

## Creating an Infrastructure for Technology Development In an Aspiring Region: the Case of Gorenjska

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### Abstract

Regional development theory expects regions and their development alliances to play the key role in the creation of strategic development directions and the implementation of programs and projects and thus take the responsibility for the wellbeing of the region. While in the past in Slovenia the role of regions has been fairly neglected, the Regional Development Programs should play an important role in the period of 2007-2013. This program has for the region of Gorenjska, which had experienced a lag in its development since early 1990s, designed a radical change in the development paradigm, with a strong role of innovation, technology development and entrepreneurship, education system, regional internal organizational structures and local (community) participation as the drivers of growth and improved economic welfare. However, these directions embodied in 4-T strategic directions, require an efficient support infrastructure for the development in general and the technology in particular. This paper will assess the projects proposed to develop this infrastructure considering the development resources available in this period as well as the organization and management of the development effort in order to contribute to the implementation of projects through a critical evaluation and recommendations.

**Key words:** regional development, development alliance, technology, business incubators, technology parks, enterprise zones

## 1 Introduction

Regional development has been one of fairly neglected areas of development since early 1990s, when Slovenia got independent. During the former socialist period, Slovenia has successfully implemented a policy of spatially dispersed economic development, keeping the regional differences in the level of development within narrow limits, nurturing a concept of equal opportunities for the whole population. However, during the transition period, most large companies with their extended networks of subsidiaries sunk in the turmoil of a fragmentation process with a number of small dispersed units being unable to survive. The former model faced huge challenges. No regional authorities exist to care for the strategic development and the process of administrative reform increased the number of municipalities from around 60 to over 200, most of them not able to care for their economic and social development. With a dynamic however uneven development of a large number of new small and medium-sized enterprises (SMEs), concentrating around some existing nuclei (see [1]) the regional disparities substantially increased.

The highly centralized system of public finance did not allow municipalities or regional institutions to finance key development projects and until early 2000s, regions did not exercise a pro-active development policy. Successful efforts were mostly seen in some of the border regions which used the cross-border projects to generate development or to implement some smaller projects. With the EU membership, the role of regions was greatly enhanced and their responsibility for own development recognized with the development programs of 2002-2006 and, especially 2007-2013. However, the organizational framework of development remained weak and there were no dedicated regional funds. The change in the development paradigm has been taken very seriously by the region of Gorenjska and its program for 2007-2013 could be considered as a case for a regional development policy where regional stakeholders have decided to make a significant difference through their focused approach.

## 2 Regional Development and Entrepreneurship Support Infrastructure

Entrepreneurship and SME development has been recognized as a strong tool of local and regional development during the last period of 1990s, with the “silent revolution” [2]. Modern concepts of local/regional development recognize the concepts of strategic development ([3], [4]) and the regional development alliance ([5], [6], [7]) to create the vision and to provide resources.

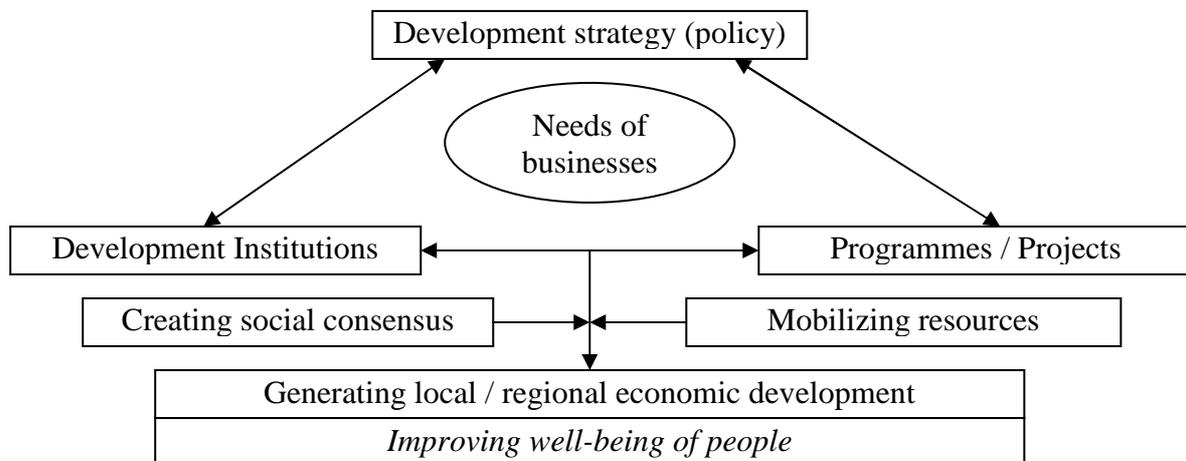
### 2.1 Regional Development and Entrepreneurship

In the global competition, every region has to create its unique development strategy in order to maintain its competitiveness. Some regions have well understood this challenge and they enjoy both the high level of growth and job creation as well as social welfare. The regional consensus about the strategy and the management of key development projects have been main reasons for some notable success stories, e.g. Baden-Wuerttemberg in Germany. The European development practice has provided some insight into the regional growth processes [6], especially interesting for regions with older industrial structures that face strong challenges which is partly the case with Gorenjska (steelworks, textile, footwear, wood processing). In the late 20<sup>th</sup> century, the concept of entrepreneurship and small business as the core of the local/regional development has sparked strong discussions about the role of the

entrepreneurial culture, the possibilities to develop regional clusters to infuse the strength through the co-operation of a vast number of small units, and the development of “innovative milieus” to support regional identity through networks [8]. Later, the concept of “learning regions” developed [9]. In the transition countries, this discussion to a number of issues regarding the proper role of the (central) government, the lack of the pro-active local/regional determination and weak “bottom-up” initiatives, the lack of the culture of partnership between the academic, business and government spheres, the trade-off between policies aimed to support large companies and the promotion of SMEs, the need to develop services and similar [4]. These countries had to learn some hard lessons, also that the development problems demand collective goals and actions when they have only discovered the market individualism (and egoism), that these activities need constant evaluation and improvement where it was difficult to get to the consensus at all, that everybody has to learn and improve his skills where the majority expected the solutions from the government, that vision is the key on the top of rational, objective analysis where people did not trust either the old nor the new ruling elites.

The experience worldwide has proven that a dynamic development could only be created by a thoroughly conceived and managed development strategy, with a good choice of programs and projects, implemented by a network of development institutions, with diverse origins but organized around the vision / direction and strong determination to create a prosperous future. Such strategic framework, based on a strong marketing of the region, could bring to a social and political consensus and mobilize both local/regional and other resources. While the concept has been promoted in Slovenia quite early in the 1990s (see [10]), a lot of time went by until political leaders and the public understood the virtues of this approach in changing the development attitude, “l’esprit” of the region and the way people responded to the initiatives or went on to create their own projects. The approach demands a real democracy, not only the tolerance but the appreciation for alternative views and concepts, the creativity and originality in applying the potentials to solve the problems of regions. In fact, the EU membership ultimately provided the convincing framework for this approach through EU funding of best projects.

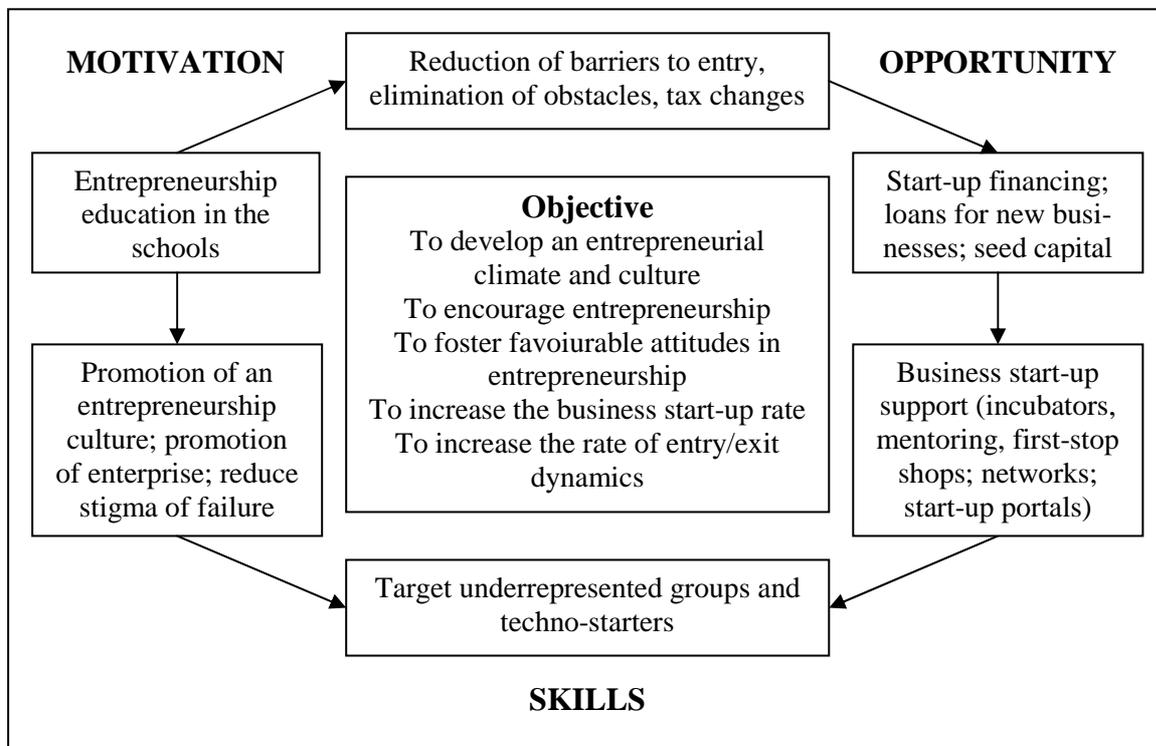
Figure 1. The Concept of the regional development



## 2.2 Entrepreneurship Policy and Support Infrastructure

Since the EU is not fully exploiting its entrepreneurial potential, judging by the GEM [11] and 2003 Eurobarometer research, the European Commission highlighted the need of encouraging business development and growth. A framework for such an entrepreneurship policy presented Lundstroem and Stevenson [12] who also argued that policymaking in this field is complex and messy. The mix of policy options depends on a number of factors already listed in [13]. Lundstroem and Stevenson identified at least 41 promoters and inhibitors of the entrepreneurial policy. Usually, the researchers propose an eclectic theory of entrepreneurship to cover different aspects ([14], [15]) and they suggest more types of policy interventions to have an impact on entrepreneurial policy levels. We will base our discussion on the framework of entrepreneurship policy measures of Lundstroem and Stevenson [12] as presented in Figure 2.

Figure 2. Framework of entrepreneurship policy measures

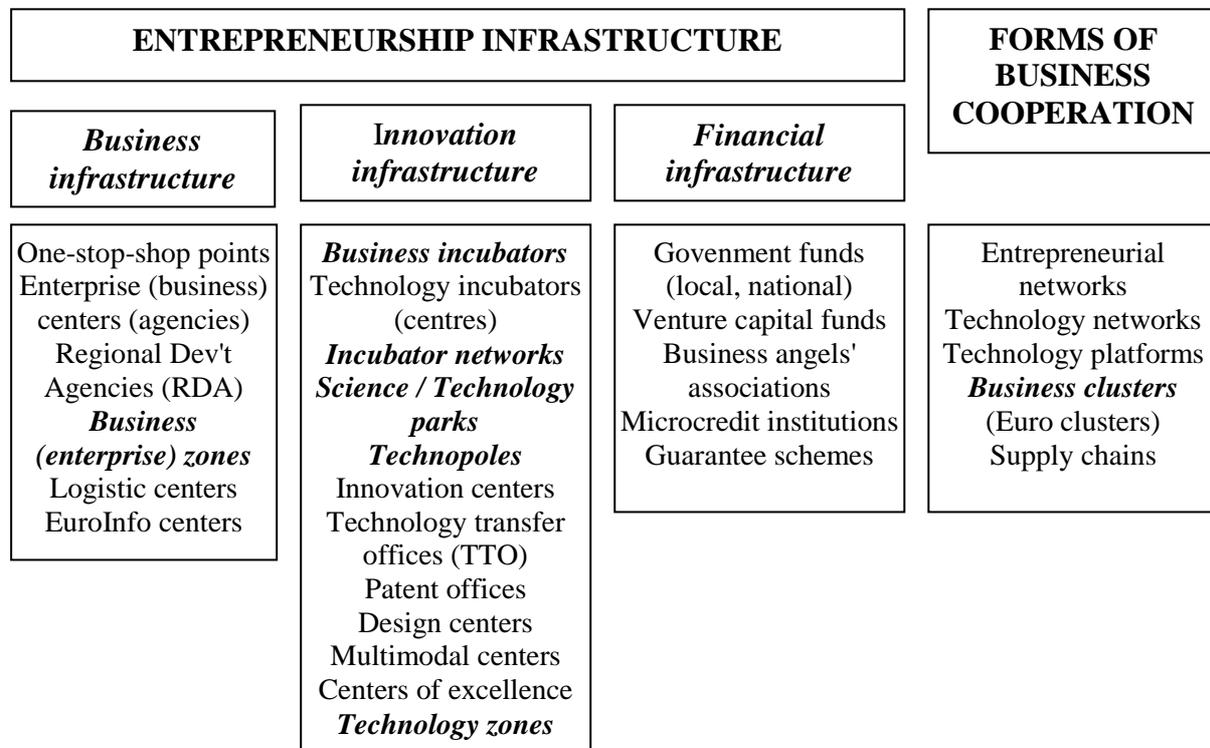


Source: Lundstroem, Stevenson [12], p. 61

The framework identifies the business start-up support as one of six areas, with 92 % of governments having stated objectives for this area which also scored above the average when authors assessed the comprehensiveness of the policy in 13 countries (a large number of instruments and support mechanisms have been identified already in 1980s, [4]). While authors discuss 8 options for this support, one of them is national incubator strategy. However, elements of the infrastructural support can be found in other 7 options as well and in some of other six areas, so the possibilities to stimulate entrepreneurship and regional development are fairly broad, what is well documented in some guidelines on local/regional projects ([16], [17], [18] and [19]).

In Slovenia, we have developed a comprehensive scheme of the support infrastructure for the Ministry of Economy, which is presented in Figure 3. Especially for techno-starters, the EU countries have developed a number of tools, a comprehensive innovation policy approach to realise more economic and social gains from the research and creative potential although some research suggested a danger of disproportionate priority leading to lower level of all start-up entrepreneurs ([20] and [21]). There is a vast specialized literature about different tools of technology (innovation) infrastructure available. Some sources are based on an “ideal form” of this infrastructure [22], although this form has to be flexible to adapt to the local/regional situation. Other sources present “best practices” [23] and some offer generalized experience from the theory and practice, while an important stream involves managerial aspects of building an efficient support institution or network ([25], [26] and [27]). We will not discuss these sources in this paper, but some comments can be found in [28].

Figure 3. The classification of technology support infrastructure



Source: Glas, Priročnik o Subjektih Inovativnega in Podjetniskega okolja, 2007

Armstrong and Taylor [9] clearly present the fact that regional policy makers like encouraging rapid technological progress and attracting high-technology industry as key elements in regional growth (also [29]). Industrial districts (and business clusters), innovative millieux and “learning regions” are discussed ([9], pp. 294-300), however, a number of problems with the approach is also formidable, so the scrutiny in evaluating the potential of various tools is necessary, considering the investment needed and operational costs.

## 2.3 Infrastructural Organizations and Their Efficiency

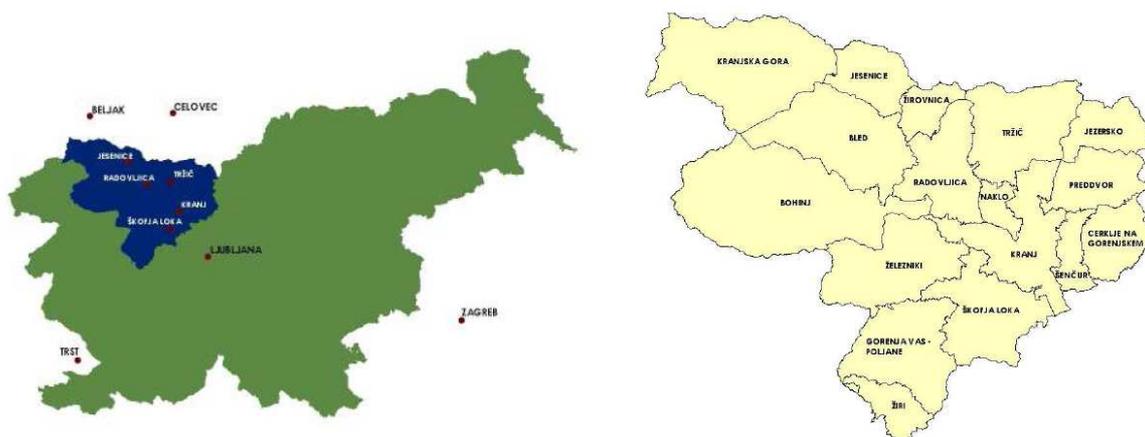
Entrepreneurship infrastructure could be quite costly if we decide for modern, well-equipped premises, and its impact on the economic development demands longer time horizons, such as enterprise zones, technology/science parks. Still, business incubation is considered as an inevitable tool [30] often linked with angel and venture capital or government seed funds when dealing with high-technology start-ups.

The link between technology and development is taken as evident from the historical experience ([30], p. 139), although at the local/regional level we have to consider a number of intervening variables that might limit the actual performance. With the assumed positive relationship between technology and support infrastructure it should be beyond doubt that fostering innovation infrastructure should bring a strong technology impact, however, only in case the community has the real potential available. The question of the efficiency of infrastructural organizations has to be taken seriously in the case of smaller regions where some sophisticated instruments might produce lesser effects than expected.

## 3 Gorenjska Region in Slovenia

Gorenjska is one of historically quite well defined regions, intuitively accepted by the population (which is not the case with all regions). With 18 municipalities it represents approximately 10 % of Slovenian territory (with its 2.137 km<sup>2</sup>) and population (199.085 people in 2005). Due to its early industrialization it used to be a region with the level of development above the Slovenian average. However, during the transition period it suffered from the deindustrialization (still 46 % of the workforce in 2005) without the proper development of the service sector (only 51 % of employment) to off-set for the structural change.

Figure 4. Geographic position of Gorenjska and its administrative structure



Source: Regional Development Programme of Gorenjska, 2007-2013, 2006

### 3.1 The relative position of Gorenjska region

Gorenjska occupies the north-western part of Slovenia bordering Austria and Italy, and is partly mountainous and partly flat lands. The X. European railway and highway corridor

crosses the region, and the central Slovenian airport at Brniki, near to the fourth largest Slovenian city, Kranj, supports its strong logistic position. The manufacturing has been the backbone of its economy in the past, together with strong tourism as the result of natural resources. There are some development facts that position the region:

- good accessibility (railway, roads, airport), supporting economic activities,
- 30 % of land is flat while 40 % lies more than 1000 metres above sea level; half is covered by forests,
- it is an area rich in water resources, but degraded by chemicals used in agriculture,
- only 40 % of population lives in urban centres, plains and valleys are scattered with houses and small settlements,
- the growth of population is slightly above the Slovenian average, as well the level of education (however not adequate for a knowledge-based society),
- while there is a relatively high share of younger people, the ageing of population is very fast, with quite a diverse situation in the region,
- the number of students is increasing and the number of graduates is above Slovenian average, however, the professional structure is not in line with the needs of the region,
- the unemployment rate is low, however, there are some structural weaknesses due to the problems of female-dominated industries (textile, footwear),
- the share of manufacturing is high, and is based on traditional labour skills, with no other specific resources to support existing industries,
- almost 20 % of active population is employed outside the region, most in Ljubljana,
- 8.9 % of economic subjects of Slovenia are based in the region, employing 9.6 % of all employees producing only 7.9 % of revenues of the Slovenian private sector - added value per employee is below average (94 % of the Slovenian average), so the GDP p.c. was only at 87 % of the Slovenian average and 66 % of the EU-25 level, it is also not surprising that the average wage/salary lags behind the Slovenian average,
- the share of employment in small businesses is low (46 %), while 41 % are employed by 61 large companies, pointing to the lack of entrepreneurship,
- during the early 21. century, the growth of GDP lagged behind the Slovenian average, thus increasing the development gap between the region and Slovenia (EU),
- the share of foreign direct investment (FDI) is quite low, although some key firms are owned by foreign multinationals (Goodyear),
- while the Index of development vulnerability places Gorenjska on the 3<sup>rd</sup> place in Slovenia, considering the GDP p.c. it is placed only 6<sup>th</sup> and is losing its momentum.

Gorenjska has not caught-up with Slovenia in the development process during the 1990s. There are some reasons for loosing the development dynamics:

- unfavourable economic structure, with a large share of “sunset” industries (steel, textile, footwear, furniture);
- low inflow of additional development resources due to its formal ranking as a relatively developed region;
- low level of entrepreneurship due to the economic structure, structure of skills and low unemployment (absence of strong “push” and “pull” factors);
- lack of strong development consensus and regional leadership in the past (Kranj has hardly played the role of the regional centre, no strong individual as “spiritus movens”);
- lack of strong higher education institutions in the region;
- lack of strong companies in “sunrise” industries (for R&D, investment);

- lack of substantial FDIs (mostly takeovers of existing companies, no “greenfield” investments) etc.

Table 1. The comparative position of Gorenjska region in Slovenia, 2005

<i>Economic parameter</i>	<i>Gorenjska</i>	<i>Slovenia</i>	<i>Gorenjska/Slovenia</i>	
			Index	Share (%)
Area (km <sup>2</sup> )				
Population	199.185	2.003.358		9.94
Active working population	71.718	813.558		8.82
Unemployment rate (%)	7.4	10.2	62	
Share of employees with higher education, 2004	12.8	15.7	82	
GDP per capita, €, 2004	11.321	13.146	86	
Added value per employee, €	27.520	29.020	95	
Number of businesses (C-K activities), 2004	8.698	93.697		9.28
Number of new start-ups, 2003	493	6.019		8.19
Average monthly net wage/salary	720	735	98	
Number of tourist overnight stays, thousands	1.460	7.573		19.28

Source: Regional Development Programme of Gorenjska, 2007-2013, 2006

The development agencies were well aware of this strategic situation of Gorenjska but they had no power, few resources, no long-term regional support, no systematic financing and no transparent influence on decisions. They opted for a different development strategy for the period of 2007-2013, along the basic orientation of the Lisbon strategy.

### 3.2 SWOT Analysis of the Gorenjska region

On the basis of the analysis of the past regional performance and the assessment of the development options, the group at the Regional Development Agency BSC Kranj created an overall SWOT analysis (see Table 2)

## 4 Gorenjska: the Need for Technology Development, 2007-2013

Gorenjska decided to employ a more ambitious development strategy in the period of 2007-2013 in order to start closing the development gap to most developed regions in Slovenia. The region adopted following development directions:

- to build on the strengths of location (entrepreneurship) and natural resources (tourism),
- to create synergies along the education / knowledge / R&D in companies,
- to build on the human capital/entrepreneurs: young, educated, new technologies,
- to exploit the natural resources and heritage for sustainable development,
- to involve the rich history and tradition of cities and towns,
- to employ a network concept in the absence of a strong regional centre,
- to support openness to international cooperation and creativity.

### 4.1 Gorenjska Region: Decision for a More Vibrant Development

In the absence of the formal regional administrative structure, Gorenjska decided to build a Regional Development Alliance. Along the national guidelines on regional development, in 2004 Gorenjska established a Regional Development Council (RDC), involving all three

stakeholder groups: (a) municipalities (17 members), (b) business associations and firms (17 members), (c) representatives of public institutions, NGOs, unions and other regional partners (8 members). Despite being well conceived, the representation of knowledge-creation entities is weak, which is a limitation on the development of Gorenjska (see Figure 5).

Table 2. SWOT analysis for the Gorenjska region, 2007

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>- favourable geo-strategic position of the region</li> <li>- attractive countryside (TNP national park, cultural heritage) for living and tourism</li> <li>- technical skills and tradition in ICT, medicine, electro- and mechanical engineering</li> <li>- some global companies and brand names</li> <li>- low unemployment</li> <li>- high share of students</li> <li>- existing basic support institutions</li> <li>- rich cultural heritage in urban and rural areas</li> <li>- broadband network</li> <li>- active regional development bodies</li> <li>- know-how to attract EU funds</li> <li>- experience with cross-border and transnational cooperation</li> </ul>	<ul style="list-style-type: none"> <li>- low GDP, added value and incomes due to unfinished restructuring of “sunset” industry</li> <li>- unfavourable industry – services structure</li> <li>- weak culture of entrepreneurship</li> <li>- low level of R&amp;D, limited innovation, lack of new products and services</li> <li>- lack of some professional skills</li> <li>- increase in women and youth unemployment</li> <li>- lack of location for “greenfield” investment, unused old industrial premises</li> <li>- lags in infrastructure development</li> <li>- fragmented tourism industry</li> <li>- small farms</li> <li>- fragmented and less efficient institutions</li> <li>- structural intra-regional disparities</li> <li>- derelict city and town centres</li> <li>- low image of the region</li> <li>- weak culture and skills of cooperation</li> </ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>- broad application of ICT</li> <li>- accessibility and quality of environment</li> <li>- inter-sectorial collaboration (technology, education)</li> <li>- public-private partnerships</li> <li>- quality, specialization, market niches</li> <li>- new trends: health, environment, alternative energy sources</li> <li>- creativity: “out-of-box” thinking</li> <li>- aligned to government’s reform goals</li> <li>- introduction of the regional structure</li> <li>- Objective 1 area</li> </ul>	<ul style="list-style-type: none"> <li>- lack of resources to implement the Regional Development Programme</li> <li>- high share of jobs in manufacturing, further restructuring, jobs relocation</li> <li>- competition of low-wage countries</li> <li>- lag in urban planning</li> <li>- bureaucratic barriers</li> <li>- high concentration of power in Ljubljana</li> <li>- slow reaction to changes, risk avoidance</li> <li>- lack of managers and managerial skills</li> <li>- deepening social inequality</li> <li>- unclear criteria for national development funds</li> </ul>

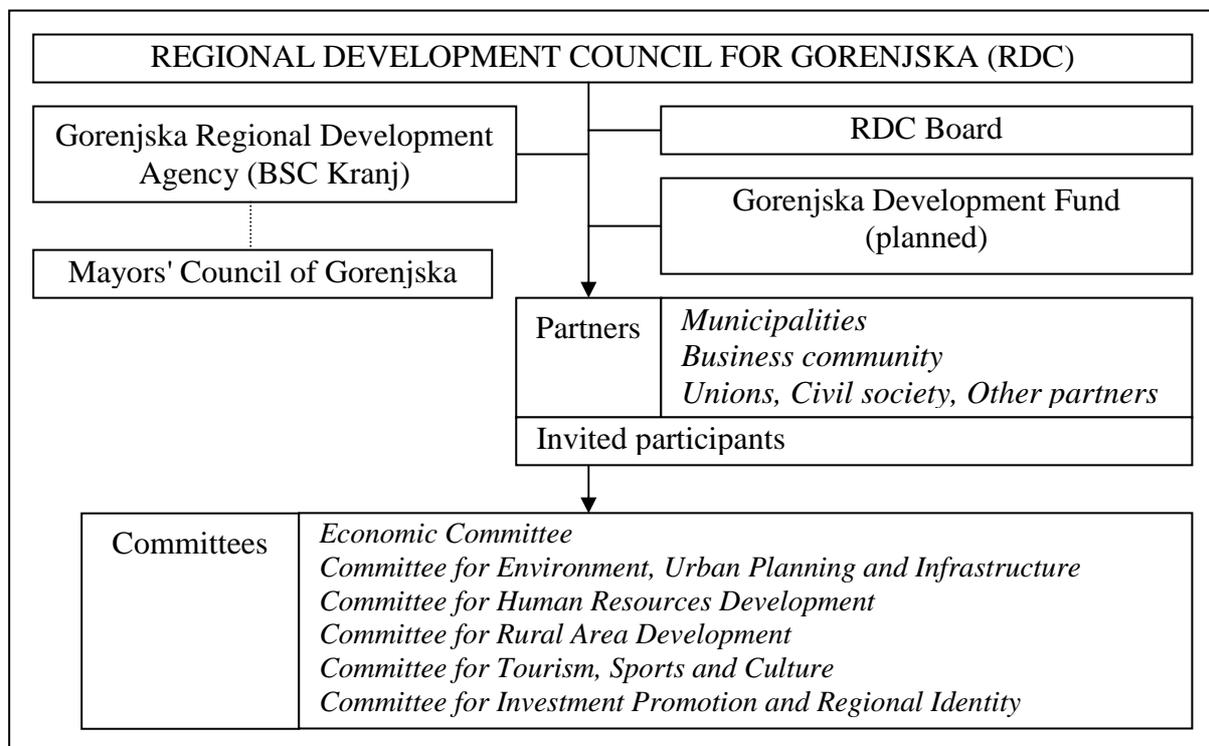
Source: Regional Development Programme of Gorenjska, 2007-2013, 2006

To create a wide support for the development strategy, RDA (Regional Development Agency) Gorenjska proposed an appropriate structure of the development alliance, an open process of the strategy development and strong media presence in the process. RDA placed a lot of efforts to create a strong RDC, with key players from business and wider society, with the leader of the business community as the chairperson. RDA Gorenjska has been the first agency in Slovenia in creating this structure that provided with its committees a broad framework for the involvement of experts and representatives from the stakeholder groups. These committees identified key development issues, determined the priorities and the projects and programmes to implement the strategy that has been approved after public discussion on the RDC meetings. The professional support from the RDA helped with the

preparation of analysis, databases and other information. The need for development of the technology has been verified through a research project on the Support Infrastructure for Technology Development in Gorenjska. RDC has proposed several aims for this project.

- to identify the infrastructure needed for a dynamic development of technology, including a wide education and transfer of the know-how between various organizations
- to provide an environment to engage young researchers from Gorenjska
- to provide locations and human resources for new innovative, tech-oriented start-ups and their dynamic growth
- to create an environment for the development of new products, services, technologies
- to encourage clustering and networking processes among businesses
- to revitalize and activate 5 central locations in Gorenjska as innovation centres to enhance the development of technology.

Figure 5. The structure of the regional development alliance in Gorenjska region



Source: Regional Development Programme of Gorenjska, 2007-2013, 2006

This research has been used both as an expert framework for the new strategy and a tool to develop the awareness of the importance of technology for the future competitiveness of Gorenjska.

#### 4.2 Creation of 4-T Regional Development Goals

The awareness of the need for giving the priority to the technology development has been raised step by step in the strategic documents. The vision of the region gave no emphasis on the technology: “Gorenjska in the future will be built as a community where people will want to work, live and have fun in a healthy alpine environment, where they can fully realize their creativity and entrepreneurial ideas. We will unify all our human, natural, cultural and development potential to join the most successful Alpine regions” ([31], p. 34). The ultimate

objective is to make people enthusiastic about the quality of life, the best of the environment. However, the RDP considers ensuring this objective through:

- a vibrant economy based on expert knowledge, modern industry and ICT (*technology and e-culture*), globally competitive,
- high involvement, engagement and cooperation of people, experts, business and organizations (*dialogue and partnership*),
- flexibility, creativity, entrepreneurship and open mind and behaviour (*the culture of excellence in achievements*),
- linking public and private interest, capital, and knowledge (*to make destiny by own hands*),
- well defined identity within Slovenia and openness to neighbouring countries (*the culture of enhanced identity within the European perspective*),
- within a well preserved alpine environment along the principles of sustainable development (*culture of environment protection*).

Technology has become one of the words in brackets which highlight the proposed principles of development. However, building this vision into three key strategic goals for Gorenjska in the period of 2007-2013 brings us closer to the technology:

Goal 1. *To create a vibrant economy in the Gorenjska region*: based on high expert knowledge, modern industries (ICT, telecommunications, high-tech mechanical engineering, medicine) and tourism to become a region of modern technology. Global competitiveness has to be provided through development networks and search for special market niches. Gorenjska growth rate has to exceed the average Slovenian growth rate by at least 10 %.

Goal 2. *To develop well educated and creative people*: support innovation, entrepreneurship, self-employment and creation of high quality jobs with high added value.

Goal 3. *To preserve the vitality of the Alps and the clean nature* to ensure healthy, high quality living conditions and well-connected and tolerant communities. Gorenjska should be a region with high quality of life, a diverse nature, differences in views and living styles.

The quantification of these goals is given in the Table 3.

Table 3: The quantified parameters for the strategic goals, Gorenjska 2007-2013

<i>Area</i>	<i>Parameter</i>	<i>Initial value</i>	<i>Goal for 2013</i>
Economy	Growth: Index of GDP relative to Slovenia	2000: 87	91
	Growth: Index of GDP p.c. relative to EU-24	2002: 66	69
Human resources	Number of new jobs created until 2013	-	2,000
	Average years of schooling	2001: 9.6	14
	Unemployment rate	2006: 7.8 %	5 %
Quality of life	The assessment of the water quality of river Sava at Medno, class of purity	2000: 2-3	1-2

Source: Regional Development Programme of Gorenjska, 2007-2013, 2006, p. 35

These goals introduce the technology through a list of tech-oriented industries which should become the backbone of the regional economy, also providing the basis in a radical change of the attitude and knowledge basis in the population. This precondition for the pivotal role of the technology raises some serious questions: does Gorenjska already have appropriately educated population, fairly different from its performance in the past? Does Gorenjska only

have to activate these resources? Which measures could bring this difference in the performance?

Considering the 4-D model of development ([7]; p. 110), the RDP assumes that the “hard” development factors, “dollars” (money) and development resources (knowledge) mostly exist and they could be activated by the change in “soft” factors, determination / dedication and directions (strategic goals), ensured by the creation of the development alliance and the support infrastructure, giving this development consensus the needed consistency and (patient) long-term orientation. To infuse the new development paradigm (l’esprit), the focus on the creativity, openness and co-operation, the RDP ultimately defined 4-T as four development orientation priorities.

Table 4. Four development orientation priorities for Gorenjska, 2007-2013 (4-T)

<i>Priority (Slovenian)</i>	<i>Priority (English)</i>	<i>Contents</i>
Tehnologija	Technology	Entrepreneurship, innovation, business locations
Talenti in tolerantnost	Talents and tolerance	Knowledge, employment, creativity, wealth in diversity
Turizem	Tourism	Region of tourism, based on potentials in culture, nature and sports
Trajnostni razvoj	Sustainable development	Environment, energy, preservation of nature and active rural area, villages and towns/cities

Technology is ultimately proclaimed as one of the cornerstones of the new development paradigm. There is a hidden assumption that the period of 2007-2013 is long enough to create a radical change towards the pro-active development policy, also supported by the change in the external environment: Slovenia as a EU member state, with a new approach to the regions and regional development. There is also a hidden warning: missing to create a radical change in the development performance of the region would mean that Gorenjska would lag behind other Slovenian regions, which is not acceptable, considering the real potential of the region.

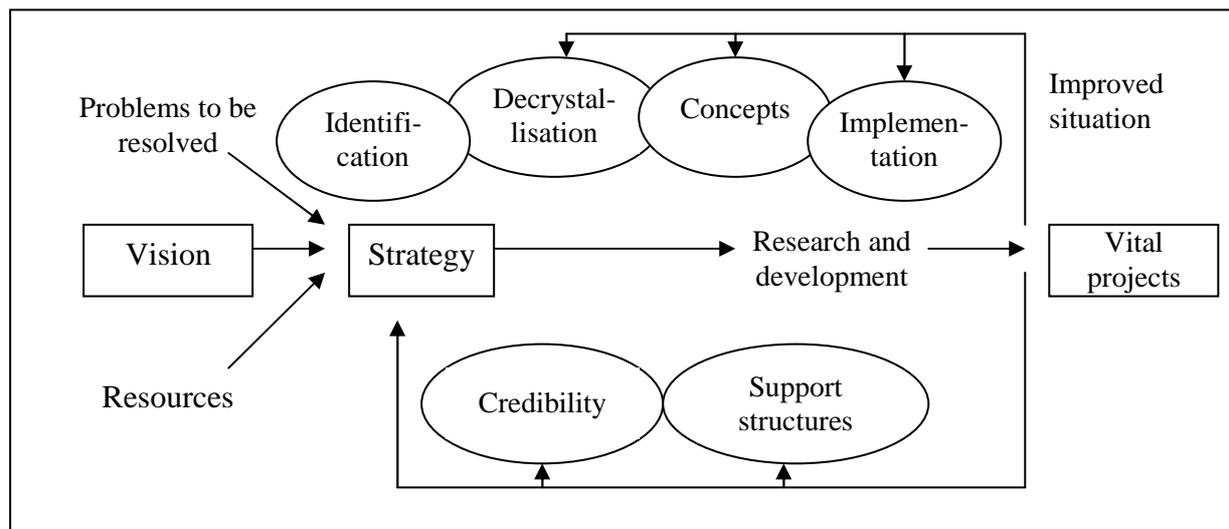
#### 4.3 Need for Infrastructure to Support the Development Program

To generate the real change in the development paradigm and to confirm this change through statistically measurable results in economic and social parameters (compare [7], p. 108), Gorenjska has established the basic assumptions of the model of change (Figure 6).

With the development and approval of the Gorenjska RDP, the majority of the upper part of activities have been tackled, however, the phase of implementation, the real important one, is still to be realized during the period. Considering the evaluation of the implementation of the previous RDP for the period of 2002-2006, reasonable doubts might be in place. From 52 projects only 9 were fully realized, further 22 were partly realized and 21 have not been realized at all. The worst implementation record has been identified for the projects with lower priority where the national bodies were responsible, and the region had only limited influence. Projects on environment protection and infrastructure had the worst record, while the projects in agriculture and rural areas, mostly financed through the national and EU agricultural funds but implemented by local/regional bodies had the highest realization. The region succeeded to attract 31 million euros of structural funds during 2004-2006, 9 % of the funds available for Slovenia in that period. The main reasons for weak realization record have been the unavailable or inaccessible development resources (at the national level, region was

considered not eligible for many projects due to its high level of development, although the economic facts and figures have shown the opposite) and absence of responsible subjects to provide good project management.. Government has treated Gorenjska Region as a well developed region, although its GDP dropped more than in other Slovenian regions. It is hard to understand this attitude of the government, however, it substantially contributed to the ultimate result: the drop of Gorenjska from the first place among 12 Slovenian regions in 1991 as measured by the per capita GDP, to the sixth place in 2006.

Figure 6. Concept of a regional development program oriented towards the change



This past record gives a high importance to the choice of proper vital projects which could result in high implementation, as well as to the question of credibility of the strategy and implementation agency and the existence of the support structures. The RDP analyzed 26 support institutions, employing 310 employees, including three development agencies (the RRA and two local agencies, Sora Škofja Loka and Ragor Jesenice) and six local tourist promotion centers, all 9 employing 52 employees. A number of weaknesses have been identified, although their past record has been among the best in Slovenia considering the available resources and the general attitude towards their activities among municipalities and other opinion-makers in Gorenjska.

#### 4.4 Past record on support infrastructure, Gorenjska region, 1990-2006

Slovenia has a fairly modest record on the entrepreneurship infrastructure development after 1990, although different institutions widely experimented with pilot projects on different support structures (see [28]). Gorenjska has been involved in these pilot projects, however, few projects have been implemented and there was a lack of ambitions in the region to create a strong infrastructure.

Already in 1989, municipalities of Kranj and Škofja Loka were involved in a project of the development of entrepreneurship as a tool for restructuring mostly industry-oriented economy. A framework for support infrastructure has been developed to support both the new venture creation process and the restructuring of existing companies through strategic turnarounds and intrapreneurship. Business support centers and an incubator network have

been proposed as the phase one. However, the municipal administrations have not followed the recommendations and Gorenjska went through the uncontrolled transition process which severely hurt traditional industries as steelworks, textile, footwear and furniture factories. In early 1990s incubator Injes, sponsored by Jesenice steelworks, has been established, but without appropriate premises and long-term support, in the absence of a stronger entrepreneurial base (mono-cultural environment), it failed.

The first EU PHARE project for Slovenia has chosen Gorenjska region as the pilot region. The key project proposed was the creation of a strong incubator facility within the industrial location of the Iskra conglomerate in Kranj, a company with a wide portfolio of electrical appliances, combined with a pilot subcontracting and partnership exchange centre to support SME exports. The “milieu” has been well chosen since a number of Iskra plants were either closed or downsized, freeing a large number of well educated technical staff and leaving appropriate premises to start a number of new ventures. However, to cover for debts and restructuring costs, creditors, including suppliers, bankers and the government, enforced the sales of premises after a long bankruptcy procedure. The municipality of Kranj itself did not support the project lacking the understanding for the need of entrepreneurship policy, and in 1995, the only result has been the Business Support Centre (BSC) Kranj, the local/regional enterprise centre, but well understaffed and left to seek financing through a number of local/regional projects.

Although lacking the political and financial support in the region, the staff of BSC Kranj introduced to the region a number of regional, cross-border and international projects, also promoting the culture of entrepreneurship and supporting some projects in infrastructure. Before 2000 BSC implemented a lot of restructuring and employment projects, some spin-offs and financial, employment and education schemes. In 2000, a small *business incubator* (861 m<sup>2</sup>) has been constructed in the business zone at Jesenice, since the municipality of Kranj did not want to provide a suitable location. The incubator’s mission is to support tech-oriented start-ups, cross-border co-operation with incubators and technology parks in Carinthia, and host the local development agency. The small size of premises and modest base for technology oriented ideas in the environment have only allowed a slow development of the incubator that could with the office space and some common facilities support up to 13 start-ups (but around 50 new value added working places). Another pilot project included an *enterprise zone* at Jesenice, which was built at the location of former steelworks, close to the city centre. This project is a case of cleaning heavily polluted grounds and making them available for new businesses (these costs have pushed the price to 80-100 €/m<sup>2</sup>, far above 20-30 €/m<sup>2</sup> in Austria). Both projects have been supported by EU funds, especially the enterprise zone. The third project has been the *business zone* Šenčur Kranj, a project managed by a private company Ržišnik & Perc, close to the Jože Pučnik Airport (formerly known as Brnik Airport) and the highway. Phase 1 included 8 buildings with 18 firms, phase 2 and 3 should add 5.5 ha, and they are still partly under construction. Besides supporting the individual start-ups, BSC Kranj supported the municipalities and region in the preparation of strategic documents and projects, managing also a number of projects in rural entrepreneurship, human resource management and other local/regional development affairs.

These projects have promoted the development of experience on management of infrastructural projects while the impacts on the economic development have been limited. It is important to note that Kranj, the real economic centre of Gorenjska, has not been proactive, far from being the leading pole of development. The absence of stronger infrastructural projects contributed to the lack of industrial locations and the proper spatial concentration of

business activities, resulting in the region lagging behind some other more pro-active regions in Slovenia.

## 5 Infrastructure Development Projects, 2007-2013

In the past, entrepreneurship infrastructure has only been half-heartedly supported by the government (see [28]) while municipalities lacked the budget for any larger project and the public-private partnerships have not produced any results. The Liberal Democratic government has not allocated resources to support SME development although the Ministry of Economy proposed quite an elaborated program of support measures for 2002-2006. The new rightist government promised to support small business but it needed some time to develop a consistent Program of Measures (2007) along the Lisbon strategy and the National Economic Development Strategy. Conceptually, the government intends to support a number of larger investment projects, with a list of key regional infrastructural projects. With the expected share of EU funds, the framework for technology infrastructure has been given.

The RDP for Gorenjska region envisaged three programs to realize the objective of technology development:

- technology support infrastructure (Gorenjska business-technology centre),
- encouraging entrepreneurship and the transfer of know-how and
- development of business locations in parks (zones).

The first program is a comprehensive program of technology infrastructure to cover the key development centres (see Figure 1 in the Appendix). Due to the tradition of dispersed economic activity, several projects have been included to support the special resources available at different centres, however, leaving open the questions of the needed concentration of resources and the availability of financing to realize the whole range of projects (RDP assumed the budget of 52 million euros from the Regional support fund and 450 million euros from EU structural funds). In the period of 2007-2013, the region should create the infrastructure for a strong technology breakthrough towards promising new technologies.

### 5.1 The Concept of Gorenjska Business & Technology Centre

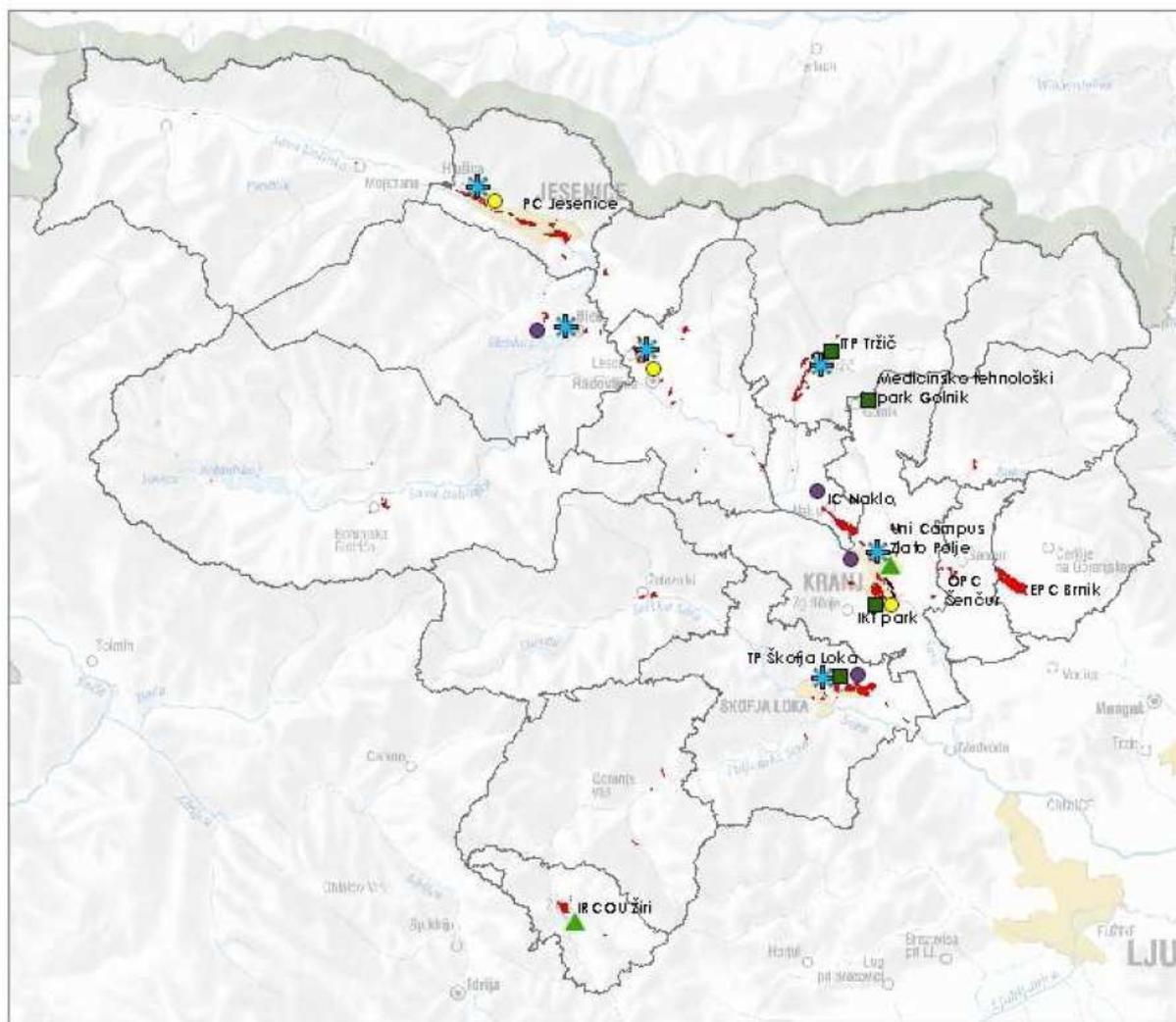
The Gorenjska Business & Technology Centre (B&TC) is an outcome of the technology support project (already with elements in [32]) and the government's concept of large development projects. RRA wrapped the concept of technology support into B&TC in order to ensure the approval of national resources. Nevertheless, there are some aspects of the technology infrastructure worth pointing to:

- the core projects are concentrated along two main corridors, from Ljubljana to Jesenice and from Kranj to Škofja Loka-Žiri, with few smaller projects at some other locations. This solution is efficient since it assumes the added value to existing economic centres with already strong resources. However, it brings the division between the core and peripheral locations [24];
- B&TC combines physical and knowledge infrastructure – the higher education institutions are built along the concentrated economic activities in need for those skills;
- different support institutions are proposed, related to the opportunities, resources available and the critical mass needed for specific institution: from incubators to tech parks;

- B&TC would basically upgrade existing locations, but bringing fresh business concepts, products, services and technologies would substantially change the structure.

In designing the B&TC, the RRA has knowingly tried to integrate the basic concept with the national political projects, also avoiding to recognize the division that might question the regional consensus.

Figure 7. Locations of Proposed Business & Technology Centres in Gorenjska



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- Business Incubator
- ▲ Technology Centre / Centre of Excellence
- Technology Park
- Entrepreneurship Training Centre
- ✦ Higher Education Institution
- Business zone
- Areas of Revitalization of Old Industrial Sites

## 5.2 Enterprise Zones in Gorenjska

While enterprise zones are not specifically supporting innovation and technology demands, they are the answer to the problem of the need for business locations. Gorenjska Region, highly industrialized in the past, suffers from the lack of industrial land for start-ups and FDIs. Enterprise zones have been studied in Slovenia, representing one of the problems for FDIs in terms of availability, price and services provided [28]. RRA has relied on the experiences of the GOM agency from Limburg, which prepared a study for Slovenia where 300 hectares of area have been proposed for Gorenjska during the next 15 years, with an excellent location in Kranj (targeting 150 ha) and further three locations at Jesenice, Škofja Loka and Tržič. Currently, the municipalities have included more locations in the urban planning for business, the area of almost 850 ha, mostly still in private ownership. In the past, especially because of mayors not attached to economic development, municipalities of Kranj and Škofja Loka have deliberately limited new locations, using the arguments in favour of the preservation of land for agriculture, avoiding “dirty” industries (rubber) and preferring the revitalization of existing industrial premises that proved difficult due to mixed ownership.

RRA Gorenjska developed five scenarios for the planned business zones, assuming dispersed, polycentric (3 variants) and monocentric scenario. Gorenjska is geographically divided into three economic areas: (a) the largest is Gorenjska Development Square (Kranj – Škofja Loka – Naklo – Cerklje) with 562 ha of business areas (only 15.6 % already engaged) of which estimated 200 ha are really usable; (b) second is the Western Gorenjska Development Portal, the area of Jesenice - Radovljica, with 190 ha, rather fragmented at Radovljica location; (c) and third is the Northern Gorenjska Development Portal around Tržič, with 80 ha of locations. There are some industrial locations elsewhere, with 6 areas of 10 ha available that could well support the local economic development. Municipalities in Gorenjska Region plan to develop 13 locations for business zones. Some of them are treated as local zones, not larger than few hectares, but important for preservation of local entrepreneurship and declining of daily migration to regional centers [34].

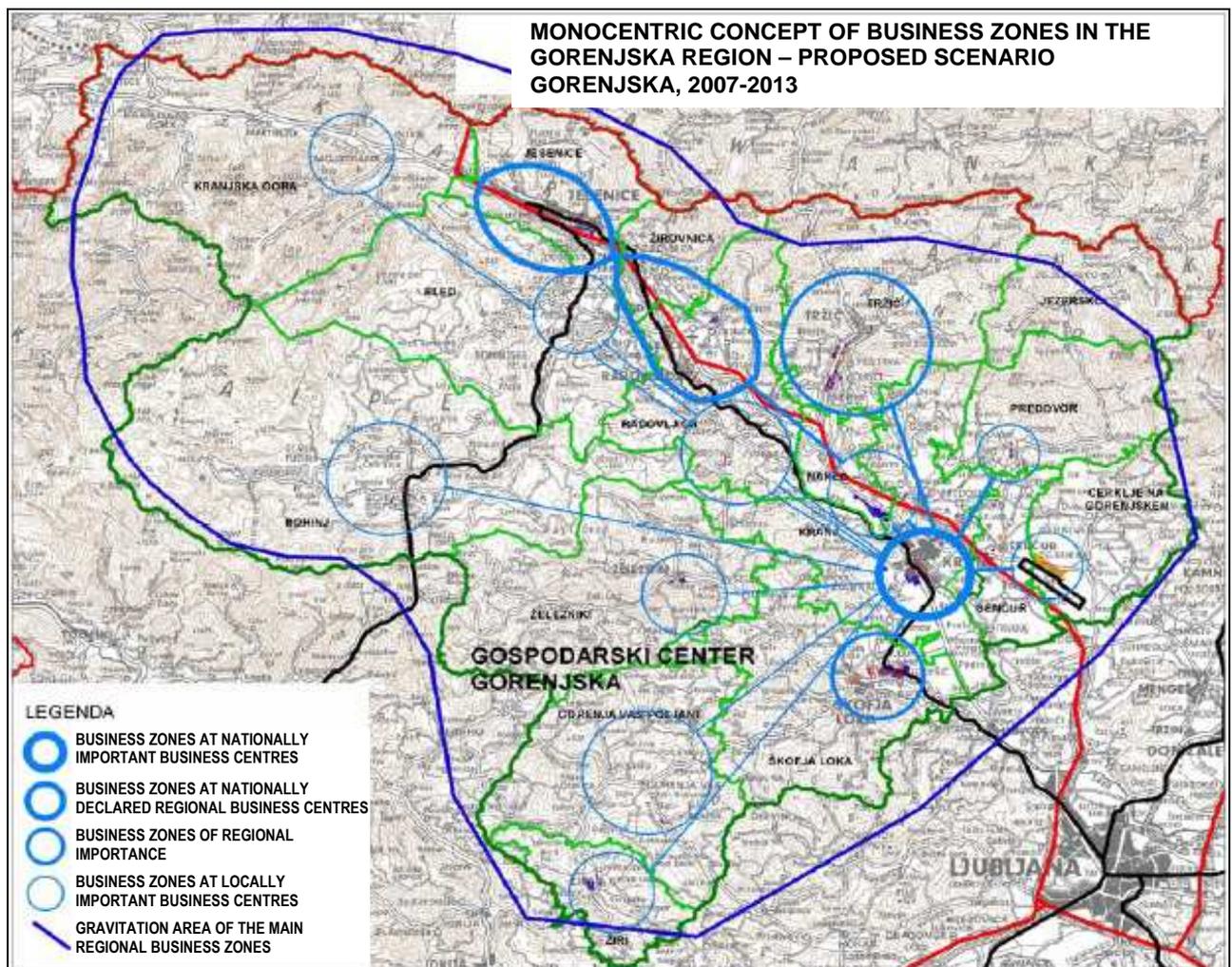
Considering the tradition, it would be socially/politically difficult to divide Gorenjska into two or three areas with a different economic dynamics. The monocentric scenario responds to the concept of B&TC which considers Gorenjska as a unique economic space, giving every sub-regional centre a specific development vehicle, although the southern part will certainly become the stronghold of the Gorenjska technology breakthrough. We will first present the planned components of the technology infrastructure and later details about the implementation process on the basis of working documents.

## 5.3 ICT Park Kranj

Kranj and its surrounding area has a strong concentration of both large firms and SMEs in the ICT and electrical appliances industry and there is a vast engineering know-how available. However, the long-term competitiveness of this industry demands the creation of new nuclei through the application of the indigenous and foreign expertise and know-how in ICT and digital technologies. Iskratel, partly Siemens-owned, can provide the premises for a specialized ICT incubator, laboratories and an international graduate program in ICT, asking

for some redesign and modern technology. Moreover, it can provide a strong link between the academic and multinational business community. A partnership agreement between the University of Ljubljana and University of Maribor to develop an ICT program within the existing Faculty of Organizational Sciences has been already signed. Gorenjska ICT firms are active members of the Slovenian ICT technology platform. The ICT park as a specialized high-tech park should include:

Figure 8. The Preferred Scenario for Locating Business Zones, Gorenjska, 2007-2013



- the creation of a world-class higher educational institution with a graduate program on new technologies in telecommunications and management,
- a R&D excellence centre and incubator with well-equipped labs to support entrepreneurial intentions of students and staff,
- the ICT technology park, hosting R&D departments and new SMEs in the ICT industry.

#### 5.4 Medical Technology Park Golnik (MTPG)

In an attractive alpine landscape, close to Kranj, a pulmonology and allergy centre Golnik, a well-known centre for respiratory/allergy diseases is located, with vast expert knowledge and rich R&D activity. With the descent of tuberculosis, Golnik has vacant premises, know-how

and in addition to this, it is based in an excellent location for European patients. The objective of MTPG is to develop an integral centre combining medicine, culture, sports and high-level catering into a package for older population. The specialized medical centre will use research, innovation, modern technology and other development activities to service clients in pulmonology, allergy, internal and sports medicine. MTPG should build on the needs of the ageing population, the revival of the nature, the benefits of low-cost air carriers to bring international clientele, attracted also by relatively lower prices of services.

Activities within MTPG, a public-private partnership, should build a package of active recreation and medical services along:

- development of new tech-based biomedical products for the global market,
- research on new developments in sports medicine (with the Faculty of Sports),
- professional training of top sport teams combining the climate, sports facilities and medical support,
- e-health services for clients from all parts of the world and
- The National Centre for Tuberculosis and Allergy diseases.

This centre would demand a change in the philosophy of the medical staff at Golnik, their re-orientation towards commercial activities for new target groups, revitalization of the whole complex and high quality hotels and smaller pensions.

### **5.5. Technology Park Škofja Loka**

The area of Škofja Loka hosts some secondary schools and established firms in metal engineering and wood processing that create the potential for new tech-oriented firms in new materials and special niche products, especially around the TCG Unitech, a company in the automotive industry. This Park will be located within the business zone Trata, with the activities in foundry (light materials, composites), metal engineering, mechatronics, tool-making and wood processing. The Park is also an answer to the dilemma of relocating the production from larger local companies to Ljubljana (Litostroj Technology Park) and towards the Eastern Europe and Asia.

### **5.6. Business Incubator Network**

Besides the existing Incubator Jesenice, a network of smaller specialized incubators will be developed. Kranj is developing into a small university centre. A business incubator will be established in the premises of a former agricultural school on 900 m<sup>2</sup>. Incubator will target young entrepreneurs, offering services, ICT support and training. Another high-tech incubator will develop at the Faculty of Organizational Sciences that will develop into applied sciences. In the town of Radovljica, with several smaller business areas, a small business incubator will be developed to support any start-ups, but targeting priorities will be in tourism and business / financial services.

### **5.7. Technology and Education Park Tržič (TEPT)**

Tržič, located in a valley along the road to Ljubelj Pass and Klagenfurt (Austria) is an old industrial centre, hit hard by the crisis in the “sunset” industries (textiles, shoes, furniture). The old premises of the shoe factory Peko are available with land and devastated industrial buildings (over 5.000 m<sup>2</sup>). TEPT should include:

- Faculty of Telecommunications, Multimedia and Transportation (5,500 m<sup>2</sup>),
- business incubator with the capacity for 50 firms (5,500 m<sup>2</sup>),
- support facilities, parking area and a conference centre,
- link to the technology park at Škofja Loka location.

### **5.8. Footwear Technology Centre, Žiri**

Gorenjska hosts the major part of the Slovenian shoemaking industry, with Alpina (Žiri) specialized in shoes for winter sports being in the best condition. To support the technology renewal, the Technology Excellence Centre for Footwear was established in Žiri. The centre should become a certified lab for shoemaking industry for the South-Eastern Europe providing:

- laboratory services,
- training centre for the shoemaking industry,
- services for quality testing,
- prototyping,
- transfer of new technologies and
- joint R&D projects integrating various activities (sports, new materials, designs and tools).

However, this centre will be mostly financed from private sources and its impact on the regional development will be quite limited, so we will not analyze it as part of the regional technology infrastructure through the rest of the paper.

### **5.9. Logistic Zone Airport Jože Pučnik, Kranj**

Gorenjska hosts the largest international airport, the home airport of the national air carrier Adria Airways, in the class of regional Central European airports. There is a huge master plan ready for its further development. The Airport Zone should become the most important logistic zone in the future regarding the fact that on this location three different types of transport will be connected: railway (still to be constructed), air traffic and car/truck traffic. It is predicted also that there will be an Airport City, including a shopping mall, hotels, garage houses and logistic facilities.

The B&TC concept involves a comprehensive set of infrastructure to cover for special needs of main business centres in the Gorenjska region (see Table 5, next page).

### **5.10. Networking and Clustering**

Neither Slovenia nor Gorenjska have a tradition of good cooperation among firms. Individualism is usually assumed as the general attitude and autonomy (“being your own boss”) is the most important motive for creating new firms (only for dynamic businesses the opportunity recognized is more important). However, the Ministry of Economy started in 1999 with a feasibility study on clustering and although the findings were quite critical, it sponsored three pilot projects on national clusters in 2000. Due to its small size, Slovenia as a whole can hardly develop stronger clusters and at the regional level, only some miniclusters have the potential to generate synergic effects, e.g. in agriculture, tourism and some special niches.

RDA Gorenjska is supporting the participation of companies in national clusters, where firms from Gorenjska have a strong position in the ICT cluster, while also participating in other clusters and technology platforms. The problem in the region is the low culture of cooperation within companies. Therefore, many clusters have still not developed to the phase where providing significant development impact and ensuring their longterm sustainability. It is the same situation with tourism. Although the Local Tourist Offices (LTOs) support the cooperation among suppliers of different activities in tourism, there are no well-developed miniclusters available. This is mostly due to the low culture of cooperation and the fact that two large holding companies, Sava through its division Sava-Tourism (premises mostly at Bled) and HIT Gorica (mostly Kranjska Gora) are managing major hotels, yet they have not created local networks of stakeholders in tourism to offer really attractive packages for active tourists.

Table 5. The components of the Business and Technology Centre, Gorenjska

<i>Institution</i>	<i>Kranj</i>	<i>Škofja Loka</i>	<i>Jesenice</i>	<i>Tržič</i>	<i>Radovljica</i>
<i>Enterprise zones</i>	Brnik, Šenčur, Naklo, Preddvor	Trata, Železniki, Žiri, Todraž, Dobje	EZ Jesenice (3 locations)	Loka	Radovljica, Žirovnica
<i>Technology Park</i>	ICT Park Kranj MTP Golnik	TP Škofja Loka	TP Jesenice	Technology & Education Park	-
<i>Incubator</i>	Incubator for youth Uni incubator		Business incubator Jesenice, Business Incubator for metal processing	Incubator in TEPT	Business incubator - services
<i>Higher Education Institution</i>	University of Gorenjska Graduate School Campus Zlato polje HE for ICT and mechatronics	HE for Mechanical Engineering	HE for nursing	HE for Telecom-Munications, Multimedia & Logistics	HE for Banking and Finance, HE for Tourism at Bled
<i>Secondary Schools</i>	Electronics Mechatronics Informatics Management & Entrepreneurship	Mechanical Engineering Wood Processing	Mechanical Engineering Nursing		Business Entrepreneurship Catering Tourism
<i>Business Centres</i>	ICT Electronics	Mechanical Engineering			Tourism
<i>Others</i>	Production Development Excellence Centre	Technology Excellence Centre for Footwear, Žiri			
<i>Technology Centres</i>	TC for ICT TC for multimedia TC for Renewable Energies	TC for Metal processing			
<i>Logistic Zone</i>	Airport Joze Pucnik				

Source: Regional Development Programme for Gorenjska 2007-2013, 2006

## 6 Evaluation, Planning, Financing, and Management of Infrastructural Projects

The Regional Development Program is only the first strategic step in creating the infrastructure for supporting technology and development. What follows is a true challenge: planning, financing, construction and management of these projects.

### 6.1 Development Impact Assessment

Glas, Zupan [28] analyzed four (regional) development tools being applied in Slovenia after 1990 to point to the weak record in the infrastructure development in the past, the lack of both (political) commitment and the management know-how on complex projects, but also the question of the real entrepreneurial potential to “use the walls” to create a vibrant economy. To some extent, these limiting factors have been overly respected in the Gorenjska region in the past, creating almost a “development paralysis”. However, we have to be cautious in assessing the possible development impact of new ambitious projects, considering the local and worldwide experience.

We will start with an assessment of the potential success factors for six projects on the basis of preliminary information using a five-point scale (with 1 – inadequate, 3 – good, and 5 – excellent).

Table 6. Assessment of Potential Success Factors for Key Projects, Gorenjska B&TC

Success factors	ICT Park	Medical Park Golnik	TP Škofja Loka	Business Incubator Network	TEP Tržič	Logistic Zone Airport	B&TC overall
Suitable region	*****	*****	****	***	**	*****	****
Adequate resources	*****	****	****	*****	***	*****	****
High quality products	*****	****	****	**	***	*****	***
Production guidelines	***	***	****	***	**	***	***
Key actors	****	**	****	***	*	*****	***
Powerful partners	****	**	*****	***	**	*****	***/**
Share of tasks	***	**	****	***	**	***	***
Public involvement	****	***	****	***	**	***	***
Good relationships	****	***	***	*****	**	****	***
Common projects	***	**	****	*	*	****	**/**
Efficient controlling	****	-	-	-	-	***	-
Communication	***	**	****	***	**	*****	***
Common PR work	***	**	***	**	**	***	**/**
Total assessment	*****	***	****	***	**	*****	***

Source: Authors' own assessment

The assessment might do injustice to some projects since they are in their early stage and the real work on creating partnerships, communication and the control has only started. However, the three projects, LBZ Airport, TP Škofja Loka and the ICT Park have best identified actors and shown a strong commitment of the relevant business community, while the incubator network is an investment for the future, because of the available potential of young would-be entrepreneurs.

## 6.2 Planning: resources, sequencing, implementation

The current development of projects differs, depending on the past activities and the nature of projects. Some of them heavily rely on the existing resources which only need new content and different staff orientation while others are new concepts demanding stronger promotion and input of resources. We will discuss the proposed planning of projects.

Table 7. The Spatial and Financial Parameters of Key Proposed Projects, 2007-2013

Project	Location and premises	Proposed financing (million €)				Timetable (1=2007) <sup>(a)</sup>						
		Total	EU+RS	Local <sup>(c)</sup>	Other	1	2	3	4	5	6	7
ICT Park Kranj	Extension and upgrade of existing zone, some new firms	17.2	11.1	-	6.0	0	X	X	X	X	X	X
MP Golnik	Partly existing, new labs, hotel capacity	31.1	20.7	-	10.4	X	X	X	X	X	X	X
TP Škofja Loka	Extension and upgrading, new firms	6.3	4.7	0,1	1.5	0	0	X				
Business incubators	Kranj and Radovljica	3.2	2.4	0.8	-	X	X	0	X			
TEP Tržič	Premises renewed, equipment, programs	17.3	7.0	0.0	10.3	0	X	X				
Shoe-making TC	New premises and equipment	2.1	1.6	-	0.5	X	X	X	X	X	X	X
Logistic Zone Airport Joze Pucnik	New premises and equipment	160,0	54,0	12,0	94,0	X	X	X	X	X	X	X
Total investment <sup>(b)</sup>		245,1	102,8	13,6	128,6							
Total investment <sup>(b)</sup>		92,3	59,9	3,3	29,0							

<sup>(a)</sup> Period 2007-2013; 0 – planning and preparation, X – construction;

<sup>(b)</sup> there is one additional project included in total investment, a Technology Centre Fiprom Jesenice;

<sup>(c)</sup> local means resources from municipal budgets

Source: Regional Development Program for Gorenjska 2007-2013, 2006, p. 45

All projects are of high priority, taking into account that the implementation will start early in the process, in order to deliver results as fast as possible. Some need to be further developed while others are ready for construction. This timetable asks for strong financing early in the period which might cause some trouble in providing the national share in financing. However, Slovenia needs projects fast for drawing EU funds and the RDA has obviously decided to compete for the bulk of resources from the very beginning when other regions will be less aggressive with their projects.

## 6.3 Financing: public-private partnerships

The infrastructural projects are believed to get strong financing from outside the region, either from European structural funds and/or the Slovenian budget (with almost 65 % share in the proposed financing). The municipal budgets are not involved with a substantial share, only with 5,5 %, most for the TC Fiprom Jesenice, the revitalized former steelworks location which is already in the process of rejuvenation. Other resources should come from the private

sector, which is expected to act as a partner in some of the projects focused on developing business parks and areas. Such a high share of the national budget funds originates in the structure of Slovenian public finance system where municipalities mostly cover the current expenses and there are no regional budgets but regional development projects are included in the national budget. The structure should change with the introduction of the regional administration level in the near future but legislative proposals are still in the National Parliament and the discussion on the regional affairs and budgets has not yet reached the political consensus. At the end of 2007 we still do not know how the region will succeed in attracting the EU and national sources that should be available for proposed projects.

#### **6.4 Management of Projects and Future Infrastructure**

Local communities are aware that the region lacks project oriented, skilled and experienced managers. Management of projects could become the critical point in development and implementation of proposed projects. Taking into account the fact that Slovenian RDAs have no systematic support from the national and regional levels, do not enjoy stable financing and have no guarantees that this situation will change, these agencies are hardly able to develop and educate enough experts to assist municipalities with the specialized know-how (projects preparation, procedures, project management etc.).

Nevertheless, RDA Gorenjska still proposes to municipalities that the management of development projects in the preparation, construction and operational stage would become a part of the RDA tasks, with project managers as part of the staff at the RDA and local agencies. Such a solution, preferred also by EURADA [33] and practiced by some successful RDAs (GOM Limburg, Lower Austria, Vienna) would enable better sharing of knowledge, experiences and the cross-utilization of staff. However, the municipalities should in this case finance the creation of the managerial task force or it should become a part of the human resource development in Gorenjska.

#### **6.5 Assessment of the initial phase of key projects**

Slovenia finished negotiation regarding Operational plans for Structural Funds in July 2007. First public tenders were published in September, additional will be published in October. In 2007 we have not succeeded in implementing all planned EU subsidized projects. For all key projects feasibility studies (FS) are under preparation, together with Cost-Benefit Analyses (CBA) and the Environmental impact assessment. The project implementation plans will start after the FS and CBA are concluded. Considering the experience with the past involvement of the government, we should anticipate some delays in the implementation, however, the region is ready to move in the direction of the strong technology-oriented period of development.

### **7 Conclusions and Recommendations**

In the past, the region of Gorenjska, once being one of the most developed Slovenian regions, enjoyed the backlash at the national level and received only few development assistance. It also demonstrated low ambitions in its development projects and the lack of leadership to develop a vision and push the implementation of planned projects. The period of 2007-2013 has to change this picture, with Gorenjska becoming aware of the need for strong development coalition and a different vision able to mobilize the population and development institutions on the long list of high priority projects to support the technology and broader

development. In its Development Program Gorenjska decided to build the technology infrastructure at a pace comparable to the best practices in other European and Slovenian regions.

This change in the development paradigm is well supported with other programs/projects in the human resource development area. Gorenjska has decided to develop a network of higher education institutions (this will result in establishing the University of Gorenjska) which will complement the strong community of students from Gorenjska at the University of Ljubljana with some specialized profiles well suited to the development trends in the region's economy. These efforts should create a strong intellectual base in Gorenjska, changing its culture of hard work to the quest for creativity, innovation and strong collaboration within the region and with partners from Slovenia and other EU countries.

Despite strong regional consensus upon the technology infrastructure and other projects to support the new development paradigm, the region still depends on the national regional policy which is being developed too slow to follow regional initiatives, on financial schemes for large infrastructural investments and the availability of high quality project management staff. While the RDA staff with local agencies could successfully manage all project preparation stages, they do not have enough human resources to oversee complex projects in the construction and operation stage. We therefore recommend the Regional Development Council to:

- support the RDA staff in developing the project documentation,
- to create a project management group with the know-how and experience to manage a number of projects on technology infrastructure,
- to demand proper financial framework for these projects from the national institutions,
- to insist on complementary measures in human resource area,
- to continue with a strong marketing of the region in Slovenia and abroad.

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