECTIONAL PERSPECTIVES



# FOCUS AREA 2

## ERDWEG

The focus area includes the community of Erdweg. The community consists of several small settlements which got importance by the S-Bahn and the two stop-points Erdweg and Kleinberghofen. They bring new impulses of inhabitants and the need for living areas near the S-Bahn. The landscape and settlement structure is characterised by small villages and large agricultural open space. The community is growing as a dormitory, according to Mayor Christian Blatt. New inhabitants arrive looking for cheap housing and easy access to Munich, without attachment to this historical place which has a unique settlement characteristic. Its 17 villages

are scattered around the territory and have different typologies from entirely rural to semi-urban. The community relies on roads from NW-SE (St2047) and along the Glonn Valley (St2051, St2054). A special challenge will be to develop the old small units and the needs of mobility and infrastructure.

**Themes:** regenerative energies, cultural landscape, further development of the disperse settlement structure, agriculture and village, abandoned properties, commercial development away from motorways, mobility in disperse settlements.



# ART-WEG



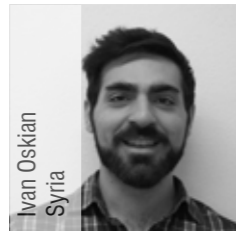
Rashad Gasimov  
Azerbaijan



Eric Vitrier  
France



Petar Juricki  
Croatia



Ivan Oskian  
Syria

“Artweg” is a project of spatial development of Erdweg in Dachau County in the middle part of Glonnvalley. After a site visit, we approached the analysis with SWOT and DPSIR methods that gave us foundations for our main vision of developing Erdweg as an area that develops around art.

## Analysis

Erdweg is considered as a brand-new settlement area for the artists highlighted with a precise analysis for this Dachau district. Indeed, this community has strength and well used lands and pretty diversified on one hand wetlands, croplands and on the other hand a huge forest area defined by pines for a huge part of it, which embodies many actors appropriating the area. The Glonn river crossing the map and two gateways opening the area to Munich by train reducing the distance within the rest of the region are good to take into consideration. However, some weaknesses are still relevant for this region with many disperse villages and a huge lack of roads for pedestrians and bikers.

Therefore, we have to consider that the whole area is under pressure. The urbanization is galloping and will reach Erdweg very soon from Munich threatening the area with a decreasing of pastures leading to intensive agriculture retaliating to the local identity preservation. New drivers are generated on this new local order such as the basic human needs, a profitable agriculture, a new appreciation of art, new connectivity and way of transport by railway, outdoor culture and tradition and new demand for the housing because the area will be under gentrification in the future. Sadly, bad state of Erdweg are being relevant for example large fauna and flora degradation, water contamination, soil erosion or the aging

city. The impacts could be frustrating because of the lack of job opportunities, activities and commuting. The “Artweg” project is a way to respond and face this brand-new challenge, which is one of the scourges of the 21st century.

## Studied factors

We have many layers superposed for our studied factors. Erdweg is divided in districts, composed of landmarks, vistas, historical buildings, node associations and paths mapping the terrain. Regarding the land use, we defined the terrain first, then the Glonn valley, the agriculture - arable/pasture, forest, human settlements, industry query and street network.

## Scenarios

To face the Erdweg challenge, we defined three scenarios:

The first scenario is called recreation and art. Considering as a major intervention for the equal development of settlements along major connections, this scenario highlights a better connection among villages with alternative means, a balanced population between elderly and youth, balanced equality of life, better connection between people and land, stable economy, a greater quality of the landscape with no major changes and less pollution. The art would be equally distributed all around Erdweg due to disperse installations. Resuming the first scenario, the strength is a good connection between villages, less impact on the environment, equal development of the villages. The weakness is less economic growth. The opportunity is a use of historical buildings by artists, a closer connection between people and the environment. Finally, the threat is a measurable uncertainty regarding the expansion of villages.

The second scenario is called living art. Considering as a major intervention for a closer outlook to Glonn valley development settlement, this scenario defines as well a balanced mobility more centered to the center and along the Glonn. The increase of youth in Erdweg is still relevant and the quality of life will increase due to the revitalization of the Glonn river. The economic profit will increase moderately and the fauna and flora will get more biodiverse. Art would be concentrated in the center of Erdweg near Glonn and art settlements. Resuming the second scenario, the strength is a revitalization of the Glonn, more spaces for artists to live and work in Erdweg. The weakness is a central development of villages around the valley. The opportunity is a development of artist settlements on revitalized Glonn. Finally, the influence of big cooperations on smaller industries and individuals are relevant.

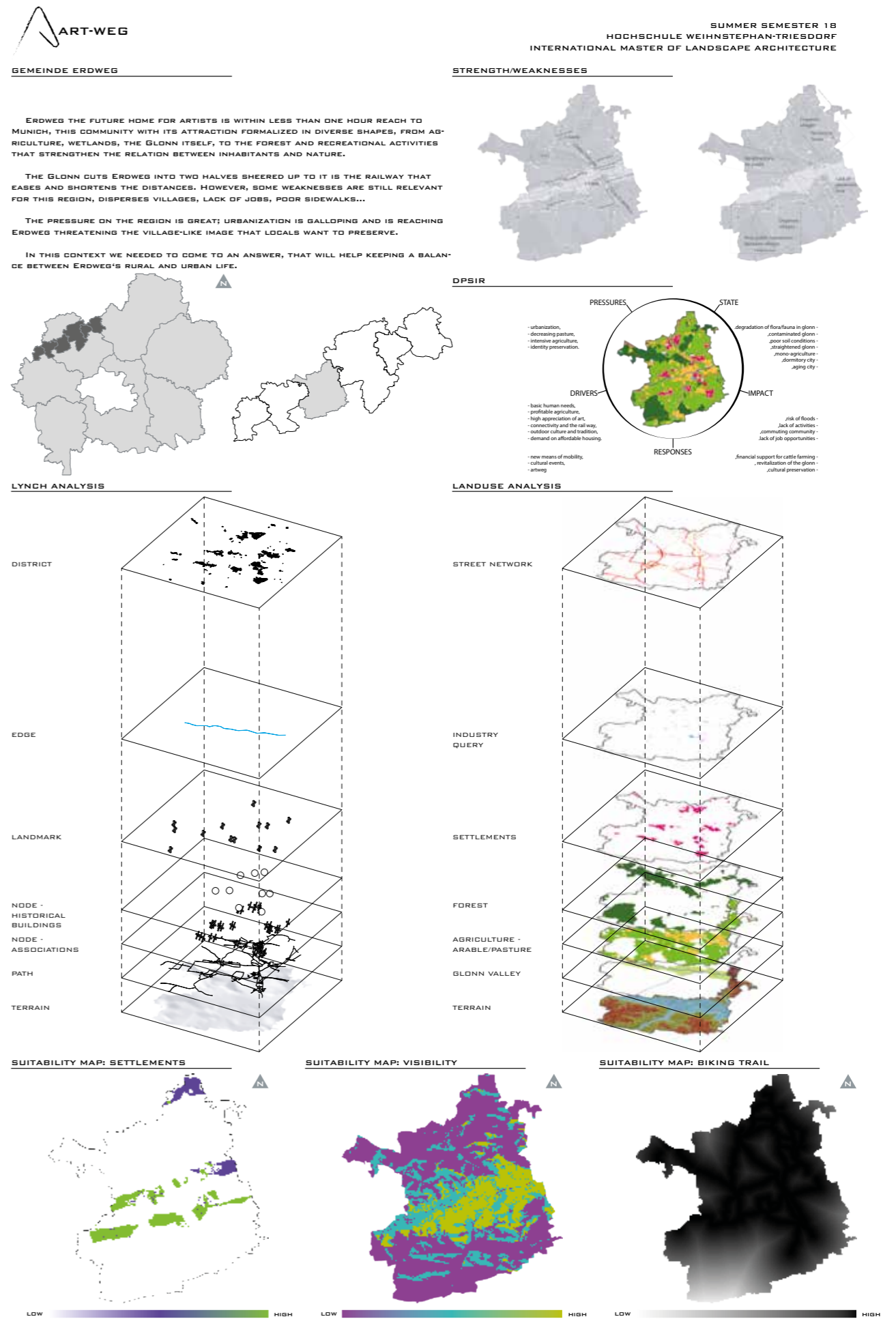
The third and last scenario is called art industry. Considering as a major intervention for a major settlement development along S-Bahn line and settlements with cultural center, this scenario is well industrialized with a centered mobility along Erdweg and road connecting settlements with industry. The population will increase fast, the quality of life in certain villages will also increase and the economic profit will increase drastically. Some pastures along Glonn will be grown up to prevent flooding and to create moors. The art industries are centered in three major settlements in Erdweg in this configuration. Resuming the third and last scenario, the strength is many cultural industry centers with diverse types of art interconnected with each other. The weakness is a centered cultural industry in certain settlements. The opportunity is an investment in development of Erdweg as cultural industry center. Finally, the influence of big cooperations on smaller industries and individuals is relevant.

### Overlapped scenarios & focus area

Our main concept is a combination of all scenarios with expansion settlements, creative industry art parks, forest, pasture, agriculture and water. A bicycle track is defined around Erdweg and some art islands are artificially created. We need to abstract the artist with the gate to Erdweg. This gateway will support making an impression for them to empathize on the great potential that Erdweg had and will have. The breathtaking nature and once shining Glonn will gather artists and recreational spaces are created with some accommodation for artists, future inhabitants and their need for affordable housing and working spaces considered.

### Timeline

To reach this aim, we defined a timeline to make this vision possible programming the construction of the project for the next 30 years. In the next 5 years, buffer zone and gateway will be defined. In the next 5 to 10 years, the hiking, biking trail will be built up. In the next 10 to 15 years, some temporary exhibitions. Then in the next 15 to 20 years, some housing, studios with some land use change and finally up to 20-30 years, it's the creative industry and the Glonn revitalization with the islands that will be set up.





RECREATION AND ART

DRIVERS

- EQUAL DEVELOPMENT OF SETTLEMENTS ALONG MAJOR CONNECTIONS
- BETTER CONNECTION AMONG VILLAGES WITH ALTERNATIVE MEANS
- BALANCED POPULATION BETWEEN ELDERLY AND YOUTH
- BALANCED QUALITY OF LIFE, BETTER CONNECTION BETWEEN PEOPLE AND LAND
- STABLE ECONOMY
- GOOD QUALITY OF LANDSCAPE, NO MAJOR CHANGES, LESS POLLUTION
- ART IS EQUALLY DISTRIBUTED ALL AROUND ERDWEG DUE TO DISPERSE INSTALLATIONS

GOOD CONNECTION BETWEEN VILLAGES, LESS IMPACTS ON THE ENVIRONMENT, EQUAL DEVELOPMENT OF THE VILLAGE.	LESS ECONOMICAL GROWTH
USE OF HISTORICAL BUILDINGS BY ARTISTS, CLOSE CONNECTION BETWEEN PEOPLE AND THE ENVIRONMENT.	UNCERTAIN EXPANSION OF VILLAGES

LIVING ART

DRIVERS

- SETTLEMENTS THAT ARE CLOSER TO GLONN VALLEY DEVELOP MORE THAN OTHER
- MOBILITY IS BALANCED BUT MORE CONCENTRATED TO THE CENTER AND ALONG GLONN
- INCREASE OF YOUTH IN ERDWEG
- INCREASED QUALITY OF LIFE DUE TO THE REVITALIZATION OF GLONN
- MODERATE INCREASE IN ECONOMIC PROFIT
- REVITALIZED GLONN, MORE BIODIVERSITY OF FLORA AND FAUNA, MORE LIFE IN GLONN
- ART IS CONCENTRATED IN THE CENTER OF ERDWEG NEAR GLONN WITH ART SETTLEMENTS

REVITALIZATION OF THE GLONN, MORE SPACES FOR ARTISTS TO LIVE AND WORK IN ERDWEG.	CENTRAL DEVELOPMENT OF VILLAGES AROUND THE VALLEY
DEVELOPMENT OF ARTISTS SETTLEMENTS ON REVITALIZED GLONN	URBAN SPRAWL OF THE VILLAGES AROUND THE GLONN VALLEY

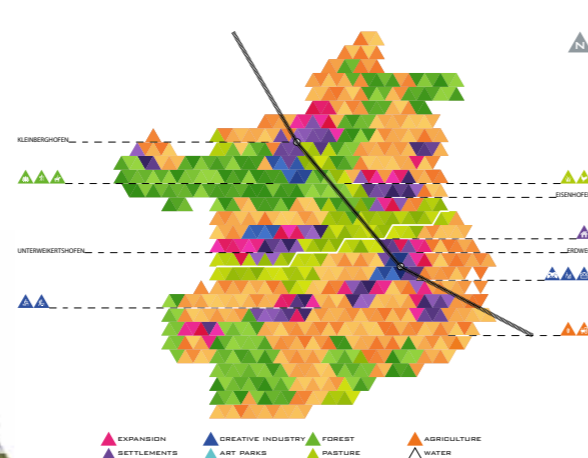
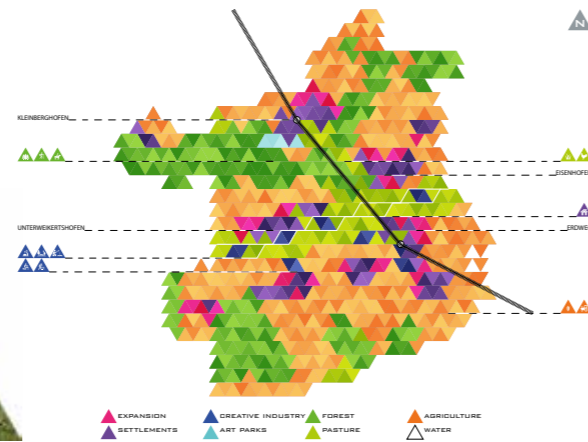
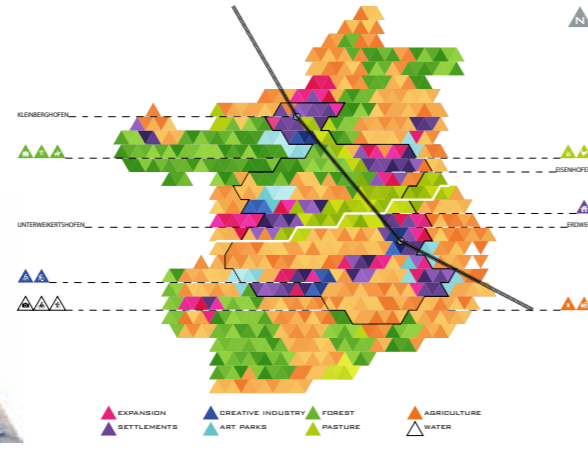
ART-INDUSTRY

DRIVERS

- MAJOR SETTLEMENT DEVELOPMENT ALONG B-BAHN AND SETTLEMENTS WITH CULTURAL CENTERS
- CONCENTRATED MOBILITY ALONG ERDWEG AND ROADS CONNECTING SETTLEMENTS WITH INDUSTRY
- BIG INCREASE IN POPULATION
- INCREASED QUALITY OF LIFE IN CERTAIN VILLAGES
- BIG INCREASE IN ECONOMIC PROFIT
- PASTURES ALONG GLONN TO FIGHT FLOODING AND TO CREATE MOORS
- ART INDUSTRIES ARE CENTERED IN THREE MAJOR SETTLEMENTS IN ERDWEG

CULTURAL INDUSTRY CENTERS WITH DIVERSE TYPES OF ART INTERCONNECTED WITH EACH OTHER	CENTERED CULTURAL INDUSTRY IN CERTAIN SETTLEMENTS
INVESTMENTS IN DEVELOPMENT OF ERDWEG AS CULTURAL INDUSTRY CENTER	INFLUENCE OF BIG COOPERATIONS ON SMALLER INDUSTRIES AND INDIVIDUALS

CONCEPT: ARTWEG



CONCEPT

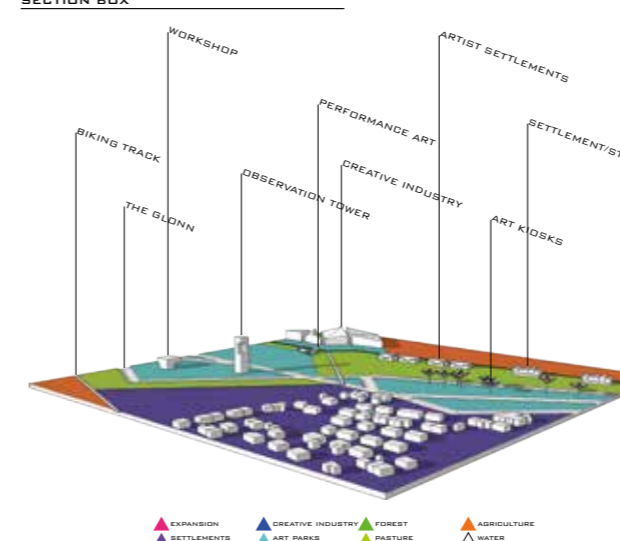


5 500M

PERSPECTIVE



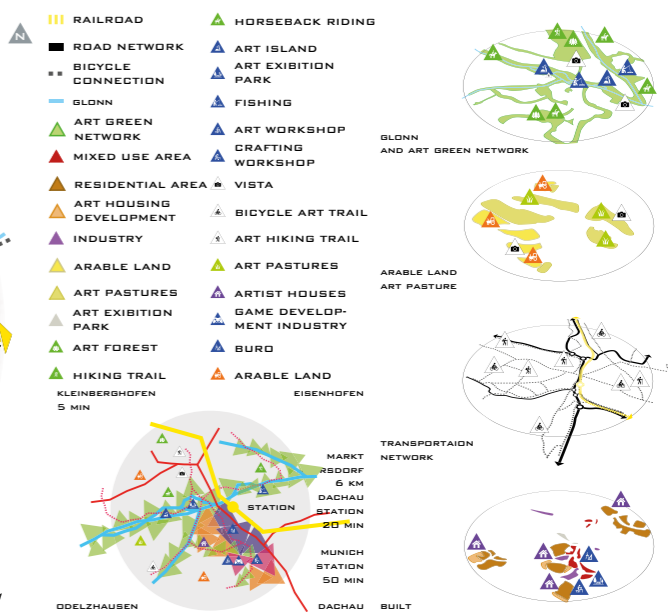
SECTION BOX



TRAINSTATION



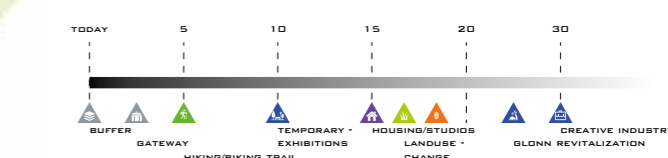
LAYERS



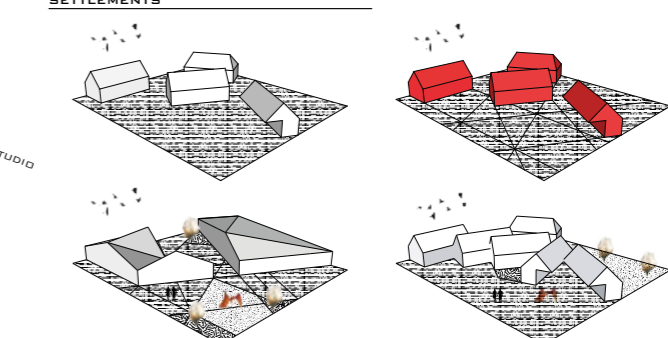
GLONN AN OUTSTANDING ENTITY IN NEED FOR REVITALIZATION, ART IS THE TOOL... TO REALIZE THIS WE NEED TO ATTRACT THE ARTIST WITH THE GATE TO ERDWEG, THIS GATEWAY WILL SUPPORT MAKING AN IMPRESSIONS FOR THEM TO EMPHASIZE ON THE GREAT POTENTIAL THAT ERDWEG HAD AND WILL HAVE.

THE BREATHTAKING NATURE AND ONCE SHINING GLONN WILL GATHER ARTISTS ALONG THE REVITALIZED GLONN, ARTISTS ISLANDS, TEMPORARY AND PERMANENT EXHIBITIONS AND RECREATIONAL SPACES ARE CREATED, ACCOMMODATION FOR ARTISTS, FUTURE INHABITANTS AND THEIR NEED FOR AFFORDABLE HOUSING AND WORKING SPACES ARE CONSIDERS.

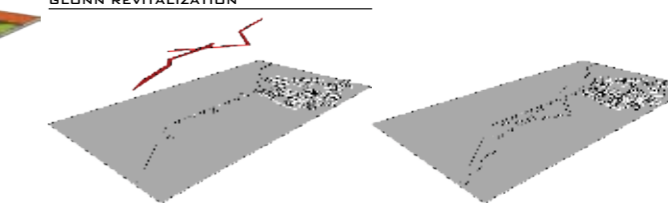
TIMELINE



SETTLEMENTS



GLONN REVITALIZATION



ART VILLAGE



# CONNECT. ATTACH. STAY.



Mariana Cairo  
Mexico



Bruna Spagnol  
Brazil



Sabine Schneider  
Germany



Asif Adnan  
Bangladesh

## General Analysis

Erdweg is one of 17 municipalities in the district of Dachau – with the ninth highest per capita income in Germany – located approximately 30km northwest of Munich, with 36,03km<sup>2</sup> and 5,856 inhabitants. Between 1988 and 2008, the district grew by around 28% (+/- 30,000 people), reflecting the trend of its communities, mainly the ones with easy connection to the capital, such as Erdweg, which has 2 S-Bahn stops.

During our visits, we observed villages are extremely empty on weekdays, when most of the people are working outside. Still, we were surprised by a group of elderly ladies arriving by train and heading to Eisenhofen through the crops. We also noticed the remaining forests (around 20%) are lovely, but not accessible, forcing us to walk among the cornfields. In our demographic research, we realised a higher increase in the group over 50 years old, indicating the necessity and opportunity to include elderly people in our concept, integrating the villages not only territorially, but also culturally between generations.

The Glonn River and its valley, one of the main reasons for the settlements' origins, are completely overlooked and underrated. The arable lands are destroying the margins and stopping people to get near to the river. Furthermore, there is not one structure to encourage citizens to get near the water.

## Concept

With the help of analysis tools, we listed 5 main fields of activity to assist in the development of Erdweg and engage people in the community. We will create connections through mobility, join cultural aspects with landscape and propose settlements guidelines to **CONNECT + ATTACH \_ STAY.**

## Design Process

It is a fact that Erdweg will continue growing, because it's happening since the 80's, so we need to create a development strategy to prevent a low-quality city in the future. With DPSIR and the scenarios analysis, we designed some guidelines regarding landscape and settlement growth. The scenarios were generated from the combinations of population growth and commuting, being:

1. If we don't do anything, it will increase the number of temporary residents in the community, aiming only for cheap housing with good connection to Munich - it will require investments in S-bahn and roads, increasing fragmentation and not adding value to the landscape;

2. To protect and add value to the water bodies through landscape and recreational activities, in order to charm workers who move there, so they will be attached with the community, form their families and invest their time and money for an ever better Erdweg;

3. Invest in identified potential and transform Erdweg into a retirement location for the elderly, who are coming and staying in the community. We would have a new specific economic segment for them, like clinics and medical care using pocket parks to enhance the desired quietness, instead of the Glonn. The village would lose the families with children due to the lack of infrastructure for them.

For the chosen scenario (#2), we highlighted the main roads to improve connection between the villages in the community. On the focus area, we designed new bike lanes taking advantage of the existing dirt paths, the topography

and landmarks as attractions and focal points.

Regarding the landscape, we propose buffer zones with native vegetation along the water bodies with 10m or 30m, depending on the width of the streams. To close the green belt and ensure that fauna can move to find food or reproduce, we will connect the remaining forests with the existing species.

We established the following guidelines for the settlement development, so we can maintain the original features from the villages. This way, we make sure the people living there do not feel expelled, but we still have place for the new-coming population:

### Semi-urban:

Erdweg, Kleinberghofen, Grossberghofen

- Commercial areas inside the villages – max. 20.000m;
- Preferably, high-density buildings (max. 4 floors) near the bahnhofs – max. 1.000m;
- Preserve historical buildings and surrounds – new constructions until 200m must to have 80% of the existing building height;

### Semi-rural:

Eisenhofen, Welshofen, Walkertshofen, Unterweikertshofen

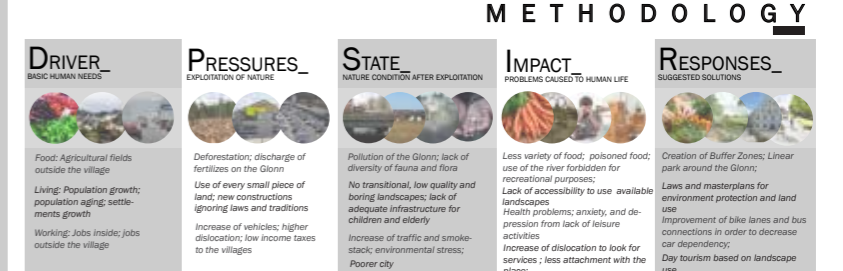
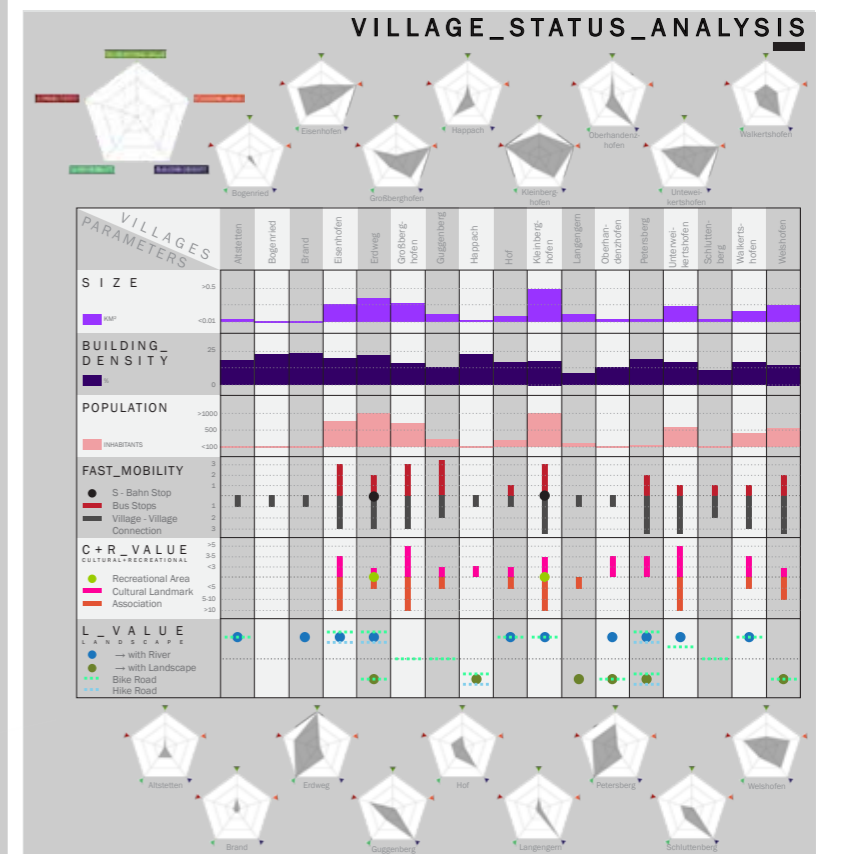
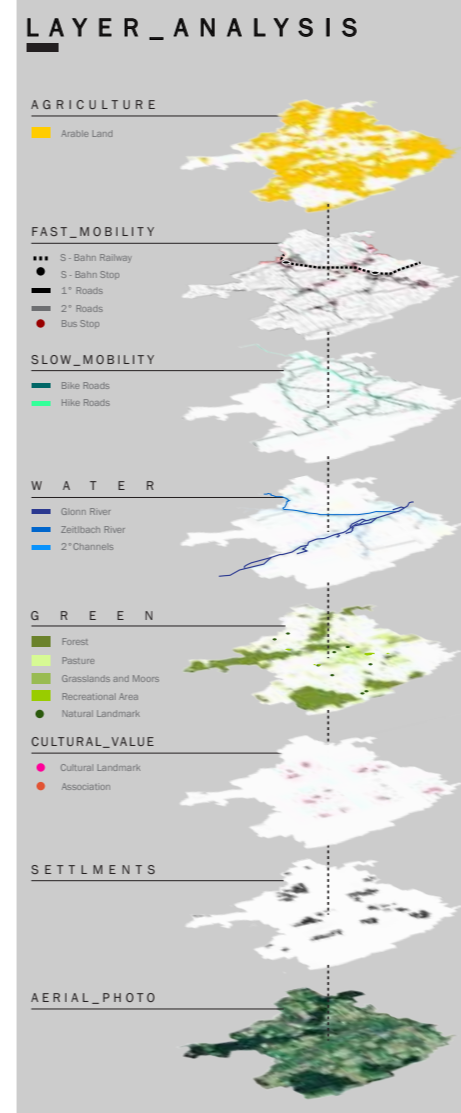
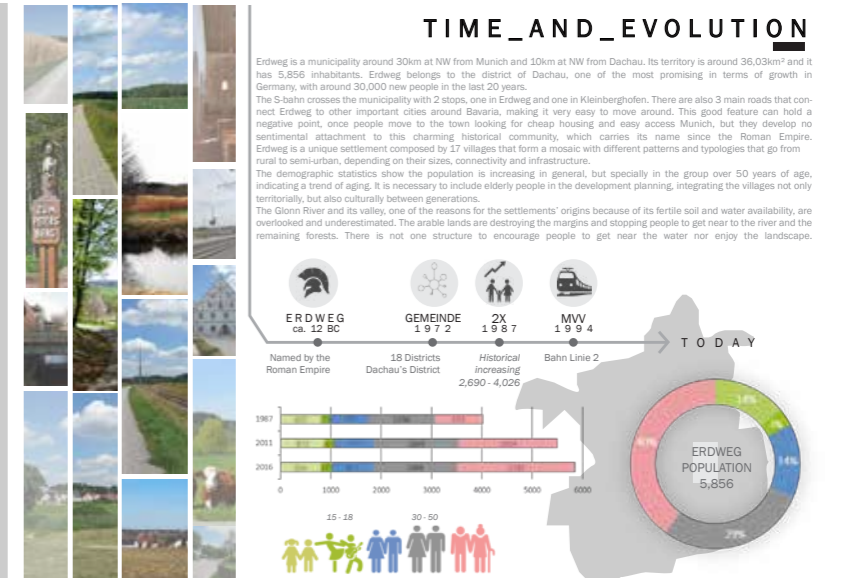
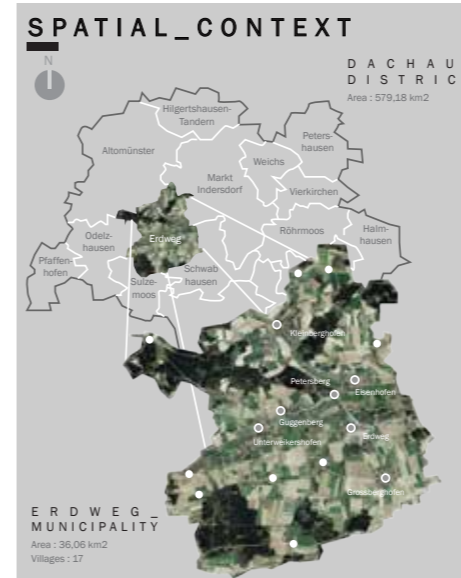
- Green buffer zones from the existing villages – min. 15m;
- New ring with new settlements; After new rings of settlements, another 15m buffer zone;
- Only single houses allowed;
- Plots with minimum area of 400m<sup>2</sup>;
- New settlements preferably around existing infrastructure;
- Avoid steep terrains to easy accessibility;

### Rural:

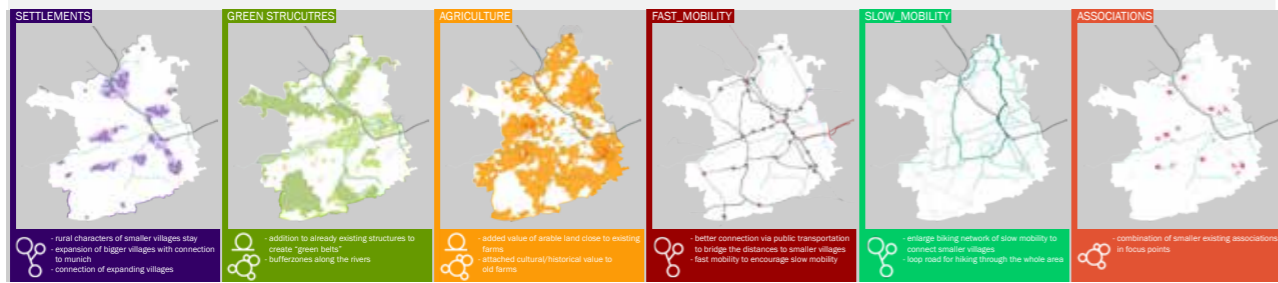
Other settlements

- Access through smaller roads;
- Maintain low density – plots with minimum area of 1.000m<sup>2</sup>;
- No commercial areas or shops allowed;
- Opportunities for farmer's market; ecotourism and agritourism.

We will present these directives with mappings, sections and illustrative perspectives.

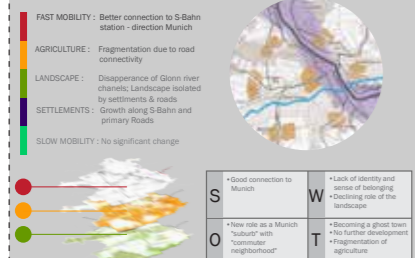


## THEMATIC\_VISION

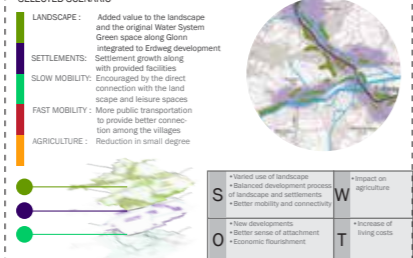


## SCENARIOS

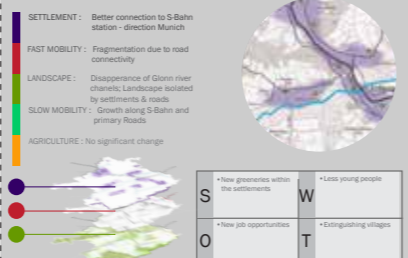
### "MOVEMENT MATTERS"



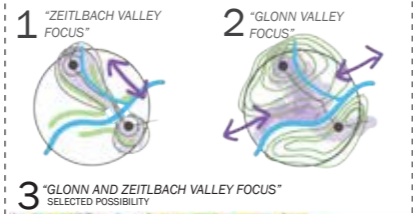
### "HOME & LANDSCAPE COEXISTENCE"



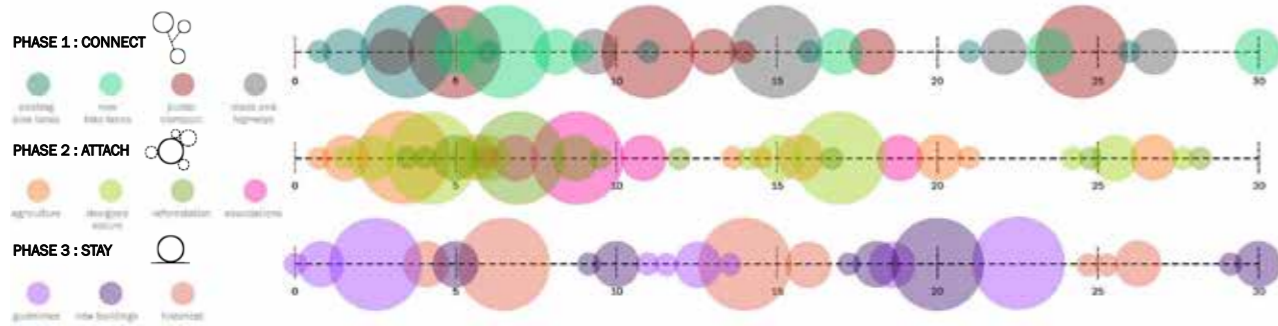
### "LANDLEBEN RETIREMENT"



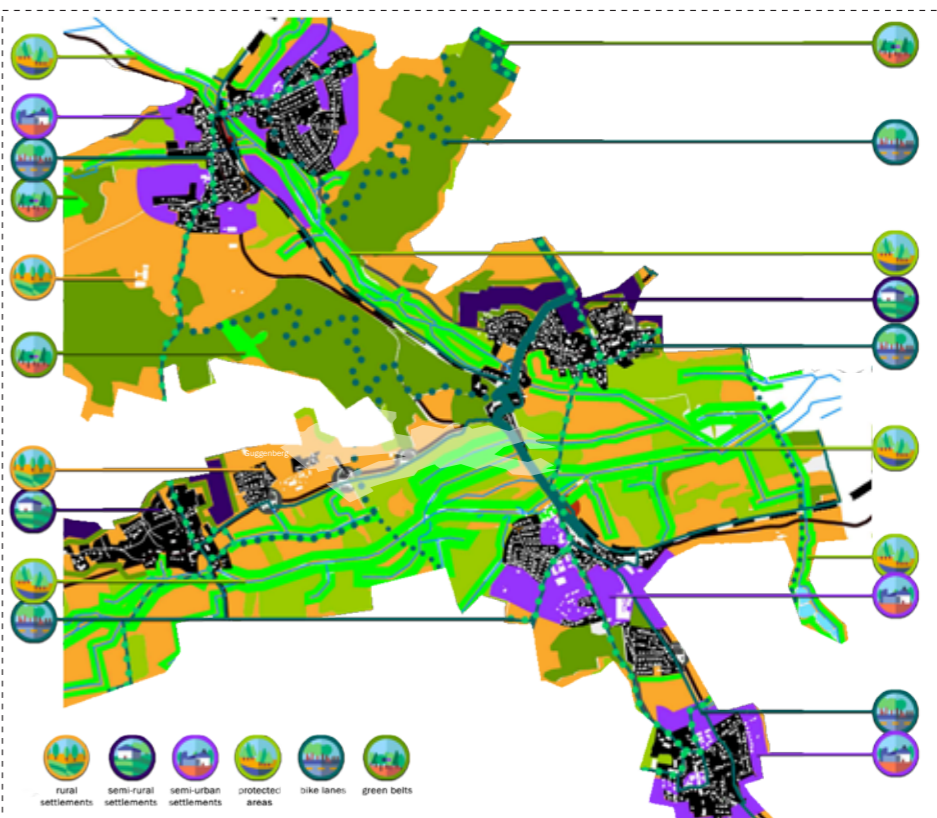
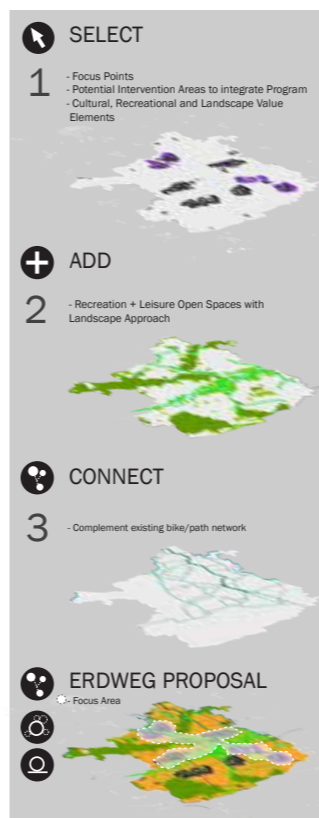
### POSSIBILITIES IN SELECTED SCENARIO



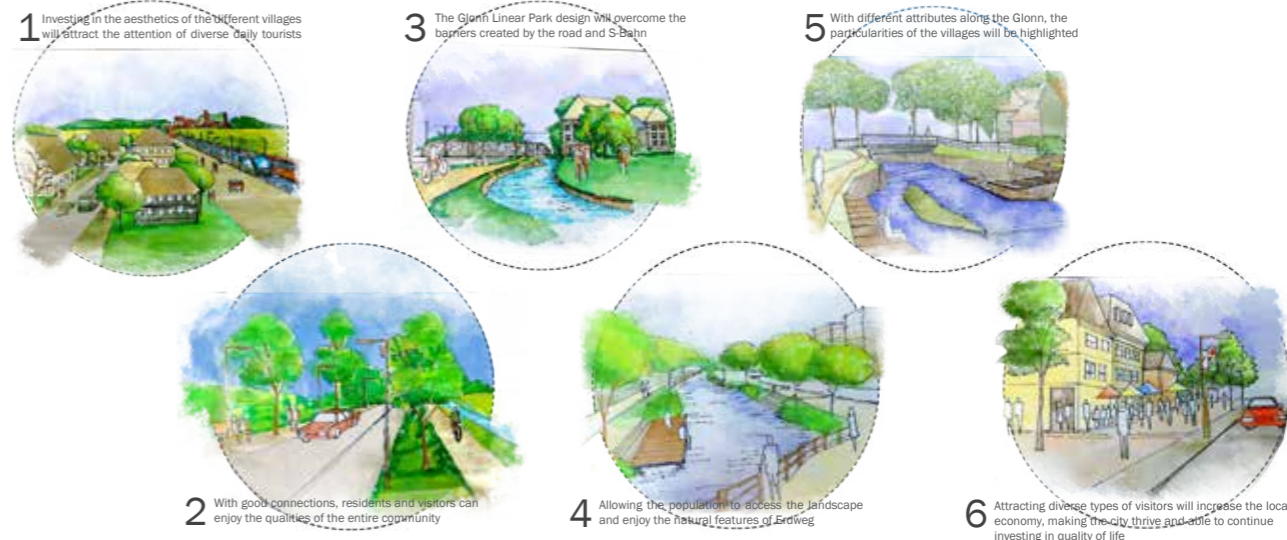
## DEVELOPMENT\_PROCESS



## CONCEPT\_PRINCIPLE



## SUSTAINABLE\_CYCLE\_STORY



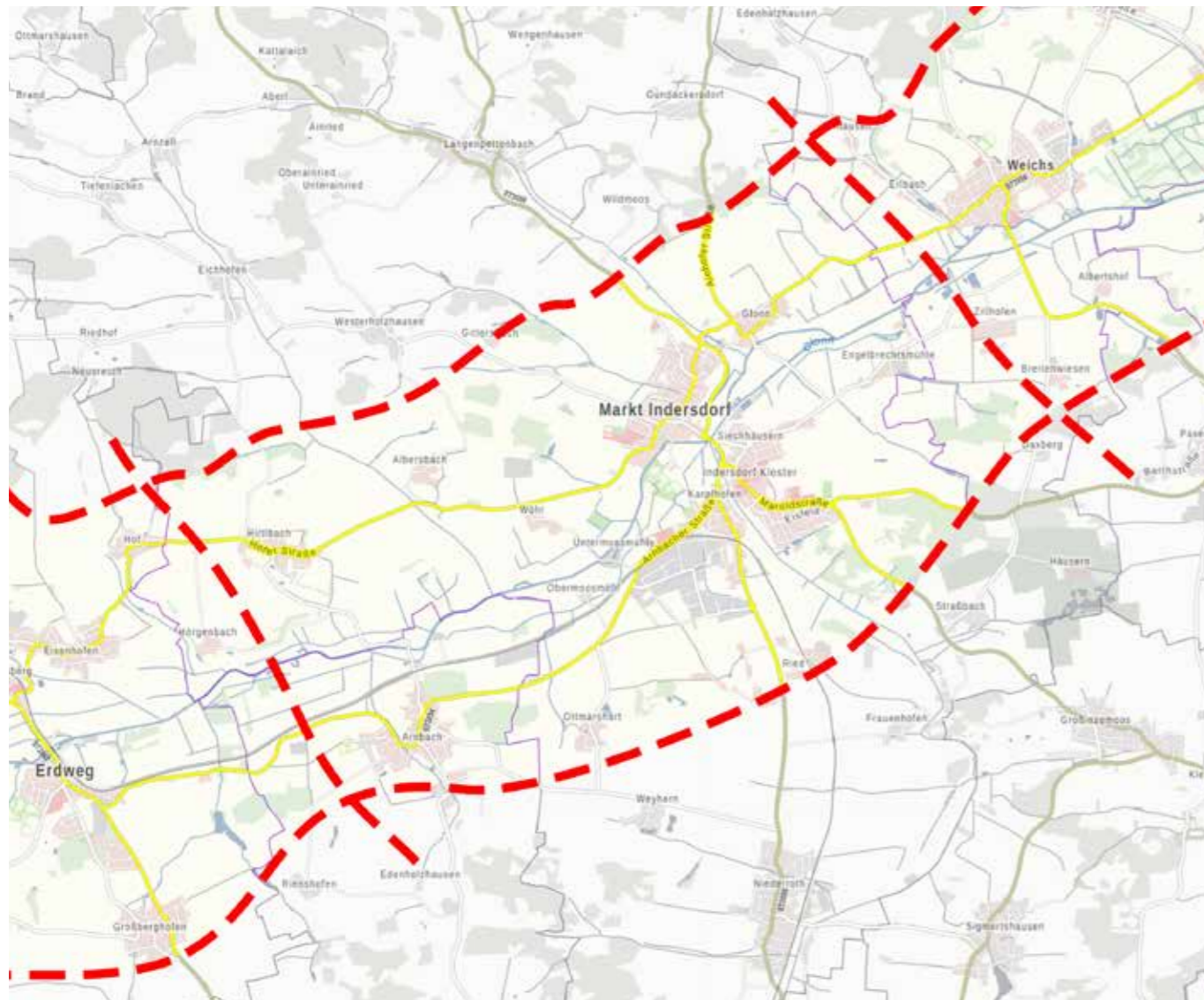
# FOCUS AREA 3

## MARKT INDERSDORF

The area includes Markt Indersdorf and Arnbach which belongs to the community of Schwabhausen. Markt Indersdorf had a central function in the past as well as in the present. It has different schools and two hearts: The market village and the cloister village divided by the Glonn River. Markt Indersdorf has a very big area and encompasses a sweeping number of smaller villages, with 57 of these scattered throughout the municipal countryside. Markt Indersdorf is a typical rural area with problems and potentials resembling those of similar settlements across Europe. Despite its predisposition towards agriculture, there is a visible

trend of development of Markt Indersdorf into a suburban township within the Munich metropolitan area. Relevant for the development in the future are three S-Bahn stops: Niederroth, Markt Indersdorf and Arnbach. Since the contemporary contextual development trend has become Munich-centric, surrounding rural communities have started to develop into small townships and have then segregated into even smaller administrative units. Finally, these small townships, including Markt Indersdorf, seem destined to become the border of the main metropolitan area. This causes a lot of pressure to the communities.

**Themes:** regenerative energies, settlement development in connection with S-Bahn influences, concepts for regional style settlement development, condensed types of housing areas, revitalisation of historic squares, Glonn valley and protection of Biodiversity and recreation, commercial development, mobility, circuitous road.



# MAKING A MARK

## MARKT INDERSDORF



Kazi Zayed Titumir  
Bangladesh



Mastaneh Mahfouzi  
Iran



Sudara Jayalath  
Sri Lanka



Amsal Mesic  
Bosnia and Herzegovina

Markt Indersdorf is a scenic municipality in the District of Dachau in the German state of Bavaria. The S-Bahn access to Munich paves the way for Markt Indersdorf to become part of Munich, which is the prospect we named “Munichication”. This phenomenon presents a grave threat to the preservation of cultural, natural and spatial identity of Markt Indersdorf and each of the satellite settlements in its surroundings, identity which had grown and been cherished for hundreds of years.

In the phase of analysis, we were able to identify the potential development aspects which are already embodied in Markt Indersdorf, namely agriculture, education, renewable energy industry, and market culture. Germany prides itself on its sophisticated and progressive educational institutions and a flourishing renewable energy industry, and these qualities are very prominent in the landscape of Markt Indersdorf. All of the above are interconnected, relying heavily on each other, and drawing support from one another. We streamed to strengthen those bonds, tying education even more closely to agriculture, on which the renewable energy industry is already dependent. Lastly, the market culture, also derived from agriculture, was meant to provide an economic backdrop as well as homage to the very name of the municipality.

The other key aspect was the woodland and habitat discontinuity. The conceptual idea of the project is to find a way to further the development of agriculture, the backbone of the economy of settlements such as Markt Indersdorf, while at the same time protecting and nurturing its natural environment. This includes soil as well as wildlife, which itself ranges from

increasingly vulnerable but economically indispensable pollinating insects to endangered and protected vertebrates such as songbirds and beavers. The aim is to create a unique value which can survive in the upcoming rapid development.

The development of Markt Indersdorf is primarily driven by landscape issues common to the surrounding municipalities and many others across the world, which include land use change, land encroachment and migration. The relevant pressures come from, among other things, the growth of Munich and the intensive yet environmentally unsustainable agricultural practices, which are in turn fueled by the desire for renewable energy. The Glonn river is especially threatened, as it cannot avoid damage from the expected spread of road networks.

All this inevitably leads to an ageing population living in a place devoid of its former biodiversity, which suffers from habitat fragmentation and water pollution. We respond to these challenges by suggesting the strengthening of the educational network, diversification of agricultural practices, creation of new farmer-consumer links, and bringing education, agriculture and renewable energy industry into an environment-supporting synergy. In this vision, Markt Indersdorf is provided with its own sense of gravity, which keeps the smaller settlements tied to the centre of the municipality while simultaneously enabling it to escape the immense gravitational force of Munich.

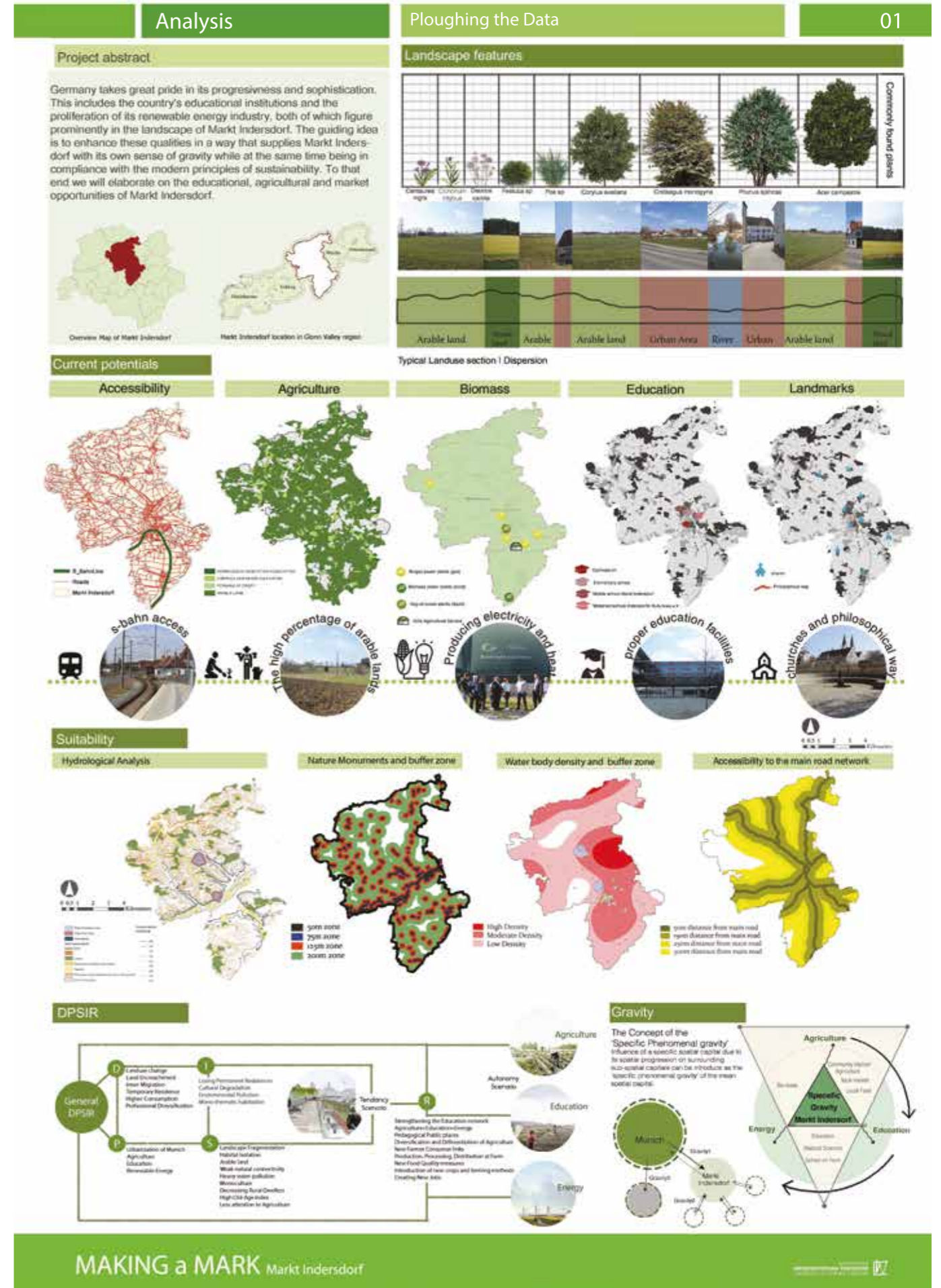
We envision a diversification of a variety of functions in Markt Indersdorf, since only multifunctionality can provide the necessary self-reliance and sustainability.

While this encompasses the introduction of novelties such as new educational facilities and agricultural and educational tourism, arguably the most important diversification is the one involving agriculture. The vast monocultures of maize, which represent a burning issue in many landscapes, are to be replaced with a variety of energy crops. All of them are important in the context of soil conservation and wildlife support, which maize monoculture so thoroughly lacks, and most of them are just as profitable. These alternative energy crops include giant silvergrass (*Miscanthus giganteus*), common reed (*Phragmites australis*), silphia (*Silphium perfoliatum*), triticale ( $\times$  *Triticosecale*), willows (*Salix* sp.) and a mix of wildflowers. This diversity will not only preserve the environment but also give an aesthetic value to the arable land.

The revamping of agriculture is naturally followed by the establishment of an array of market places throughout the municipality of Markt Indersdorf. The primary market place, serving as the central local food market, is encircled by secondary markets. These secondary markets connect the primary market to the outlying markets at the edges of the municipality. The three tiers of market places will operate on different weekdays in order to keep the entire municipality vibrant throughout the week. The idea behind this is to simplify the food system of Markt Indersdorf.

With the energy crops in check, the last remaining issue to address is the discontinuity of habitat. The establishment of hedgerows on the margins of the plots of arable land will provide corridors for wildlife, not to mention being visually exciting. Riparian corridors are to parallel these along the Glonn, connecting dispersed habitats alongside the river.

In the course of our project, we strove to address the real-life issues by employing methods which are not ground-breaking but rather proven and reliable solutions. We believe that our concept is very soon not going to be just an option but the only way forward.



### Munichification of a Wilting Town

The scenario which will probably take place according to the current trend of water progression of the area can be called tendency scenario. All six selection criteria from DRSI scheme, identified drivers are seen as the forces of change and positions of the future phenomenon.

**Munichification (Tendency Scenario)**

**Legend (Tendency Scenario)**  
 - Intense Development  
 - Linear Movement  
 - Urban Fringe

### Sprout of New Strategies

The autonomy scenario can be expected to arise in case of the implementation of the responses from the DRSI scheme. The patches of woodland and riverside habitats would be connected by hedgerows and riparian corridors respectively in order to establish proper habitat connectivity as well as to encourage a mixed development and diversification. Spaces are meant to be used for a variety of purposes.

**Placemaking strategies (Autonomy Scenario)**

### Propagation of Functions

In terms of a sustainable future, a set of unique functions will materialize over the Markt Indersdorf. Process of conceptualization is done in three different spatial scales. In expansive stage, whole area of Markt Indersdorf identified in terms of characters.

**Conceptual scale Place Making**

Integration

Progression

**Alternative Crop Comparison**

Propose with an economically viable crop as a response to the propagation of these structures has been determined as using the Green peas, and it has become a crop in terms of value.

**Landscaping Indicators**

Over time, the landscape indicators show a shift from a high level of diversity and organic edges to a more structured and less diverse state.

**Autonomy Scenario**  
 Diversification towards a Multi-functionality

The combination of education and agriculture  
 Agriculture can help provide the increasingly needed energy in a sustainable way. Students and educational tourists will deliver input useful for the further development of sustainable food production. Markt Indersdorf prides itself on its educational opportunities. We propose the location of these and their future development.

The concept mainly focuses on sustainably utilizing the land and potential of functions. The primary functions are the potential sustainable development functions, while the secondary ones are the predominant social activities. The users of the functions will benefit from their positioning in relevant environments, and this dispersion will add value to a wide area.

Here, three different types of market places can be seen in Markt Indersdorf. The first is the primary market, which is going to be the central local food market. The second tier are the secondary markets, which are located between the center of Markt Indersdorf and the surrounding settlements. The third tier contains the markets farthest from the center. These three markets will operate on week days in order to keep Markt Indersdorf vibrant throughout the week. Additionally, different tiers will sell different types of goods. As the third tier markets are distant from the center, the middle tier will help reduce the transportation problem of farmers.

**Designed Road Network**  
 - Bio Gas Plant  
 - Education Centers  
 - Sport Centers

**Conceptual Layout Map**

**Legend:**  
 - Sports  
 - Industry  
 - Wastes  
 - HERMACHOS VEG MOON ASSOCIATION  
 - GREEN URBAN FABRIC  
 - OTHER ROADS  
 - PERMANENT CROPS  
 - COMPLEX AND MIXED CULTIVATION  
 - INDUSTRY  
 - FOREST  
 - ARABLE LANDS  
 - DIVERSED MIXED/CONTINUOUS URBAN FABRIC  
 - DENSE/CONTINUOUS URBAN FABRIC  
 - CONTINUOUS URBAN FABRIC

**Community Kitchens**  
**Proposed Local market**

**Typical Riparian Character**

**Recreational Area**  
 Soft and Hard Landscape

**Wood land**  
**Hedgerows**

**Education center**  
**Community kitchen**  
**Local market**  
**Green valley**  
**International park**  
**Research laboratory**  
**Classrooms**  
**Natural water body**  
**Riparian corridor**



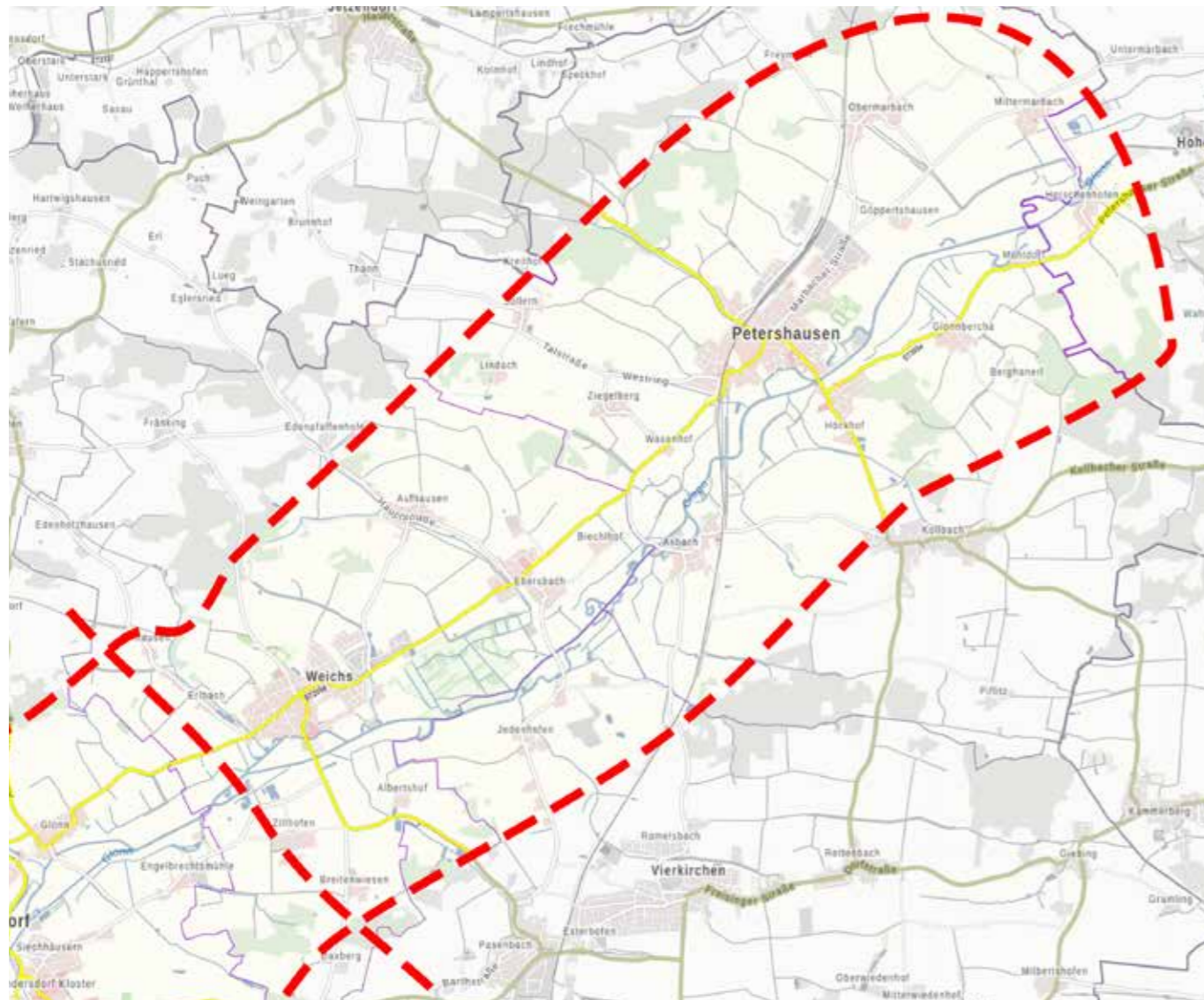
# FOCUS AREA 4

## WEICHS / PETERSHAUSEN

The area includes the communities Weichs and Petershausen. Both villages have already changed from agricultural villages to suburban living areas. The Glonn valley and especially the protected Weichser Moore are very important for the ecologic quality of the area. The S-Bahn stop Petershausen caused a lot of people moving there because of the easy access to the train to Munich. The majority of the local people who actually live there are senior citizens. Therefore, there is an age gap between the local and the newcomers. The people also don't feel connected with the town since they only move there to work then live elsewhere on the weekends.

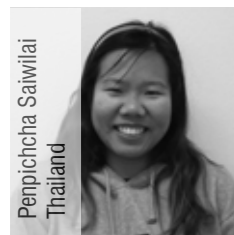
Moreover, the influx of immigrants in Petershausen causes many new residential buildings to be constructed. This leads to the loss of identity of the town. In the present day, the number of the owned dwellings and the rented ones is divided equally.

**Themes:** regenerative energies, quantity and style of further settlements, condensed housing areas, design of market square, village centre versus bedroom suburb, biodiversity and recreation in Glonn valley, agriculture and nature.



# GREEN LIVING

## THE FUTURE OF PETERSHAUSEN



Penpichcha Sawilal  
Thailand



Sarah Jankowski  
Germany



Tarjila Tahsin  
Bangladesh



Hamid Gohari  
Iran

### Analysis

Landscape planning project that aims to improve the quality of life of the local people by integrating nature and green areas into the urban area.

The project location is in Petershausen, Dachau County, Bavaria, Germany. Our main focus areas are Weichs, Ebersbach, and Petershausen. The area is known as the Glonn Valley where the Glonn River flows through the area before it joins the Amper River in Allershausen. There is one nature protection area in the valley, which is Weiches Moos.

At first, we focused on three towns, which are Weichs, Ebersbach, and Petershausen. Each of these areas has different identities and characteristics. For example, Weichs is the “rurban” town that is closed to the nature protection area. Ebersbach is a small rural village that lies between Weichs and Petershausen. Petershausen, on the other hand, is the most developed town out of the three. It has become a small urban town because of the S-Bahn station. But all of these areas are connected by the Glonn River.

From the analysis, we have done, our visions for the area is to make people feel more connected to the town, integrate nature into the urban areas and create sustainable living.

### Scenarios

For the scenarios, we propose three different outcomes: The first is the “Uncontrolled Expansion”. This one is the worst-case scenario. The cause of this is the urban sprawl. There will be a lot of traffic and pollution. There is also the issues of deforestation and loss of biodiversity in the surrounding area as well.

The second scenario is focused on the settlement. We called it “The Cityscape”. The cities are allowed to grow according to the plan. In this scenario, we aim for creating a relationship between the people and the town by creating more public spaces, child-friendly playgrounds, and urban green areas.

The third scenario is the “Agro Backbone”. This one is focused on agriculture and green areas. We have promoted various types of farming in the area, both human labor and smart farming as well as create parks and hiking trails along the river and into the forest to create interaction between people and nature.

From the scenarios, we choose to combine the “Cityscape” and the “Agro Backbone” scenarios together to create our concepts for our focus area Petershausen.

### Main concept

Our concept is “Green Living”. We mainly focus on the settlement and green areas. We proposed creating a public space in the center of Petershausen as a green recreational area in the city. On the opposite side of the park, there is a weekly market where people can sell their farming products and interact with other people. We have also created edges at the border of the city as well as gardens where people can grow their own plants. Additionally, we also create areas for smart farming there. Smart farming (SF) involves the incorporation of information and communication technologies into machinery, equipment, and sensors for use in agricultural production systems.

The main goals for the concept are as follows:

- Conserve the distinctive and historic character of the landscape
- Improve the recreation and leisure facilities
- Enhance high efficiency in farming
- Enhance green sustainable affordable housing

### Weichs

Character:

- Conserve historical places
- Conserve the pattern of discrete rural Settlements:

- Conserve the character of forests

Recreation:

- Theme parks
- Informal public spaces

Farming:

- Conserve the traditional farming

Landscape:

- Biomass and energy crops

Housing:

- Responding to the character and sense of identity in new housing

### Ebersbach

Character:

- Conserve neutral pastures network
- Conserve a natural river form
- Recreate the former direction of the river
- Conserve historic and archaeological site of Weiches Moos

Recreation:

- Improve the public spaces qualities
- Improve access to nature (Weiches Moos)

Farming:

- Enhance productive landscape

Housing:

- Conserve historical housing

### Petershausen

Character:

- Improve the pattern and structure of soft and hard edges
- Conserve the main characteristic of each settlement (urban, rural and town)
- Create new distinctive landscapes in association with new development

Recreation:

- Enhance the extensive interconnecting network of footpaths
- Enhance opportunities for recreation areas
- Enhance integrated public spaces

Farming:

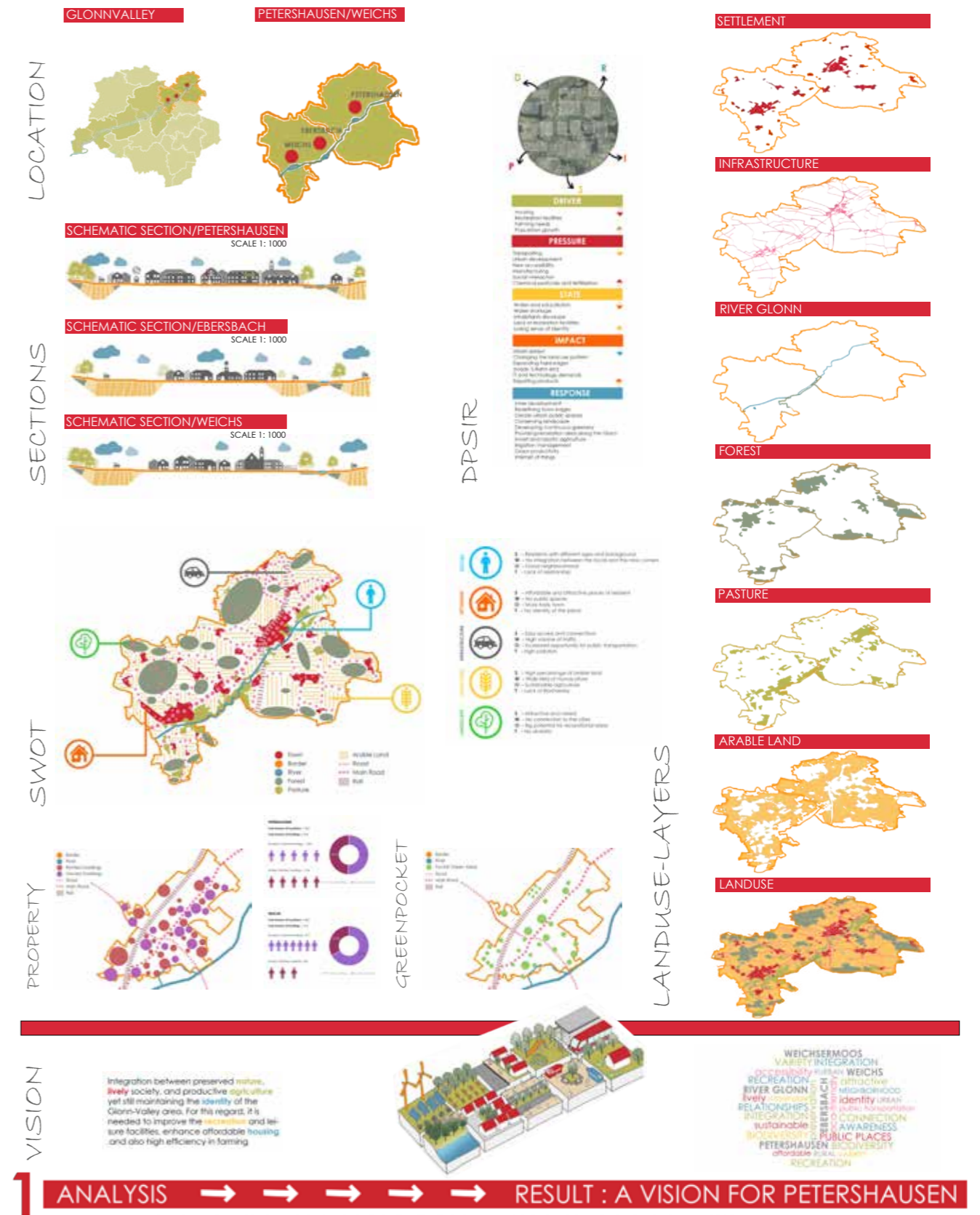
- Arable lands consolidation for special operations
- Smart farming and robotic agriculture

Housing:

- Establishing green community living
- Provide for Variety in Housing Types
- Inner development

# GREEN LIVING THE FUTURE OF PETERSHAUSEN

## I ANALYSIS II SCENARIOS III CONCEPT



### I ANALYSIS II SCENARIOS III CONCEPT

UNCONTROLLED EXPANSION

LANDSCAPE - BACKBONE

CITYSCAPE

**1 SCENARIO I**

**SCHEMATIC SECTION I**  
SCALE 1: 1000

CHARACTERISTIC

**2 SCENARIO II**

**SCHEMATIC SECTION II**  
SCALE 1: 1000

CHARACTERISTIC

**3 SCENARIO III**

**SCHEMATIC SECTION III**  
SCALE 1: 1000

CHARACTERISTIC

**COMPARISON**

**FINDINGS DIAGRAM**

The spidermaps and the findings diagram are based on our own perception.

**RESULT**

**2 SCENARIO 2 + 3** → → → → **RESULT : A CONCEPT FOR PETERSHAUSEN**

SCALE 1: 500

The final concept is the combination of the „cityscape“ and the „Agro-Backbone“ - Scenarios. It is characterized by creating a relationship between the people, Petershausen, agriculture and the nature.

### I ANALYSIS II SCENARIOS III CONCEPT

OVERALL CONCEPT

TIMELINE

CONCEPT MAPS

**2018**

Current situation

**2024**

**2030**

The overall concept map shows the general development of the area according to the infrastructure, recreation and public spaces and smart farming.

Based on the concept map there are two main recreation areas at the border of the Glonn.

The greenways, which connect the town with the nature. Also, robotic farming is located close to the railway, which is a contrast to the public urban gardens.

On top of that, new integrated public spaces give a new identity to Petershausen.

**GREEN AREA DEVELOPMENT**

- Forest
- Pasture
- Green edges

**AGRICULTURE DEVELOPMENT**

- Energy farming
- Organic farming
- Arable land
- Smart farming
- Composed site

**SETTLEMENT DEVELOPMENT**

- New development
- Settlement
- Recreation area

**DETAILED DESIGN**

**1 DETAIL I - CITY CENTER**  
SCALE 1: 500

**1 SECTION I - CITY CENTER**  
SCALE 1: 250

**1 3 D PERSPECTIVES**

**2 DETAIL II - URBAN GARDEN/FUTURE FARMING**

**2 SECTION II - URBAN GARDEN/FUTURE FARMING**  
SCALE 1: 500

**2 3 D PERSPECTIVE**

The two focus areas show the new designed city center with a pedestrian zone with a multifunctional park, the „little Glonn“ and a beautiful market square in the middle of Petershausen on the one hand. On the other hand public urban gardens are located at the north side of the town of the border to a new settlement district. On top of that you can find robotic farming areas between the urban gardens and the forest. They represent the future farming methods.

# CONTEMPORARY LIVING IN NATURE



Hossam Nassar  
Syria

Represent a continuing sequence of events flowing the demand for houses and increasing of population, as Petershausen is rural natural small town and it's close to Munich because of the good train commuting system

In brief short distance from Munich, real-estate growth and nature. are the three most essential features of Petershausen.

Based on that; the development of the landscape architecture, and its relation to green landscape represented by the urban farming are the key project elements.

Growing real estate market in Petershausen while living in the nature in a semi-rural area, house prices are still accepted comparing to Munich and people can reach Marienplatz in Munich in a short time from Petershausen, because of the good transportation system "Munich S-Bahn". Real-estate brokers, developers and even ordinary house sellers focusing in their ads on the short distance from Munich.

The rapidly growing population and changing consumption patterns are placing increasing pressure on landscape, urban planning, agricultural fields and forestry production systems In Petershausen; negative environmental and social consequences have been observed such as, land-use change. Taking in consideration "the process of formulating and implementing land policies is not only politically and technically difficult, it can also be costly. However, the costs of not formulating and implementing them are much higher" (Dowall, David & Clark Giles, 1997)

## Scenarios

Scenario 01: Future scenario for Petershasuen, important landscape growth and development based on adjacency to public transport system

Scenario 02: Future scenario for Petershasuen based on existing landscape architecture plans growth expectations

Scenario 03: Nature-infused landscape, architecture and urban farming development in Petershausen town

## Concept

Nature-infused landscape, architecture and urban farming development in Petershausen town

## Suggested Development

The combination of urban landscape and urban farming into the community. Urban farming is one way to bring urban dwellers together—to establish a sense of community among people otherwise independent and, in some cases, isolated. Encouraging, healthier food—herbs, vegetables and fruits—and you are more likely to eat what's in season, when you eat what's produced on an urban farm. Provides a learning opportunity, makes efficient use of land. Consider rooftop or vertical gardens: they take up minimal space but produce tons of fresh, healthy food. Many hydroponics systems are set up vertically, to fit anywhere even indoors.



# Contemporary Living in Nature

## 1 Analysis

### History



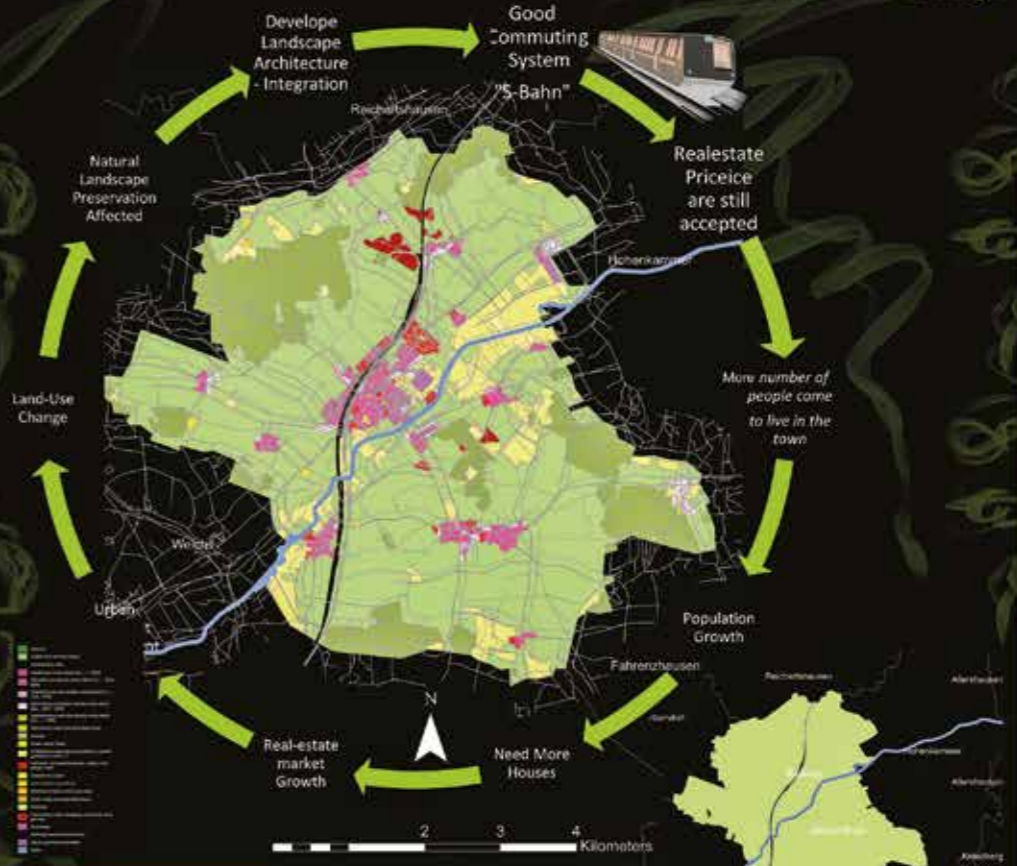
### Analysis: Real-Estate

**Growing Real Estate Markets in Peterborough**  
While living in the nature is a semi-rural area, houses prices are still accepted comparing to Munich and can reach 400,000 Euro in a short time from Peterborough, because of the good transportation system "Munich S-Bahn".  
Real estate brokers, developers, and even ordinary house sellers focusing in their ads on the short distance from Munich.



**House prices and prices 2018**

Year	Price (€)
1966	10,000
1962	15,000
2003	30,000
1983	40,000
2019	400,000



The rapidly growing population and changing consumption patterns are placing increasing pressure on landscape when planning agricultural fields, and forestry production systems in Peterborough, negative environmental and social consequences have been observed such as land-use change.

Represents a continuing records of events showing the demand on housing and increasing of population, or Peterborough is rural around small town and its close to Munich because of the good train commuting system.

Taking in consideration "The process of formulating and implementing land policies is not only politically and technically difficult, it can also be costly. However, the costs of not formulating and implementing them are much higher" (Dowall, David & Clark Giles, 1997)



Design by James of 2018  
Interactions between environment and the society  
Jam. R. Bourne 2018

HOCHSCHULE  
WEIHENSTEPHAN-TRIEDORF  
UNIVERSITY OF APPLIED SCIENCES

*ipmla*

**2**  
Scenarios

### Contemporary Living in Nature

**Scenario 01**  
Future Scenario For Petershausen, Important Landscape Growth and development Based on Adjacency to Public Transport system

Scenario 01  
Important Landscape Settlement development based on Public Transport

**Scenario 02**  
Future Scenario for Petershausen based on Existing Landscape architecture plans Growth Expectations

Scenario 02  
Future Scenario for Petershausen

**Scenario 03**  
Nature-Influenced Landscape, Architecture, & Urban Farming Development in Petershausen town

Scenario 03  
Nature-Influenced Landscape, Architecture, & Urban Farming Development in Petershausen town

Form R. Navroze 2016

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**3**  
Concept

### Contemporary Living in Nature

**Integrated Land Use Landscape Architecture Reference**

**Nature-Influenced Landscape, Architecture, & Urban Farming Development in Petershausen town**

**Legend**

- Arable land (annual crop)
- Pasture
- Suggested new building extension
- Existing Buildings
- Forest
- Suggested new Urban Farming
- Green urban areas
- Permanent energy and Nature
- Water
- Highways and secondary road
- Water
- Protected Urban Park Area

**Visual Legend**

**Urban Farming Development - The Combination of Urban Farming Into The Community**

Urban Farming contributes to greater food security.

Creates a sense of belonging

Urban Farming is one way to bring urban dwellers together—to establish a sense of community among people who are often isolated and, in some cases, isolated.

**Producer: Healthy Food You Can Respect:**  
You get fresher, healthier food—herbs, vegetables and fruits—and one more likely to eat what is real, when you eat what is produced on an urban farm.

**Provides a Learning Opportunity**  
Urban Farming gives city dwellers a chance to produce their own food, and learn in the process. They learn about various gardening techniques, the best nutrient solutions, required sunlight, and controlling temperature, among other things.

**Makes Efficient Use of Land**  
We can efficiently use the land we do have to feed the people. Consider rooftop or vertical.

**Roof Urban Farming**  
Roof Urban Farming gives residents extra space to grow crops.

Form R. Navroze 2016

# GLONN\_UP



Luis Aquino  
Mexico



Ahmed Abdelhafaz  
Egypt



Magdalena Giefert  
Poland



Lubna Mansour  
Syria

## Description

Development plan of the Glonn Valley in the section Petershausen, focused on new settlements, land use management, recreation and preservation of the Glonn river.

The group consists of 4 members coming from 4 different continents. Two group members are urban architects and two other landscape architects with a various levels of experience and skills.

## Project Achievements

During the planning process new methods were used, like GIS analyses, DPSIR, scenarios and 12. Hester's Steps. All members of the team had different backgrounds, level of experience and skills. Also the cultural differences had a big impact into the workflow. However, the team managed to successfully combine each capability.

## Unexpected Events

There were modifications in the initial group composition, since one team member left the group in the early stage and a new member joined in the middle stage of the project. The impacts it had for our team was that our schedule extended because of momentary distraction and disharmony in the work flow. The new member brought a fresh new look into the process of planning, additional ideas and balance between the team members. To react to those impacts we reviewed our management strategy, changed the communication among team members and split the tasks on the four persons.

The lack of the cooperation with the Mayor office of Petershausen also caused extensions in the schedule because of some delays in getting the expected materials. Instead we used other sources.

## Lessons Learned

Team members have slightly different priorities according to the achievements of the project. There were two parts of the group, where the first one was more creative, emotional and open to invest more time on looking for new solutions. Second part of the group was more pragmatic, better organized, focused on the final product. The recommendation for this is to well determinate priorities, avoiding Time Wasters, effective performance, Work Priority Checklist, staying focused on the tasks at and limit interruptions.

Also, team members had different communications styles of work, where they found themselves comfortable. Dissonances caused the drop-in work quality inside the group. To counteract those things, we recommend to respect the overall communication program: meet regularly; be inclusive, transparent, clear and concise and show some respect. Recognize that being right may be wrong.

In the initial stage of the project - collecting materials and information- group 4. and 5. worked together because of the same focus area. This combination didn't bring satisfying results because of the amount of people engaged and sprawl of the information.

The project management was based on the previous experience of the group members and the new methods were not sufficiently used and implemented into the whole process. The management of the work flow should be well prepared and consistently conducted.



### Project Performance

The group chose Petershausen because of its problems and potentials, which could make the project more challenging. In the initial stage, the group decided to cooperate with the group 5 (also for Petershausen area) in order to save time. After that we collected materials and information on the focus area, defined problems and potentials and created the survey (only group 4.). The survey assured more sociological dimension to the project and let the group to implement and exercise the knowledge gained during the first semester in the area of Landscape and Democracy. Afterwards followed defining the main challenges and the red line of the project on the base of the survey and team conclusions. For the main topic, the river Glonn was chosen with the surrounding area, new settlements and preserving the ecological value of the landscape in the zone. The variety of analyses led to 3 main scenarios that affect the chosen area:

The first scenario, "Policentric Estate", focuses on the nodes: economic independency and diversity of services (creating the Central Market supplied by local producers), activation of the area along the river Glonn, control the urban dispersion and recovering the balance between green and urban areas.

The second scenario, "Dynamic Housing", focuses on improving housing areas spread horizontally with clear limits, North-South green access and improved forest edges, creating the recreational areas inside the valley and along the green access as well as extensive urban vegetable gardens and other types of green public spaces between buildings. These two scenarios cover also a model of new mobility system.

The third scenario, "Lost Landscape", investigate the consequences of a high population influx and uncontrolled urban sprawl in the area. These two phenomena lead to unbalance between green and urban zones, ecosystems distractions and reduction of biodiversity and other disfunctions in the shape and functionality of the landscape.

The final step was to overlap the three scenarios with additional elements and focus on the details in a specific area. The result shows the development process in the time frame and deliver the multi-dimensional proposal with a strong emphasis on restoration and preservation of the landscape (especially the river Glonn), social interactive infrastructure, fluent agricultural strategies, dynamic housing model, water management and recreational areas respecting the protected zone. To conclude, in the next 30 years the analyzed nodes will have a clear and smooth relation between them.



POLYCENTRIC ESTATE



1- LAYER PRIORITIZATION



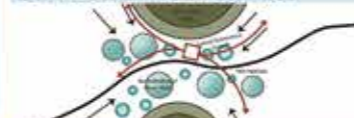
2- ELABORATION

- \* Economic development, diversification of products
- \* Integration of the area into the river basin
- \* Controlled urban design
- \* Balance between green and urban areas
- \* New identity for connected settlements
- \* Improved transport and mobility situation

4- EVALUATION

- \* Integration of small settlements with Peterhouse and transforming it into a core district
- \* Increased attraction through the new economic business model
- \* Multi-use plan improves the value of the space
- \* New jobs and urban growth in order to become an independent community
- \* Recreational quality of the area
- \* Stimulated agricultural practices
- \* Controlled urban dispersion to protect the green areas
- \* Dependence on car usage for short and long distances
- \* Lack of worker workers to satisfy the needs inside the zone
- \* Accommodation-induced pressure threatening the positive situation
- \* Neglecting the development of small settlements and their potential
- \* Attraction of visitors into the area and causing disturbance of the rural concept

3- PROGRAMATIC INDICATION



DYNAMIC HOUSING



1- LAYER PRIORITIZATION



2- ELABORATION

- \* New housing areas spreaded heterogeneously with river banks
- \* Multi-layer green structure and green corridors edges
- \* Recreational areas inside the valley and along the green spaces
- \* Extensive urban vegetable gardens
- \* Green public spaces between buildings
- \* Improved transportation and mobility system

4- EVALUATION

- \* New settlements position to keep balance on both sides of 5 tasks
- \* Advanced state appealing new offers
- \* Multi-use public spaces for all-year activities
- \* Recovered identity of the place
- \* Convenient mobility routes for users
- \* Affordable housing appealing to young adults
- \* Active life between buildings
- \* New jobs and activities causing attraction to the place of living
- \* New current of self-food production
- \* Excessive foot print sprawl
- \* Space without a specified center
- \* Slow progress and growth
- \* Avoidance of personal mobility
- \* Maintaining of previous human habits
- \* The rural claim will disappear
- \* Attraction of visitors into the area and causing disturbance of the rural concept
- \* Urban sprawl on undeveloped lands

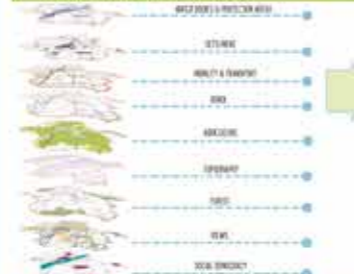
3- PROGRAMATIC INDICATION



LOST LANDSCAPE



1- LAYER PRIORITIZATION



2- ELABORATION

- \* Increase of distance between the river
- \* Sustainable approach to the restoration of landscape
- \* Housing areas oriented to the river and the valley
- \* No clear identity and landscape village
- \* Deconstructed network on different levels of mobility
- \* Separation of small settlements from the general development
- \* Diversity of urban style and typologies of the buildings

4- EVALUATION

- \* Capacity of new traditional housing
- \* Free choice of aesthetic level
- \* Short term satisfaction coming from keeping a previous state
- \* Attraction for new state investments
- \* New jobs
- \* Uncontrolled sprawl causing poor spaces
- \* Underdeveloped potential of the place
- \* Inefficient mobility system, traffic jams and poor low speed transport
- \* Non-ecological community
- \* Far removed parking
- \* Value of the land will fall
- \* Social dynamic of the settlements will turn into disruptive patterns
- \* Location of older inhabitants
- \* Decreasing production of goods
- \* Settlements of poor importance

3- PROGRAMATIC INDICATION



**SCENARIOS MAIN IDEAS**

- AFFORDABLE AND SUSTAINABLE RESIDENTIAL HOUSING WITH A CONTEMPORARY STYLE (POLYCENTRIC ESTATE, DYNAMIC HOUSING)
- NEW CENTRAL MARKET SUPPLIED BY LOCAL PRODUCTION (URBAN POLY, POLY, GRASS) (POLYCENTRIC ESTATE, DYNAMIC HOUSING)
- LOCAL FOOD AND MARKET TIME ON THE RIVER (LOST LANDSCAPE, RIVER ACTIVATION)
- GREEN TRAILS CONNECTING NORTH AND SOUTH PARTS OF THE MUNICIPALITY (URBAN INTERACTION AND ACTIVATION)
- SAFE AND CONVENIENT WALKING, BICYCLING AND FLUENT CAR ROUTES (URBAN MOBILITY INFRASTRUCTURE)
- EMPHASIS ON THE RIVER (LOST LANDSCAPE, SOCIAL INTERACTION INFRASTRUCTURE)

**ENVIRONMENTAL APPROACH**

- RECOVERING THE ECOSYSTEMIC VALUE OF THE RIVER (LOST LANDSCAPE, CLEAN WATER), (URBAN WATER MANAGEMENT, RESTORATION AND PRESERVING THE RIVER)
- EXTENSIVE AGRICULTURE AND VEGETABLE GARDENS, BASES AND THE PRODUCTION (URBAN POLY, POLY, GRASS) (POLYCENTRIC ESTATE, DYNAMIC HOUSING)
- BALANCE BETWEEN GREEN AND URBAN AREAS (URBAN CORRIDORS, WOODS, FORESTS, NATIVE HABITATS) (URBAN POLY, POLY, GRASS) (POLYCENTRIC ESTATE, DYNAMIC HOUSING)
- GREEN PUBLIC SPACES BETWEEN BUILDINGS (URBAN POLY, POLY, GRASS) (POLYCENTRIC ESTATE, DYNAMIC HOUSING)

	EVALUATED BY AMA	EVALUATED BY IPFG USERS	EVALUATION SUMMARY
SCENARIOS MAIN IDEAS	+	+	+
ENVIRONMENTAL APPROACH	+	+	+

**EVALUATION MATRIX (TOP COMBINED SCENARIOS IDEAS)**

River Conservation and Activation

Urban Growth Sustainability

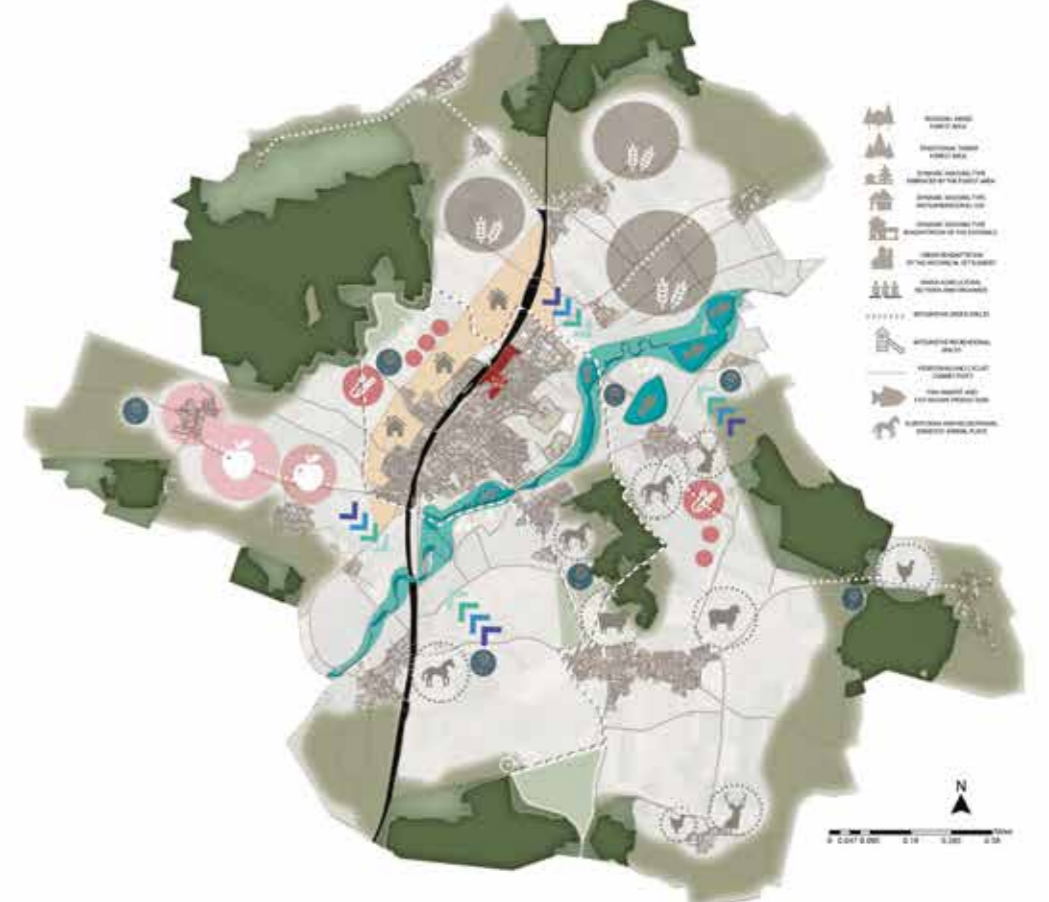
Integrating Ecological Impulses

River Connectivity System

Focus Points

DETAIL 1

DETAIL 2



# IMPRINT

*imprint*

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## LAYOUT

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