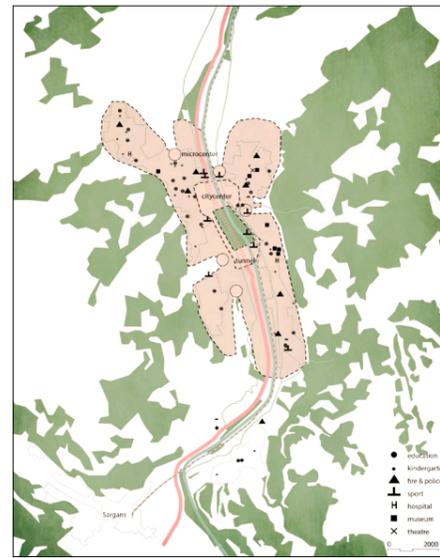


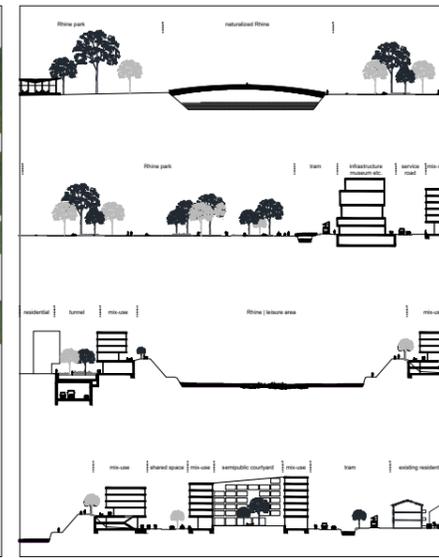
Settlement The scheme shows the fusion of four cities into one big agglomeration.



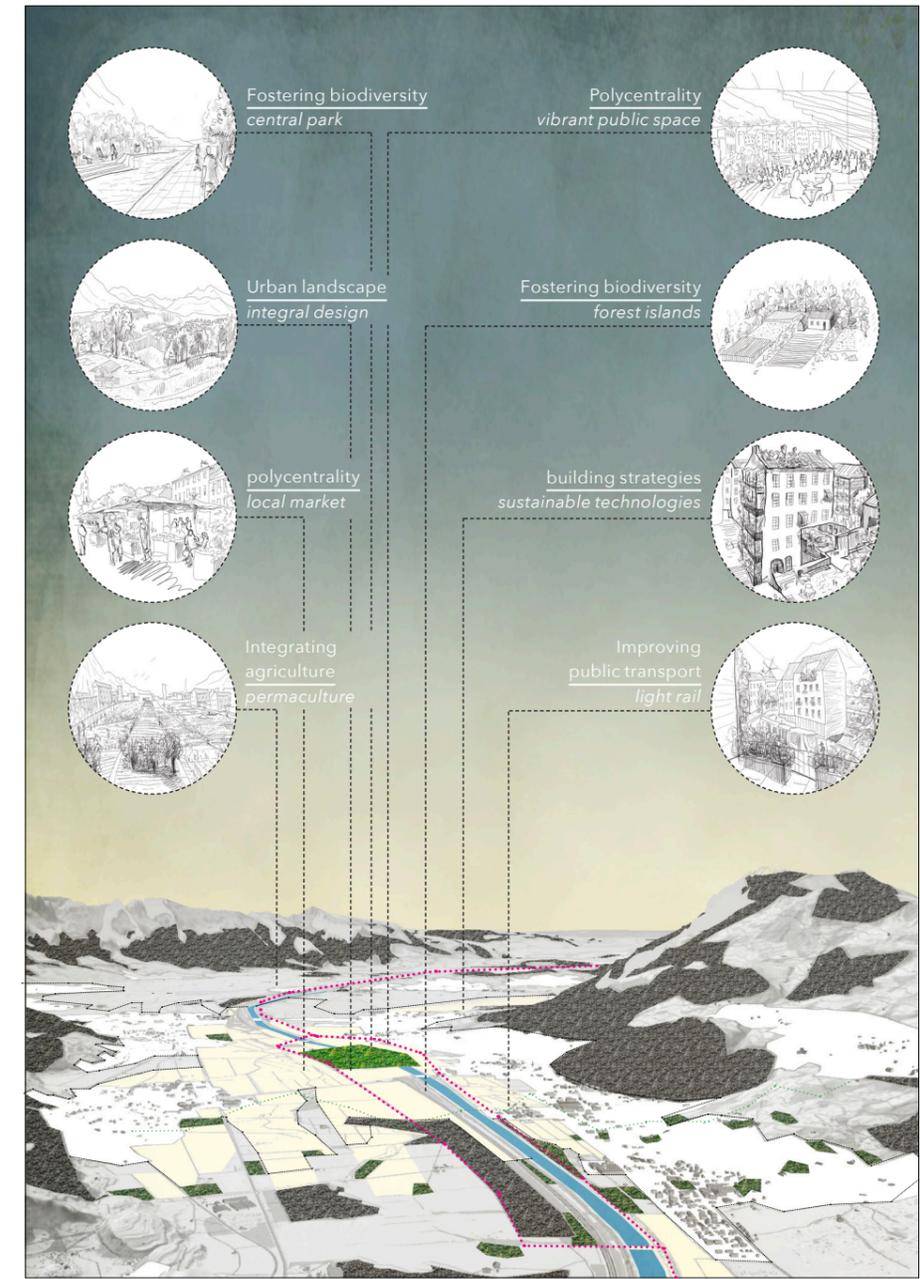
Urban landscape A system of agricultural wedges, forest islands and urban nature meeting spots.



Shared infrastructure Existing dispersed and implemented shared infrastructure.



Sections Integration of the waterways (blue network) within the urban landscape.



Alpenrhein Valley Development scenario based on regenerative regime

VOTING FOR THE VIVID AND DENSE CITY

The territory of Liechtenstein holds a strategically beneficial position in the centre of Europe, closely located to the important economic centres and hubs as Zurich or the Vorarlberg region. Its economic potential for the future development is therefore very vital. This proposal is based on the assumption that the urban development will continue for the next 100 years because of further population growth in the bigger region and the possible liberalisation of the residency permission law for foreign workers. Acting on these assumptions, it is important to set distinct guidelines for a future urbanization, that shall only be allowed if the living environments created are entirely regenerative.

The analysis of the territory shows that the border between Liechtenstein and Switzerland has a broad range of (also spatial) effects; it results in doubling of the infrastructure on both sides of the river. There is a big potential for the two countries to share not only their culture, but also their infrastructural and transport system. The only geographical border that divides the two countries is the Rhine river, which is separated from its surroundings by two highways and that lacks of infrastructure all along its river banks. This proposal provides a broader 'extreme' vision of the urbanization process of the Alpenrhein Valley in the upcoming future; it suggests to form a continuous band along the river from Chur to Bregenz. The focus

of the design strategy was on the four cities of Vaduz, Schaan, Buchs and Sevelen. We see the solution of the problems mentioned above in stimulating the further development not 'from the inside to the outside' (urban sprawl), but 'from the outside to the inside' through the densification of the free space in the valley between the cities and, as a consequence, transformation of the territory into a big city. It will be one of the several future Alpenrhein Crosslinks. In order to achieve the said goals, the concept of fixing a green-blue network that will be forever excluded from the settlement zones is required. A central part of the future city is reserved for a landscape park that is strictly excluded from every future urbanization, as it was made, for instance, in New York's Central Park. This area is dedicated to the renaturation of the river and serves as a green island enriching the biodiversity of the region and providing recreational facilities for the surrounding dense city neighborhoods. It is proposed to allocate the territory along the river for public functions, such as schools, museums, offices and other public services, so that the people from both sides of the river can benefit from this attractive central area in the future.

The emphasis of the project was devoted to setting future urbanization strategies, such as using renewable energy, embedding urban agriculture and resource efficient development. The future settlement

will be based on the extension of the existing street system on both sides of the river. The new population will demand new transport infrastructure, that is why the project proposes a new connection, a light rail transit line that goes through the developing area and connects Sargans with the Vorarlberg region. The aim is to reduce private motor transport through the introduction of additional carbon taxes and its replacement by shared mobility systems, electric and hybrid public transport and cycling. The new building strategies include the design of exclusively 'plus energy' buildings with south facing solar roofs for rooftop installations and appropriate insulation materials. The structure of the six-storey residential blocks with the courtyards providing public spaces outside the blocks and the semi-public spaces inside it has to be implemented. Preference should be given to local materials or to building materials with the least embodied energy. It is proposed to create a big city center in the middle enriched by smaller local centres around it in order to establish polycentricity; all centres should provide vibrant public spaces. The settlement will also have its microcenters in spots where agriculture comes closer to the city; these spots will be allocated for the market spaces, shared storages for the farmers and restaurants for cooking local food. In the current situation, agriculture is placed into a separate layer outside the cities. It is suggested to bring it back to the city and to the life of people

through a system of green wedges. Instead of the traditional agriculture, it is planned to establish permaculture on all sites; that will allow using the land 30% more efficient by farming smaller plots of land. Food production will also be implemented into the courtyards of the residential blocks and roof terraces. Support schemes for the local food production have to be established in order to lower the price for local food. A combination of small forest islands of different sizes, implemented into the agricultural fields and connected to each other with the big island of the Central Park in the middle of the settlement, should serve as a system of green corridors between the two parts of the river in order to enrich the biodiversity of the region.

The arrangements described above will offset all negative external effects of the old neighborhoods. The new dense city centre will result in an enhancement of the energy efficiency of transport systems and in the stimulation of cycling and walking; the proposed network of public infrastructure will be placed in a more systematic way and will act as neighborhood hubs for the settlements on both sides of the river. The new resource and waste management, as well as the new agricultural approaches, will allow keeping the circular urban metabolism. All this will lead to healthy relationships between the future city and its hinterland and will help to preserve the surrounding mountain landscapes.

ALPENRHEIN CROSSLINKS

Due to the successful economic development and soaring demographic growth, the settlements in the Alpenrhein Valley have expanded significantly during the last 50 years. Previous urban planning strategies applied in the region resulted in massive urban sprawl and inefficient land use, such as the doubled infrastructures on both sides of the Rhine river or the scattered settlements along the mountain slopes, where building and population density is low and the infrastructure is heavily dispersed. Assuming that the population growth continues as up to now, the preservation of the biggest possible areas for uninhabited natural use should be the key element of the future urban planning. In order to allow for future generations to enjoy the untouched nature of the mountains as well as we do today, this project proposal advocates for a dense city in order to save the surrounding landscape.

Final project proposal Anina Frei, Olga Ivakina, Oleksandra Telenkova, Alexander Sokolov (SS17). Initial project idea: Hassan Amr El Ghayesh, Iurii Goncharenko, Laura Bagdonaitė, Patrick Holmes, Tapiwa Mirirai Manase, Tomáš Minarovic (SS15).

REGENERATIVE.LI

Exhibition: September 14 to October 6, 2017
Architecture Foyer, University of Liechtenstein

Over the past three years students participating the course *Regenerative Environments* had a close look at the Alpenrhein Valley focusing on Liechtenstein and its surroundings. Aiming at the design of integrated approaches for sustainable, regenerative environments, a broad variety of topics have been discussed, wrought and finally distilled into project proposals that could contribute to render Liechtenstein more regenerative. The topics range from habitation, commercial or mixed use to infrastructure, mobility, renewable energy production and supply, agriculture, forestry, biodiversity, carbon sequestration and water resource management. The ten projects on display in the exhibition are intended to be thought-provoking impulses for the ongoing discussion about the future sustainable development within the region.

Further information: WWW.REGENERATIVE.LI

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