

REFLECTION REPORT P4

From an Atomgrad to an Atompark: upcycling a nuclear energy landscape

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The project is about the transition of nuclear energy landscape after decommissioning of a nuclear power plant.

The nuclear energy landscape is characterized by city large industrial sites, transmission corridors cutting through the forested landscape, a new town with specific type of population (multiethnic highly educated nuclear power plant workers, artists and sportsmen) and the lifestyle, buffer landscape which is part of international nature framework, forested, laky and sparsely inhabited land. This landscape is facing the transition due to the decommissioning of nuclear power plant. Decommissioning involves dismantling power plant at the final stage. But it takes more than that. Decommissioning deletes atomgrads economy, population, identity, cultural and technical achievements, threatens built structures in the city and raises questions about the role of buffer landscape.

The construction of Ignalina Nuclear Power Plant was a huge intervention to the region and to pull it up with roots would be again a destructive intervention. Therefore the approach to upcycle nuclear energy landscape is chosen to strengthen atomgrad's economy, natural and cultural qualities. The alternative decommissioning process is proposed.

Aspect 1

the relationship between research and design

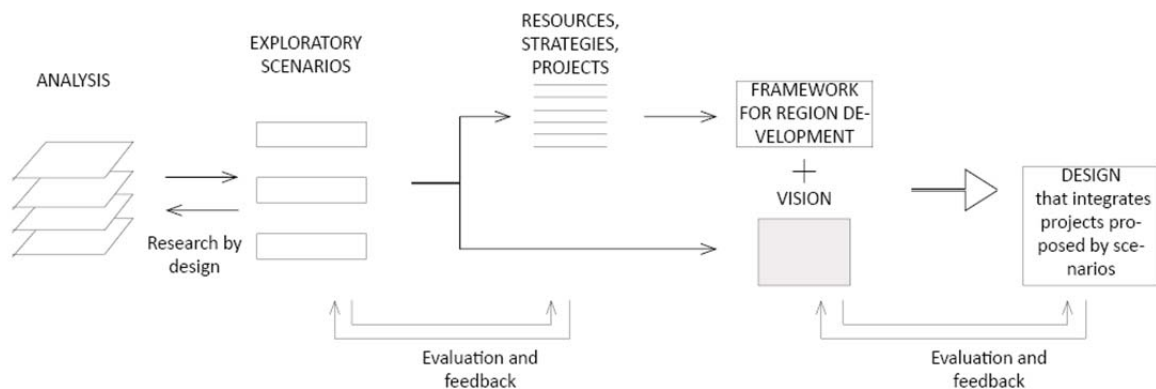
The transformability theory of social ecological systems was the starting point for the research for the case of atomgrad which loses its main economical pillar – large scale nuclear power plant. The atomgrad's future development question was open. However, the large scale infrastructure and specific type of social capital created by nuclear power plant was seen as window of opportunity for transformation of such urban settlement. The research on general principles of transformability and the site (mapping, Interviews, literature review and case studies, artworks; workshop) helped to set a vision for the future development of the city. However, more specific look on the transformations of industrial sites and cities would have helped to proceed with the design easier.

The struggle in the project was uncertainties and controversies on political, technological level:

- The unclear state government's position for the future of nuclear energy technologies in the country
- Controversy about nuclear energy technologies on the global scale, uncertainty about long-awaited nuclear fusion reactors

The **scenario method** helped to overcome this by exploring possible reuse, transformation and development of structures and sites in the region, concerning related topics of industrial heritage, ecology, energy generation and research. The research on each of them was held to understand the sociocultural particularities, modern ecology approach and relationship with urban design, influence of technology to urban and natural environment. Scenarios helped to identify resources (place of opportunity for future development (Rieniets, 2014)), strategies and projects on specific locations in the region. Locations overlapped by different scenarios sometimes proposing contradicting development paths. Therefore design is used to balance and combine them.

There are various ways how to use scenario method in the urban planning. The method used in the project evolved from economic development scenario to scenario that tells the story about transformation of the region with spatial interventions.



Aspect 2

the relationship between the theme of the graduation lab and the subject/case study chosen by the student within this framework (location/object)

The graduation project contributes to the topic of Design as Politics studio *Let's work – industry, architecture and the city* by exploring specific type of industry – nuclear energy industry and its relation to built, natural environment and job market. Decommissioning of nuclear power plant causes unemployment and increases a precariat class - the class of workers without contracts and all sorts of insecurities. Decommissioning results in spatial changes due to demolitions in nuclear power plant site, the city and the landscape. In the course of decommissioning, there is an opportunity to reconsider the structure and the role of the nuclear power plant region which has been created according First Nuclear Age utopias, adjusting it to the new type of workplaces and residences.

Aspect 3

the relationship between the methodical line of approach of the graduation lab and the method chosen by the student in this framework

Design as Politics studio sees design as tool in the decision making process on political level; and politics as an integral part of design. Similarly to the studio approach, thesis project uses a design in scenario method to test possible futures related with certain political decisions, and design processes that imply changing power relationships between government and citizens.

Aspect 4

the relationship between the project and the wider social context

The societal challenges in the project are related with unemployment of both highly educated people and workers with low education level, aging, population decline caused by decommissioning of nuclear power plant. INPP workers are forced to escape from the First Atomic age dream and face the uncertainty of their future which is even increased by current tendencies in job market - raising precariat class. Controversial opinions about nuclear energy influenced by Chernobyl disaster and lack of decisions on political level keep the development of nuclear energy as an open question. INPP workers once was exemplary part of society, now are unwanted. Solutions showed in the project are relevant to other nuclear power plant cities in Eastern Europe and United States.

The project proposes a transition of the nuclear power plant region from threatening buffer zone to lived in area. The search for suitable form of urbanity which has a strong relationship with nature and benefits from its presence is the concern of the Biophilic Cities movement. The project case explores a mid-sized region (20 to 40 thousand inhabitants) and contributes to the knowledge of biophilia in urban environments.

In addition to this, nuclear power plant cities with decommissioned facilities show the end of utopia created by the First Nuclear Age and encourages us to think about the possible impacts of upcoming new utopia - the Second Nuclear Age. Would it succeed to fulfill promises of Atoms of Peace and revolutionize our lifestyles, or become another failure to be solved for future generations? Thinking about the broader context, project becomes relevant to the global society as well.

Rieniets, T., 2014. The city as resource : texts and projects 2005-2014 : Chair of Prof. Kees Christiaanse, ETH Zurich. Jovis, Berlin.