

## INNOVATION CENTRES AS GROWTH POINTS FOR SMALLER TOWNS AND RURAL AREAS

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*This article addresses the role of innovative centres in the development of surrounding areas beyond large cities. At the same time, the innovative development of rural areas should be of a composite nature; municipality development strategies take innovations into account. International practices serve as an argument in favour of establishing innovative centres in smaller and medium-sized towns in order to facilitate the socioeconomic development of the territory and surrounding rural areas. Science parks created in smaller towns give a boost to socioeconomic development. The authors analyse the case of the science park in the town of Gusev in the Kaliningrad region and emphasise the role of development and adoption of legal acts at regional and municipal levels, for example, the law «On the production policy of the Kaliningrad region».*

**Key words:** innovation centers, rural areas, small cities, socio-economic development

It is an undeniable fact that small towns lag behind urban areas in their economic and social development. Since the time of economic reforms, the gap has widened even further. Even the state support for rural areas is not likely to improve the situation significantly. In our opinion, one of the solutions, aiming at improving the standard of living in small towns and villages, creating new jobs and increasing the revenue base of municipalities, can be the establishment of innovation centres with innovation enterprises located outside major cities. In addition to its strategic function — bringing rural areas to a new level of innovative economic development and modernization — these centres, as well as innovation and technology parks, business incubators could have a direct impact on the socio-economic level of the surrounding area.

Until recently, the concept of "innovation" in rural areas was associated primar-

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ily with sustainable development of rural territories and the possible application of innovations directly in agriculture. For example, in the special edition of "APK: ekonomika, upravlenie" [Agriculture: economy, management], dedicated to forecasting trends in the development of agriculture and rural innovation, M. Nikolaev analyses the strategy of innovation, the models of rural development, the development of human resources, and the establishment of science parks only in the framework of the agricultural sector development [4]. A. Serkov regards innovation only as one of the conceptual approaches to forecasting the development of agriculture [12]. However, innovation is not only vital for agriculture as a sector of economy, but for rural areas, as well. International experts believe that, first and above all, more comfortable living conditions in rural areas should be created, special emphasis should be laid on housing construction, advanced energy generation and supply systems, introduction of renewable sources of energy, the construction of decentralized sewage systems, and so on<sup>1</sup>.

According to P. Wirth, innovative rural development has a composite nature: it is characterized by basic and special features, as well as the socio-economic sector and the environmental aspect [16].

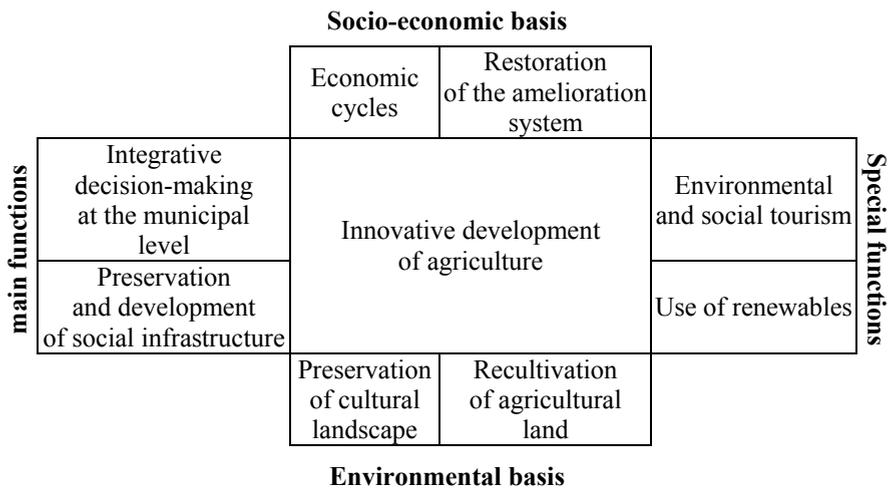


Fig. 1. Action areas for innovative rural development

Whereas the direct impact of innovation (especially in agriculture) can be observed and assessed on the microeconomic level, the evaluation of the direct or indirect effects the activity of innovation centres in rural areas is not so easy.

Thus, G. Weber, describing the effects of globalization on rural areas, cannot see a place of innovation centres among the many regional economic impacts of globalization on the rural areas, such as outsourcing, the growth of the tertiary sector (especially tourism), the integration of agricultural mar-

<sup>1</sup> Such examples already exist. For example, a natural wastewater treatment system funded by the German Environmental Foundation (DBU) has been operating for several years in the Ilyushin village of the Nesterov municipality.

kets in the world trade, decline in the local supply of villages and small towns with goods and services [15].

A similar situation is observed in Russia. For example, in the strategies developed by non-agglomerated municipalities we find almost no mentioning of innovations and their impact on municipal development [11]. N. Beketov, writing about the process of separation of R&D and innovation activities from the centres of education and the traditional industrial areas, remarks that the problem of evaluating the impact of R&D centres — the primary driving force of technological progress [1], — on the territorial structure of the economy is completely unexplored. From the two types of territorial innovation and technology institutions only one type can influence the development of rural areas — specially created centres of technological development (science and technology centres, science parks, "business incubators", innovation centres, etc.).

If we consider the peripheral municipalities where municipal towns often serve as innovation centres, the distribution of modern industry can be characterized by two processes:

- the transfer of production from towns to peripheral zones (this process is especially typical for Western Europe, but one can find enough examples in Russia, as well). In these cases, companies use certain benefits such as lower production costs, the possibility of purchasing or leasing out plots of land, the prospects for business expansion, and so on [6]. A similar trend of moving small and medium-size enterprises in the Kaliningrad region has been observed for quite a long time (furniture production, construction materials, assembly of television and radio, etc.).

- the placement of innovation centres in the old industrial centres of the micro-level (regional centres, small towns). In this case, innovations act as a replacement of old, often abandoned or stagnating industries (engineering, mining, chemical, etc.) [17]. With remaining labour force potential (in small and medium-size towns) and some excess labour force (in rural areas), there is an opportunity to develop and increase competitiveness of these areas. The average monthly salary in the regional capital is 30—40% higher than in small and medium-size towns of the region, let alone rural areas (Figure 2).

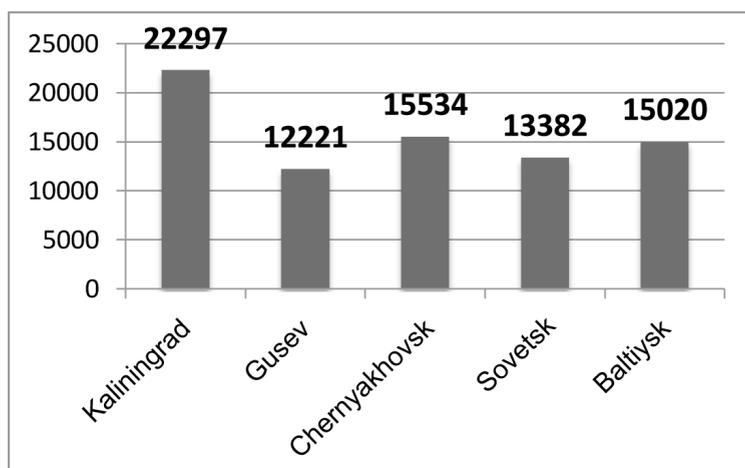


Fig. 2. Average monthly salary in medium-size towns of the Kaliningrad Region in 2010, RUB [6]

The Baltic Sea Region countries can serve as an example of successful introduction of innovations; this process started there a bit earlier than in Russia. For example, so-called "industrial parks" located mainly in old, abandoned industrial or agricultural enterprises outside major cities are established in Lithuania. There are industrial parks of this type in Taurage, the Siauliai region, Panevezys and its surrounding areas. Located in small towns and rural areas, they provide residents with jobs; improve infrastructure and investment attractiveness of their municipality. Investors mainly include local and foreign entrepreneurs. More high-tech industries that require considerable intellectual resources are located in the major cities of Lithuania, near the universities [13].

In Latvia, the development of the network of science or industrial parks has been rather slow. Three major industrial parks are located in urban areas (two in Riga and one in Daugavpils), and five technology parks are being built in different regions of Latvia. This development has a positive impact on the socio-economic situation in the rural areas and small towns of the country (whether these are small satellite towns of larger cities or independent multifunctional urban areas). The majority of investors in Latvia's industrial parks come from the Nordic countries. Thus, an Icelandic group of companies "Nordic Industrial Properties" is the leading investor in Latvian technological parks. Local authorities, interested in new industrial enterprises in their territories, willingly cooperate with the company, providing land for lease, as well as necessary facilities and infrastructure [9].

In Russia, more than 75 science parks of various kinds have been established and put into operation. The main aim of Russian science parks is "to create new organizational and economic conditions in order to increase and effective use science and research potential of science-intensive enterprises integrated in science parks".

The Kaliningrad region ranks last in the NWFED in terms of innovativeness of its enterprises (Table 1).

Table 1

**Innovative activity of the North-western Federal District, % [10]**

Regions of the Russian Federation	2002	2003	2004	2005	2006	2007	2008	2009	2010
RF as a whole	9,0	9,5	9,6	9,7	9,9	10,0	9,4	9,3	9,5
Northwest Federal District as a whole	8,6	8,6	9,1	9,4	11,0	9,8	8,9	9,5	9,4
Karelia	5,6	5,9	3,2	6,1	5,6	5,8	6,1	5,3	6,6
Komi	7,0	5,1	8,2	7,1	8,1	8,1	9,7	6,3	7,5
Arkhangelsk region	5,3	7,4	7,9	8,4	8,6	9,9	8,0	8,8	9,0
Vologda region	13,8	12,3	8,2	8,4	8,9	8,3	9,8	7,6	7,4

End of Table 1

Regions of the Russian Federation	2002	2003	2004	2005	2006	2007	2008	2009	2010
Kaliningrad region	9,3	6,6	5,1	4,6	14,1	10,1	5,1	5,5	3,2
Leningrad region	6,5	6,0	5,8	6,9	8,8	6,7	5,6	8,6	9,4
Murmansk region	7,7	8,1	14,8	13,5	12,3	8,0	7,9	7,6	9,7
Novgorod region	9,3	10,9	12,2	9,9	10,2	8,9	10,3	9,7	8,7
Pskov region	8,0	6,1	7,2	9,5	10,6	9,8	6,2	8,7	9,6
St. Petersburg	10,9	12,0	11,5	12,7	14,1	13,1	12,5	14,0	13,0

The size and structure of investments in fixed assets can serve as an indirect indicator of the general (if not innovative, then technological) industrial development of small towns<sup>2</sup>.

The data illustrated with the example of the Kaliningrad region demonstrates not only lagging behind of medium-size towns from the regional capital in this indicator (27.9 billion roubles in 2010), but also rather poor technological conditions in the industries (Table 2).

Table 2

**Investment in fixed assets of medium-sized towns  
of the Kaliningrad region, thousand roubles [6]**

Indicator	Gusev	Baltiysk	Chernyakhovsk	Sovetsk
Investment in fixed assets				
Including the forms of ownership:				
Russian property:	942 894	618 843	390 613	145 398
State	627 510	603 546	231 401	45 025
Municipal	7 675	17 438	15 483	20 970
Private	314 666	19 651	21 520	18 787
Mixed Russian	305 000	566 421	194 356	5 135
Consumer cooperation	169 000	36	—	—
Foreign	—	—	—	—
	30 300	15 297	116 619	99 060

In 2010, the total investment in the Kaliningrad region accounted for 54,564 million roubles, the per capita investment — 57 981 roubles. This in-

<sup>2</sup> In 2010, 40,433 million roubles in fixed assets were invested in the Kaliningrad region (675,526 million roubles in the NWF as a whole), out of which 38.8% (15,678 million roubles) were invested in the transport and communication sector, while in the manufacturing sector — only 12.2% (4,917 million roubles). The region is 61st in the Russian Federation in terms of fixed assets depreciation — 33.1% [10].

dex ranks the Kaliningrad region 27th in Russia [10]. In the structure of capital investments in the region (from 39 661, 1 million roubles invested in 2010) more than half accounted for the generation and distribution of electricity, gas and water (30.7%) and transport (26.6%) (Fig. 3). Only 15.2% of all finance was invested in manufacturing.

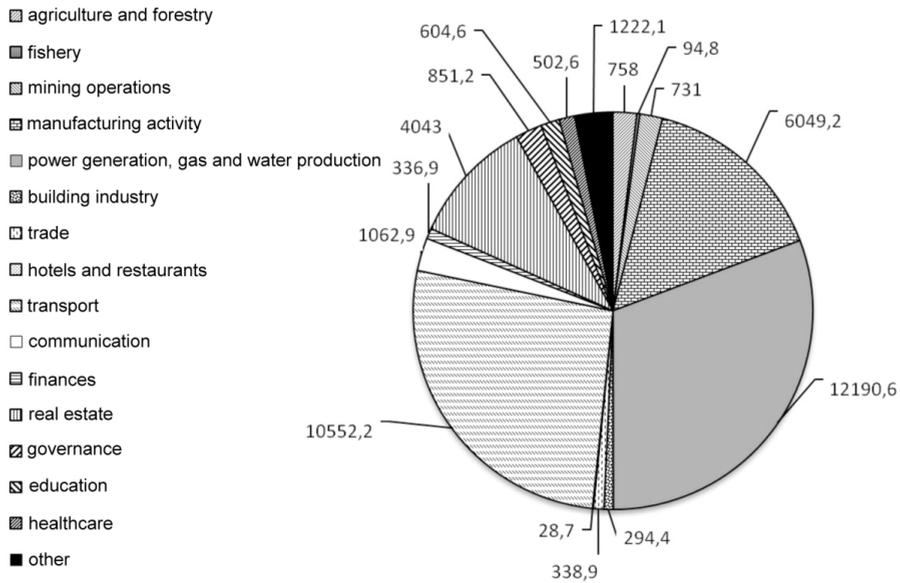


Fig. 3 Fixed capital investments of the Kaliningrad region in 2010, million roubles [10]

Thus, the analysis of the socio-economic situation in the small towns and medium-size towns shows that one of the most important tools for the revival of these municipal towns is the creation of innovation institutions, the main objective of which is the resurgence of basic industries at a new technological level. To achieve that, it is necessary to improve the efficiency the innovative sphere, to stimulate the development of small and medium-size enterprises and to increase the use of ICT in municipalities [14]. This path can be considered optimal, since the initiative of organizing innovation centres in the framework of the Programme "Small Towns of Russia — innovation centres" in some regions and administrative-territorial units of the Russian Federation (Sverdlovsk region, Komsomolsk-Amursk-Solnechniy, Yamal-Nenets Autonomous District, Noyabrsk and Zarechny cities, etc.) outlined the prerequisites for this decision. In addition, certain types of industrial parks already exist in a number of small and medium size towns of Russia [2]. However, the creation of technology parks, technology towns and other innovation institutions should take into account the priority specialization of the region they are set up in. On the one hand, these innovation institutions, must comply with the economic activity of the state, and on the other — meet the demands of the full-fledged economic development of a particular region.

Technology parks in small towns raise these towns to a whole new socio-economic level: new jobs, increase in industrial production, infrastructure upgrade, improvement in people's level of living.

The need to improve the periphery territories is reflected in the draft law "On the industrial policy of the Kaliningrad region", elaborated in the framework of the "Conception of Industrial Development of the Kaliningrad Region for the period 2012—2015". This document is aimed at creating conditions for a dynamic innovative development of the region's industry and resolving social problems on that basis; the document also presupposes the formation of industrial clusters, the development of import substitution industries, providing support for science-intensive production, introduction of new, advanced technologies and industries with a high recycling rate, including the establishment of joint-ventures. Special importance is given to the transfer of the "gravity centre" of the industrial infrastructure from Kaliningrad to the municipalities of the region, the development of industrial zones on the public-private partnership basis, and, as a result, creating new employment prospects for the citizens [5].

Placing science parks in small and medium town is profitable due to a number of reasons; it also creates certain benefits that can and should be used: low rent for accommodation facilities, the availability of vacant land for science parks, as well as a relatively inexpensive labour force [1].

Some regions of Russia have more profitable business conditions for Russian and foreign investment in the form of special economic zones, which offer special benefits for business development. The Kaliningrad region is one of such special economic zones, where the potential of medium size towns for the development of science-intensive industries is significant, as they enjoy a rather favourable economic and geographical position, and already have an established reserve of industrial production.

Thus, a technopolis based on the production of modern radio-electronic equipment was established in Gusev, a town of the Kaliningrad region. The technopolis in Gusev was initiated in November 2007, when the corporation "General Satellite" started the production of the so-called set-top boxes for receiving satellite and terrestrial television broadcasts. Several months later, the General Satellite Corporation started building a plant in Gusev to manufacture household electronic equipment, and in 2008 the agreement between the Mayor of Gusev, Nikolay Tsukanov (since August 2010 — the Governor of the Kaliningrad region), and the president of the General Satellite Corporation, Andrey Tkachenko, was signed in order to create a modern industrial park in the town [3]. The decision to locate the new high-tech industries in Gusev was made for three reasons. First, the corporation "General Satellite", being a resident of a special economic zone, had already established production in the town. Second, enough manpower was recruited both in the Gusev municipal area and in the adjacent municipalities for the start of the production. Third, the administration of the town took keen interest in the development of their district and supported the project. As representatives of the corporation said, the project mission was "to create in Gusev a new effective pole for innovative development of Russia" [8, p. 7]. In addition, the following objectives of this project can be identified:

- comprehensive economic development of Gusev, improvement of its social infrastructure, creating conditions for the development of innovative activity in the town and transformation of Gusev into a technopolis by 2013;
- setting up of a radio-electronics industry cluster in Gusev. The project envisages the construction of 5 high-tech industries, 2 of which are already running;
- testing an innovative model of small cities development in Russia, which can be applied to revive other towns in the country, disseminating the project results" [3].

Gusev technopolis area occupies 400 hectares. The project investment for the period of 5 years accounts for 5 billion roubles, out of which more than 1 billion roubles was already allocated at the end of 2010. Upon completion of the project aiming to create a technopolis toward 2013 it is planned that more than three thousand people will be employed in the production and maintenance of the technopolis [8].

The expected outcomes of the project:

— The development of modern industries in Gusev: household radio-electronics manufacturing plant, microelectronics plant, television antennas and case manufacturing plant, corrugated cardboard and packaging producing factory, house-building plant.

— Creation of Educational and Scientific Research Centre, including the design bureau, university educational and scientific park (UESP) together with the Immanuel Kant Baltic Federal University, venture fund for supporting and implementing research and development accomplished both within the Technopolis and outside of it; business incubator — Industrial Park (BII);

— increase the level and quality of life for the city and district residents; strengthening innovation and business activity in the Kaliningrad region; creating in Gusev a new Kaliningrad region growth pole [8].

However, a more accurate and detailed assessment of the impact of the Technopolis Gusev on employment solution to the existing problem of finding skilled labour, the degree of completion of municipal budgets is only possible in the short term perspective. In addition, there are plans for location and construction of an IT-village on the Baltic Sea coast in the Kaliningrad Region.

Thus, innovation centres should promote social and economic development of the area, especially the peripheral rural areas and small towns. New innovation centres should if possible be located in the peripheral areas, far from metropolitan area, as a tool to support the territory, or "growth points". Further monitoring of socio-economic development of the municipalities is required to assess the impact of innovation centres on the surrounding areas.

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