

Directions of transformation and development of border towns of the Leningrad region in modern conditions (through the examples of Ivangorod and Svetogorsk)

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Abstract. Numerous problems of cross-border cooperation in the North Western Russia , in particular in the Leningrad region, are not defined only by features of interstate relations, but also by the problems of development of the border settlements. Cities with border points crossing creates the first impressions of the foreign visitors about Russia and therefore the search for the ways of their transformation and development is actual. In the Leningrad Region there are two border towns - Ivangorod (border with Estonia) and Svetogorsk (they border with Finland). Despite the differences in the border location of these towns relative to state borders, the problems of them are very similar. At present, both Ivangorod and Svetogorsk are not in the best position, and for these border towns most of the problems of small towns of Russia are characteristic. This is a range of territorial, transport, functional planning, economic and recreational problems.

1. Introduction

In 2017, on the instructions of the Committee for Urban Planning and Architecture of the Leningrad Region, work on Master's graduate works began on the topics of transformation and development of these border towns at the Chair of Urban Planning of the St. Petersburg State University of Architecture and Civil Engineering. In 2019, these graduate works were completed and some of them were honored at the XXVIII International Review Competition with the first categories.

Svetogorsk and Ivangorod (Figure 1) are different in history of origin and development, size of territories and population. Ivangorod was founded in 1492, it contains such architectural monuments of federal significance as the Ivangorod fortress, Svetogorsk, as a settlement within the pulp and paper industry was founded only in 1887 and until 1940 was part of Finland as the city of Enso. There are no significant historical monuments in this town. Svetogorsk, combined with the surrounding settlements is larger than Ivangorod - its territory is 49.5 km² and the population is 15,400. In Soviet times, it was a closed town, partially opened only in the 1990s. The international automobile checkpoint (MAPP) was opened in Svetogorsk only in 2002. Svetogorsk is located a few kilometers from the Finnish Imatra.

The history of the development of Ivangorod in the XX century was different. From 1920 up to 1940, Ivangorod and Narva were a single settlement, divided by the river Narva, and were the part of Estonia. Since 1940, Ivangorod became a part of the Russian Federation and became a transit city in the direction to the Baltic Soviet republics, and since the beginning of the 1990-ies in the direction of the



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countries of the European Union. At present, the population of Ivangorod is about 9900 people, and its territory is 7.8 km².

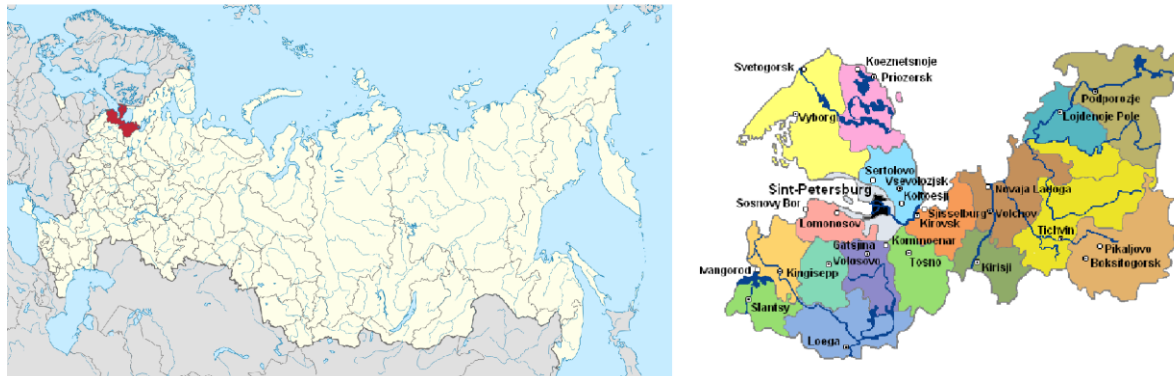


Figure 1. Leningrad region (oblast)

Finding the ways of transformation and development of Ivangorod were devoted the following Master's final work in 2019 : " Sustainable development of the cross-border small town of Ivangorod " (the author V.L.Museeva, supervisor prof.A.G.Vaytens) (Figure 4) , " Formation of the spatial structure of border territories on the example of Ivangorod "(author L.V.Litvinova, supervisor prof. Y.S. Yankovskaya) (Figure 5), and " Development of the tourist cluster based on Ivangorod and surrounding settlements "(author E.S. Smetankina , supervisor prof. Y.S.Yankovskaya) (Figure 6) .

Master Graduation works were devoted to the similar topics for Svetogorsk: " Formation of a natural-ecological framework and revitalization of buildings using the example of Svetogorsk" (author N.S. Verzhnyuk, supervisor prof.Y.S. Yankovskaya) (Figure 7) and " The concept of Industrial park in the town of Svetogorsk " (author D.Yu. Bryl, supervisors prof. Y.S. Yankovskaya and ass. M.V. Lushnikova) (Figure 8) .

2. Materials and methods

To determine the directions of transformation and development of both Ivangorod (Figure 2) and Svetogorsk (Figure 3) , in all these works, a town-planning analysis of these border settlements was carried out in order to identify problems that hamper their development.

According to the authors of these graduate works, the problems of the functional planning organization include the monocentric structure of these towns, the functional and planning fragmentation of their regions, the lack of the social infrastructure, depreciation and the moral aging of the housing stock.



Figure 2. Ivangorod. Maps. Functional zones and green frame

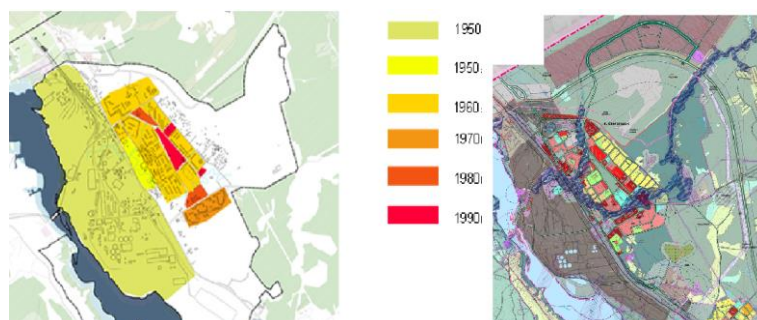


Figure 3. Svetogorsk. Maps. Development of residential development and functional zones and green frame

To the *transport problems* of these towns the authors related the intensive transit flows of freight vehicles passing through their centers, the lack of differentiation between automobile and pedestrian spaces, the mixture of freight and passenger modes of transport at the International Road Checkpoints (MAPP), the lack of parking spaces and landscaping adjacent to the MAPP territories [1, p .8].

On the opinions of the authors of these works, to the *economic problems* both of Ivangorod and Svetogorsk could be included: a lack of investment attractiveness due to unclear legal land use, extensive nature of the economy as a consequence - the outflow of the population (the working-age youth) in St. Petersburg, as well as abroad [2, 5].

In addition, the negative impact of pulp and paper production of JSC «International, the Paper» on the air basin of the city and waters of Vuoksy river and the lack of areas for urban recreation was related to the *environmental problems* of Svetogorsk.

3. The study of the Cross Border Benefits

The theme of cross-border cooperation between Estonia and Russia is difficult due to the unfavorable overall relations between these two states. Nevertheless, the common history of Narva and Ivangorod, resistant socio-cultural and economic connections of the population, economic interdependence make necessary transformation and development of Ivangorod and looking for the compromises for establishment of cooperation between neighboring towns.

At the same time, the analysis of the present state of Ivangorod allowed the authors of the graduate works to conclude that this town has the advantages of its border position, which may be prerequisites and conditions for its development. First of all, this is the presence of unique historical and architectural monuments (Ivangorod fortress), the relatively low cost of land and the possibilities of developing cross-border cooperation in the fields of trade and culture, excellent transport accessibility, and the use of transit flows. [1, p .9].

What can be done to develop cross-border interaction and cooperation between residents of Ivangorod and its neighbors in Narva as the basis for its development? The authors of the noted graduate works answered differently to these questions.

In these works, it was shown that cross-border orientation of the economy of the settlement towards export-import, which obliges this settlement (Ivangorod) to transform the transport infrastructure and logistics in such a way as to rationally serve external and internal traffic flows. In the work of V.L.Museyeva, it was proposed to direct the flows of freight vehicles north of Ivangorod and create a new logistics center with customs services there [2]. In present, there are prerequisites for this. Construction of a new bridge through river Narva could be the subject of establishing cross-border construction activities between Russia and Estonia (Figure 4).

For both Ivangorod and Narva, tourism is a way and organization of the new places of employment, attracting investors and creating high-quality tourism infrastructure. Thus, cross-border cooperation can embrace and facilitate the implementation of industrial, social, and cultural activities between the border regions of neighboring states. On the other hand, such cooperation could contribute to the joint solution of many common problems that exist in neighboring regions.



Figure 4. Sustainable development of the cross-border small town of Ivangorod (the author V.L.Museeva, supervisor prof.A.G.Vaytens)

Therefore, it is necessary that the development strategies of the border areas of Russia reflect cross-border cooperation that contributes to the achievement of common strategic goals for the formation of sustainable development. To solve these problems, the East European experience in the development of border areas was analyzed [3].

In the graduate Master work of V.L.Museyeva [1, p.12-14], the ways and means of achieving sustainable development of Ivangorod as a small town based on taking advantage of the border location were considered.

To achieve this goal, the mission and vision of the territory of this town, strategic priorities and long-term development goals were determined. To implement these goals and objectives, six Strategies, program activities, stages and tools for the balanced development of Ivangorod have been proposed. [1, p.13]. The aim of these measures was the transformation of Ivangorod into a self-sufficient border small town, using various levels of cooperation with its foreign neighbor Narva. By the strategic priorities of Ivangorod were classified as transport, the environment, society, economy, urban environment. [1, p.14]. Within each priority, the author of this graduate Master work formulated long-term development goals aimed at responding to one of the main challenges of this town - the decline of population due to its migration. Thus, successful cross-border cooperation between residents of Ivangorod and Narva could be carried out only if the goals of sustainable development of Ivangorod could be achieved. The implementation of this Strategy of the use of territorial and infrastructural potential, proposed in the work considered above by V.L. Museeva, was devoted to the final graduate Master work of L.V. Litvinova "Formation of the spatial structure of border territories on the example of Ivangorod." (Figure 5) [4].

In this graduate work, based on the analysis of the existing problems of the central historical part of Ivangorod, the more concrete measures to transform these areas for strengthening the tourism attraction and to improve international transit transport flows through breeding and improvement of cross-border logistics were proposed [6]. In this work the program of urban transformations [5] at the city level: the construction of a new bus station near the railway one, the improvement of main highways, a two-level interchange at the intersection of railway and motor transport, the development of an international checkpoint, the extension and improvement of the embankment of the river Narva, removal of the

movement of freight transport and logistics outside the city was proposed[4, p .11]. These measures could facilitate the creation of new jobs and will be one of the conditions for achieving sustainable development of this town.

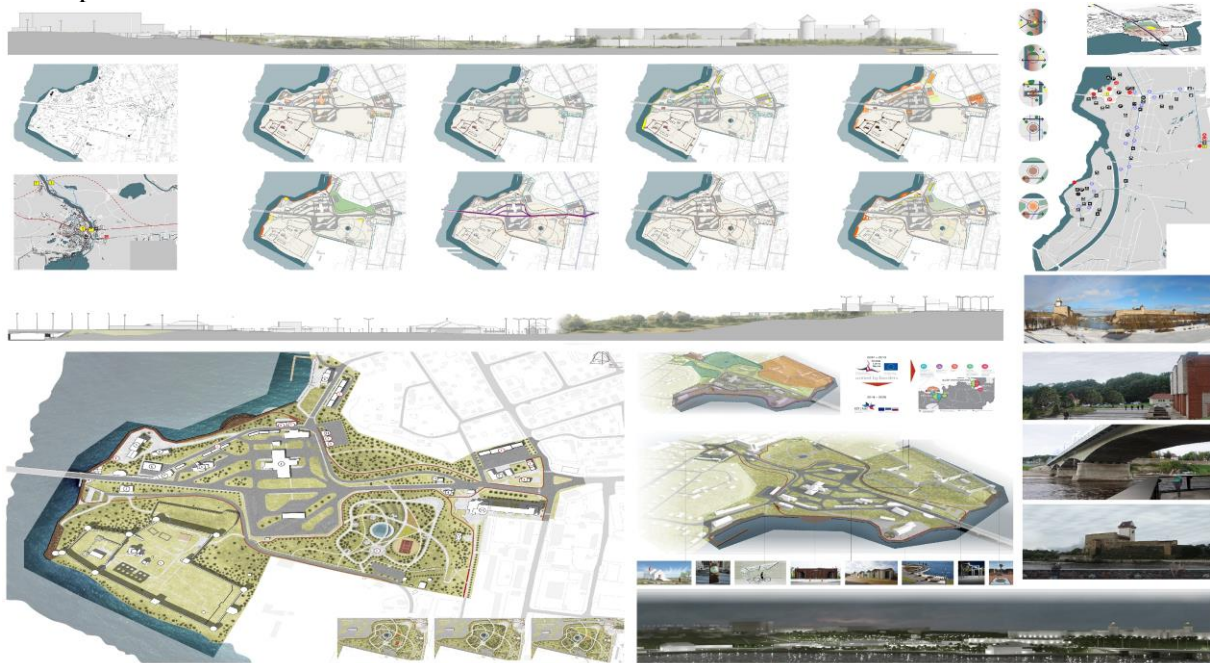


Figure 5. Formation of the spatial structure of border territories on the example of Ivangorod (the author L. V. Litvinova, supervisor prof. Y. S. Yankovskaya)

The Master graduating work of E. S. Smetankina “ Development of a tourism cluster based on Ivangorod and surrounding settlements ” (Figure 4) was devoted to the comprehensive development of the tourism potential and the solution of the problem of employment of the population of this town, the creation of its positive image as a historical settlement and also the increase of the historical and cultural significance of the adjacent border territories [2, 5].

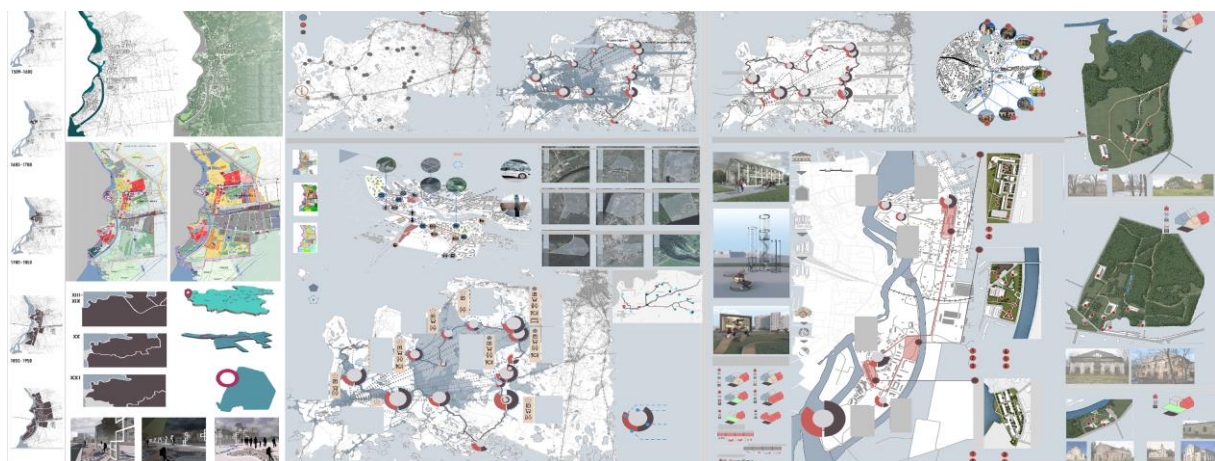


Figure 6. Development of a tourism cluster based on Ivangorod and surrounding settlements (the author E.S. Smetankina, supervisor prof. Y.S. Yankovskaya)

In this work the term "Tourist cluster" as a system of historically important settlements in context of their urban development is confirmed. In the work of E.S. Smetankina the formation of such tourist

cluster on the basis of Ivangorod as a complex of territories and objects connected by a common infrastructure and used by enterprises and organizations related to the provision of tourism services in order to create a common tourism product is proposed. This cluster aims to increase the competitiveness of the territory in the tourism market, the preservation and development of tourism - significant objects (natural, historical buildings) [7]. The author of this work proposed a design-theoretical model of strategic transformations of Ivangorod and surrounding territories (Figure 6). The macro level will be represented by a united network of objects of tourist interests. As a part of the study of the tourist potential of this territory, a system was developed for identifying objects that seem attractive from a tourist point of view according to the following system of criteria: condition, historical significance, attendance [8].

At the city-wide level, the concept of the distribution of tourist infrastructure within the borders of Ivangorod is proposed; also the sequence of the walking route along Ivangorod, which will become the center of the tourist cluster, is presented. Such a function will be achieved by creating a symbolic connection of the selected large objects with an element of the planning structure, namely, a pedestrian street and objects located along or near it. Each of these objects in the city will reflect the function or historical significance of the corresponding macro-level object [9, 11].

The micro-level is represented within the boundaries of the city by individual nodes, and within the boundaries of the entire cluster by the territories of objects of tourist interests [10].

All these project proposals were submitted to the Ivangorod administration, received positive conclusions and accepted for further development.

The proposals for the transformation and development of Svetogorsk were proposed differently in the Master's graduate works. In the work of N.S. Verzhenyuk "Formation of the natural-ecological framework and the revitalization of buildings using the example of Svetogorsk" (supervisor prof. Y.S. Yankovskaya) (Figure 7), based on the comparative state of development of this city, the main factors are determined, positively or negatively affecting these processes. A new perimeter residential development of small and medium floors, the creation of public spaces in its system is meant under revitalization.

The main factors are identified in this work, that positively affect the development of Svetogorsk [7]:

- transport and transit position strategically significant for the region between the cities of Vyborg and Imatra (Finland);
- development of transport infrastructure as well (railways and highways), about bespechivaet connection with the settlement of St. Petersburg, Vyborg and Finland;
- the presence of high industrial potential (Pulp and paper mill).

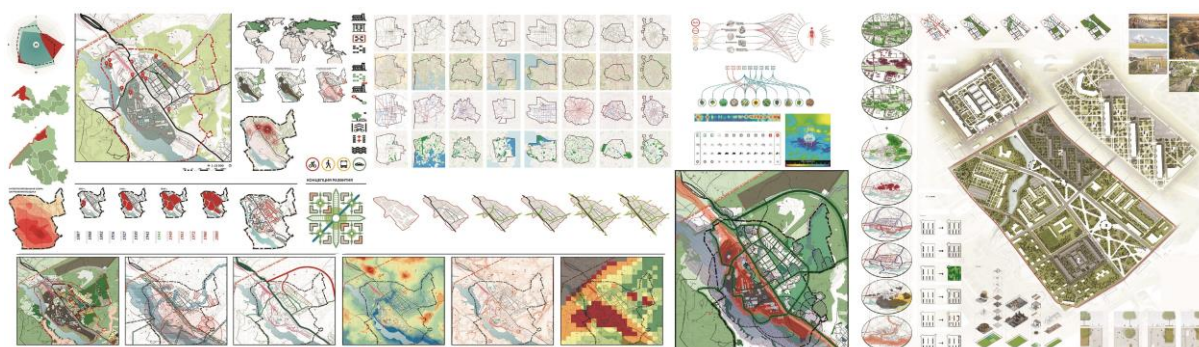


Figure 7. Formation of the natural-ecological framework and the revitalization of buildings using the example of Svetogorsk (the autor N.S. Verzhenyuk, supervisor prof. Y.S. Yankovskaya)

The formation of the natural-ecological framework of the city should include the transformation of the riverside territories of Vuoksa, as well as courtyards and boulevards in the existing residential development, as well as the existing park for holding joint international cultural events.

The existing pulp and paper mill «International Papers» is not enough to provide jobs for all Svetogorsk residents. There is a lack of jobs and this is one of the problems of the development of this town. In the graduate Master work of D. Y. Bryl, “The Concept of the Formation of an Industrial Park in the City of Svetogorsk” (supervised by prof. Y.S. Yankovskaya, and ass.M.V. Lushnikova) (Figure 8) , the ideas for overcoming this problem, as well as transport and logistics problems were proposed.

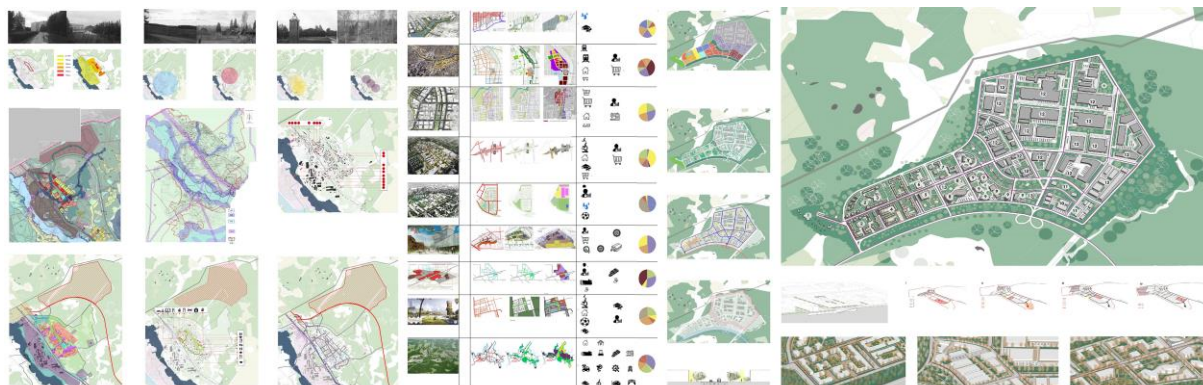


Figure 8. Concept of the Formation of an Industrial Park in the City of Svetogorsk (the author Daria Bryl, supervisors prof. Y. S. Yankovskaya, and ass. M.V. Lushnikova)

The construction of the bypass road around Svetogorsk, which could eliminate international transit traffic through the city and increase traffic and passenger flows across the Russian-Finnish border is proposed. In its system, the creation of a perspective Industrial and logistics park of not only regional, but also international significance is proposed [9, 12-14]. The specialization of this multidisciplinary association is the woodworking, pulp and paper industry, the chemical industry, mechanical engineering, the production of building materials and the processing of forest waste [10]. The construction of the Svetogorsky Industrial park will provide the creation of new jobs and may become one of the sides of Russian-Finnish economic cooperation.

4. Conclusion

The results of the considered final qualification works allowed drawing the following conclusions:

1. The development areas of the border city of Ivangorod should include:

- solving transport problems of transit of passenger and international freight flows through the city;
- comprehensive use of the tourist opportunities of this city (Ivangorod fortress and the Parusinka complex) and the surrounding historical settlements;
- creating conditions for trade and socio-cultural interactions for the residents of Narva and Ivangorod;
- development of small and medium-sized businesses in existing industrial territories (partially abandoned).

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To implement these areas, the following transformations are needed:

- improvement of the transport network of the city (construction of transport interchanges and parking lots);
- creation of logistics centers north of the city with a cargo customs terminal);
- improvement of the river embankments with the formation of public spaces;
- creation of tourist information centers.

2. As it was already noted, Svetogorsk differs from Ivangorod in many respects - from the size of the territory and population to interaction with foreign neighbors - Imatra and Narva. Therefore, the necessary directions of development and transformation will be both similar and different.

The necessary directions for the development of Svetogorsk include:

- construction of a bypass road to reduce the transit of international passenger and freight flows through the city;
- creation of new logistics complexes outside the city to create new jobs;
- creation of conditions for trade and cultural interactions of residents of Svetogorsk and Imatra;

In order to implement these areas, the following transformations are needed :

- improvement of the existing transport network of this town;
- development of a natural-ecological framework based on the existing park, boulevards and courtyards to reduce the harmful effects of existing production.

These directions of development and transformation of the border cities - Ivangorod and Svetogorsk will significantly reduce the population outflow from these towns, create conditions for cross-border activities in the field of trade, logistics and industry and significantly improve the image of North-West Russia.

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