

# **SERVICE INNOVATION POLICY MAPPING STUDY SLOVENIA**

**Metka Stare, Maja Bučar<sup>1</sup>**

**Centre of International Relations, Faculty of Social Sciences,  
University of Ljubljana**

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<sup>1</sup>[stare.metka@guest.arnes.si](mailto:stare.metka@guest.arnes.si); [maja.bucar@guest.arnes.si](mailto:maja.bucar@guest.arnes.si)

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*The study is based on the knowledge and expertise of both authors who have a long-term experience of research in the field of services development in transition economies and in innovation policy shaping. This expertise has been complemented by interviews with relevant innovation stakeholders/actors carried out by the authors and publicly available information. Innovation stakeholders include Ministries, public agencies, Slovene Enterprise Fund, Chamber of Industry and Commerce, Clusters, Technology parks, Technology platforms, University incubators, Regional development agencies, etc.*

## **Introduction**

The perception of the service sector as the generator of growth and competitiveness was not present in the past economic system in Slovenia. As a result, services were not deemed a key element of economic development and only occasionally entered economic policy considerations. The implementation of market-oriented reforms in 1990s has improved the understanding of services and their role in the economy as an important contributor to GDP. Still, with regard to the growth of competitiveness and innovation, a bias towards manufacturing remains and is evident in conceptualisation of innovation policies and measures (Stare, 2007).

Slovenia has made a significant progress in the development of the service sector in the last fifteen years. In 2005, services accounted for a dominant share of value added (63.4%) and employment (54.5%), but the lag behind the EU levels persists as the average share of services in value added in EU accounted for 71.9 % (IMAD, 2006). The bulk of this gap in services development in Slovenia can be attributed to lower share of business and financial services in value added. Since these two groups of services are knowledge intensive business services (KIBS) that play a very important role in the innovation activity and the innovation process<sup>2</sup>, it partly explains low average innovation activity of the service sector firms in Slovenia. Insufficient availability of specialised KIBS further deters the innovation capacity building in Slovenia that is also related to the perception of innovation and innovation culture.

The understanding of innovation is biased in favour of technological innovation and thus very deficient when it comes to innovation in services. However, some stakeholders are aware that to increase value added innovation in services and in service functions is equally important (e.g. in information services, logistics, marketing on target markets, etc.). The activities encouraging innovation in service activities exist (like promotion of more efficient business practices and models, internationalisation) although their carriers are hesitant to consider them and talk about them in terms of innovation. They rather use different terms such as permanent improvements, changes in processes, business models, organisation, etc. The concept of innovation is predominantly reserved to new technology/new product concept, leaving little

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<sup>2</sup> KIBS not only generate innovations but also play a catalytic role in spurring innovation activity throughout the economy.

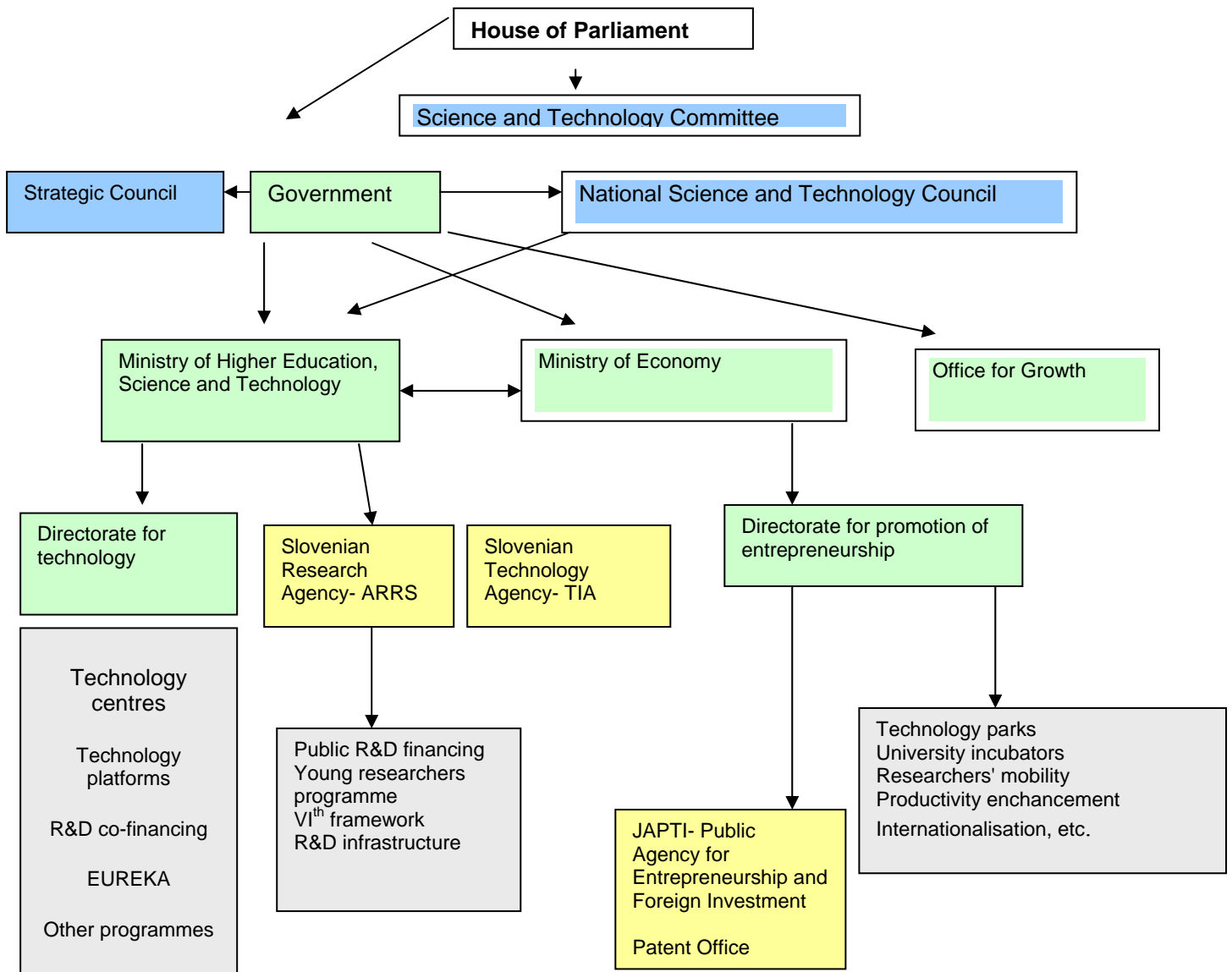
room for non-technology (service-type) innovation. Through Europeanisation of innovation policy and by transfer of best practices, at least the rhetoric about innovation is gradually changing. The institutional set-up, mechanisms and instruments in the area of innovation policy have been constantly complemented in line with EU policies and practices. More problematic has been the fact that the policy-makers paid insufficient attention to the socio-economic framework to which they transferred the measures and therefore the expected results were not forthcoming.

The available evidence on the mechanisms, specifically addressing the promotion of innovation in services is very limited. However, within general support measures addressing innovation, innovation in processes, services and organisational change is stipulated more often. Thus, the supporting measures to both the innovation in service sectors and in service functions can be found. This is why the mapping study covers several general innovation support measures as well.

## **1. Schematic presentation of the innovation system**

The institutional framework of innovation policy has gone through several changes since Slovenian independence, reflecting in part the search for the most efficient division of tasks between ministries and in part the influence of the science and business communities. Each of the past elections brought forward new ideas on how to best organize the government to be more supportive to science, technology and innovation.

The bellow schematic presentation reflects current institutional set up in the area of research and innovation. Tasks of individual policy actors are described in the next chapter.



**Legend:**

- Blue: advisory bodies
- Green: government
- Yellow: Executing agencies
- Grey: measures

**2. Policy actors**

Following the last elections (2004), Slovenia re-established a sectoral ministry for science and technology, although this time, the new ministry also took on full responsibility for the area of higher education and some of the tasks of the abolished Ministry for the Information Society. The key policy role in R&D is therefore played by the **Ministry for Higher Education,**

**Science and Technology** (MHEST- [www.mvzt.gov.si](http://www.mvzt.gov.si) ), which is responsible for setting the policy through the preparation of the five-year National Research and Development Programme. The technology directorate under this Ministry is in charge of technology centres, support to research and development projects in SMEs, technology platform programme, and support to the participation of business enterprises in international R&D activities, especially EUREKA.

The Law on Research and Development (2002) provided for the establishment of two public agencies one for research and one for technology development (see details in EU Innovation Trend Chart Country Report: Slovenia, September 2003- October 2004). The **Slovenian Research Agency** (ARRS)<sup>3</sup>- has been fully operational with the staff, several key programmes and the financial resources since 2004, while the formation of the **Slovenian Technology Agency** (TIA)<sup>4</sup>, took longer and was finally settled in summer 2006. It is planned that most of the calls in the area of technology support, currently executed directly by the Ministry of Higher Education, Science and Technology will be operated by Technology Agency in 2007.

The **Slovenian Research Agency** annually issues public calls for financing various activities, including the funding for different types of research programmes, basic and applied research projects, Young Researchers Programme, infrastructure support to public research institutes, support to Target research projects, and other programmes and mechanisms, focusing on R&D support. Up to now, none of their projects is aimed exclusively on service sector, but is opened to research proposals in all scientific areas, and within Target research projects (see detailed presentation later), to the needs of all government Ministries and offices.

**Slovenian Technology Agency's** programme should focus on providing support to innovation and technology programmes, on creating innovation friendly environment and support to knowledge transfer and technology diffusion to enterprises. Due to prolonged procedure with its establishment, TIA is only gradually developing its programme, starting in 2006 with the administration of the public calls for special programme, supported by the Ministry of Defence (Technology for Peace and Security). While no programme of the

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<sup>3</sup> <http://www.arrs.gov.si/en/index.asp>

<sup>4</sup> [http://tia.si/eng/eng\\_novice.php](http://tia.si/eng/eng_novice.php)

MHEST or TIA has so far focused exclusively on service innovation, this type of innovation was also not excluded from the support measures available.

**The Ministry of Economy**<sup>5</sup> is in charge of entrepreneurship promotion programmes and several activities in the area of innovation policy. So far these include: support for technology parks and university incubators, “voucher programme” to cover costs of consultancy services to SMEs and internationalisation support to SMEs (these measures are executed by Public Agency of RS for Entrepreneurship and Foreign Investments- JAPTI<sup>6</sup>) as well as different programmes of financial assistance to SMEs (executed via Slovene Enterprise Fund). A new *Programme for the support of entrepreneurship and competitiveness for the period 2007-2013* was accepted by the Government in July 2006. According to the Programme<sup>7</sup>, several existing measures are to be continued as well as new ones are proposed.

**Public Agency for Entrepreneurship and Foreign Investment (JAPTI)** is a specialised public agency under the Ministry of Economy. Part of its programme are different public calls, entrusted to JAPTI on behalf of the Ministry, but the prime task of the Agency is the promotion and networking of the SMEs. JAPTI provides information to SMEs, especially small business on legal and regulative/administrative matters, advises as to the potential access to finance, promotes entrepreneurial culture, etc. Since 2005, an important segment of JAPTI's activity is support to internationalisation of Slovenian SMEs as well as the provision of relevant information to potential foreign investors, coming to Slovenia.

The importance of **Slovene Enterprise Fund (SEF)**<sup>8</sup> is growing as a national financial organisation for support to SMEs with the different forms of favourable financing. Besides various subsidized credit lines, SEF has a special programme of loan guarantees in connection with private banks. In the 1990s, the commercial banks were not very open to new businesses, but under the scheme where SEF provides loan guarantees, several banks have opened special more favourable programmes for SMEs. The widening of the SEF activities can be attributed to availability of additional resources from the EU Structural Funds, specifically from the European regional development Fund (ERDF).

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<sup>5</sup> <http://www.mg.gov.si/en/>

<sup>6</sup> [www.japti.si](http://www.japti.si)

<sup>7</sup> The programme can be found in Slovenian at [http://www.mg.gov.si/fileadmin/mg.gov.si/pageuploads/DPK/PROGRAM\\_UKREPOV\\_ZA\\_PODJETNI\\_TVO\\_IN\\_KONKUREN\\_NOST\\_2007-2013\\_.pdf](http://www.mg.gov.si/fileadmin/mg.gov.si/pageuploads/DPK/PROGRAM_UKREPOV_ZA_PODJETNI_TVO_IN_KONKUREN_NOST_2007-2013_.pdf)

<sup>8</sup> <http://www.podjetniskisklad.si/>

The government's **Office for Growth**<sup>9</sup> was established in January 2006 and is to coordinate reform programme and is expected to play an important role in the preparation of the National Development Programme as the basis for Single Programming Document 2007-2013.

**Chamber of Industry and Commerce (GZS)**<sup>10</sup> is being reorganised after the change in its institutional status: up to mid-2006, the membership was compulsory for all businesses. With the beginning of 2007, the Chamber is actively pursuing different programmes to maintain the membership. One of such activities was the formation of a special fund to support entrepreneurship and thus more actively engage itself in support to creation and growth of new, especially high-tech firms.

It is necessary to recognise that most of the policy actors interviewed are not familiar with the concepts of innovation in services although some of them recognise the importance of non-technological innovation, in particular change in processes, models and permanent improvements. Those who have learned about innovation in services have done so mostly through links with European partners and initiatives launched by different European institutions.

### **3. How the identified policy actors address service related innovations?**

Recently, Slovenian Government has adopted a number of documents that recognise more fully the important contribution of innovation activity to the competitiveness and growth of national economy. We focus on the main three documents: Development Strategy of Slovenia, Resolution on the national research and development programme for the period 2006-2010 (NRDP) and Programme of Reforms for the Implementation of the Lisbon Strategy (NRP).

**Development Strategy of Slovenia** (the Strategy) adopted in June 2005 is the major strategic and policy document for the period 2006-2013 that also sets the foundation for other policy documents, such as for example *The framework of economic and social reforms for*

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<sup>9</sup> <http://www.svr.gov.si/index.php>

<sup>10</sup> <http://www.gzs.si>

*increasing the welfare in Slovenia* approved by the Government of Slovenia in November 2005, NRDP and NRP. The implementation of the Strategy focuses on five key development priorities. We briefly refer only to the priorities, which address service related issues.

Under the first priority of the Strategy “A competitive economy and faster economic growth” the main objectives is to increase the competitiveness of services. This is the first time that services occupy such an important place in development document in Slovenia. The Strategy sets a number of measures relevant for services development and diffusion of innovation with the objective to restructure the economy in favour of services (increasing the share of services in value added to 67 % by 2013), with the level of knowledge-based services (financial, business and telecommunication services) and tourism growing significantly faster than other services. Further, the Strategy aims to stimulate and develop innovation friendly environment. The Action plan for the implementation of the Strategy in 2005 and 2006 introduced, among others, the following measures that should enhance services development and stimulate innovation:

- a) improve SMEs access to support services, improve the quality of these services and bring all consultancy and supervisory institutions, including regional chambers of craft, within a single network (Ministry of Economy (ME), autumn 2006);
- b) establish mechanisms to boost investment in service industries by promoting SMEs activities (ME, autumn 2006);
- c) encourage the use of contemporary managerial techniques to manage change and develop a business model of development and business excellence for Slovenian enterprises;
- d) promote the implementation of European excellence model (ME, autumn 2006);
- e) enhance the development of specific know-how related to the process of service innovation, service marketing and international transactions; develop instruments tailored to stimulating innovation in services (Ministry of Higher Education, Science and Technology (MHEST), ME, autumn 2006);
- f) encourage competition and competitive use of e-communications (promote the development of fixed wireless broadband access, competition in leased lines, enable number portability and other regulatory measures (ME, Post and Electronic Communications Agency (PECA), by end 2005); upgrade the broadband networks strategy (ME, summer 2005) and prepare a strategy for transition to digital broadcasting ME, autumn 2005);

- g) create a national innovation system and implement Slovenian regional innovation strategy (SLORITS) (ME, MHEST, autumn 2006);
- h) stimulate the creation of environment conducive to innovation through financial aid to enterprises for technological development (ME, MHEST, by end 2005);
- i) comprehensively revise regulations, non-stimulative to innovation and promote the establishment of domestic and foreign high-tech and innovative enterprises (MHEST, ME, Ministry of Public Administration (MPA), Ministry of Finance (MF), by end 2006);
- j) establish a risk fund for financing high-technology SMEs (ME, spring 2006);
- k) accommodate curricula at all educational levels to arouse young people's interest in innovation, science and change;
- l) increase the use of ICT and e-government services in households (launch the Home computer initiative as a pilot scheme) (MHEST, 2005 and 2006);
- m) draft a law on public private partnership (MF, autumn 2005) and procure at least three large projects (MF, competent ministries, spring 2006);
- n) accelerate the outsourcing of different services from the public sector, control the quality of services and the maintenance of high standards (MF, competent ministries, by end 2006);
- o) adopt operational programme for promoting the use of environmental technologies (Ministry of Environment, Space and Planning (MESP), by end 2006).

The above set of measures is a non-exhaustive list of actions that could enhance innovation in services, but most are of a general character and only few address innovations in services in particular. During the interviews, we tried to assess the current level of implementation of the measures. For most activities, significant delay in the implementation can be observed, especially in the introduction of more innovative approaches.

**Resolution on the national research and development programme (NRRP)** for the period 2006-2010 was accepted in December 2005. Key objectives of the NRDP include:

- a) increasing of public R&D investment to 1% of GDP by 2010
- b) shifting balance of public research funds from basic non-targeted research in favour of targeted (and applied) research,
- c) introduction of support measures to stimulate growth of investment of business sector in R&D to help achieve a 2% target

- d) growth of number of researchers with Ph.D.s in business sector,
- e) higher rate of establishment of new high-tech firms, including promotion of spin-offs from universities,
- f) continuous participation in the international research, especially in ERA,
- g) support to the growth of patents, as an indicator of business relevance of research,
- h) growth of high-tech exports and growth of value-added in Slovenian economy.

Relatively wide set of research priorities set in NRDP follows the priorities set in the VI<sup>th</sup> Framework project (information and communication technologies, advanced (new) synthetic metal and non-metal materials, nano-technologies, complex systems and innovative technologies, technologies for sustainable development and health and life-sciences) and adding research of specific importance for the Slovenian culture and history. Current strong concentration of public research funding on basic research is to change if the NRDP implementation is carried out in accordance with its objectives to boost applied R&D projects. The government's intention is to channel all increased R&D financing<sup>11</sup> towards targeted basic and applied research projects, as well as shift the financing structure in favour of projects instead of programme financing. To stimulate knowledge transfer and diffusion of technologies to enterprises, measures like establishment of centres of excellence and university incubators were introduced and an additional window was opened for joint research projects.

**Report on the Programme of Reforms for the Implementation of the Lisbon Strategy in 2006** summarises the implementation of reforms in 2006 aimed at Lisbon goals achievement. According to the Report most of the activities that could have had an impact on stimulating services development and innovation have not yet been implemented. At best, some of the activities have only been launched or partially undertaken. These are reported in chapters 4.1. and 4.2., respectively.

#### **4. Service innovation related policy measures**

The existing R&D and innovation support measures are general in nature and do not differentiate in favour of service innovation or innovation in service sector. What one could

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<sup>11</sup> To achieve 3% R&D investment share in GDP, the government should increase its annual allocations to R&D by 0.1% of GDP annually until 2010. This new money should be allocated in accordance to NRDP priorities.

stipulate as a positive development is, that at least in the rhetoric, no measure discriminates against innovation in services but treats all types of innovation as equally important. More problematic is the selection process and project/ proposal evaluation, where methodology still tends to be biased in favour of technology-based and product based innovation.

Current support measures all focus on different deficiencies and challenges, which are rather standard to Slovenian innovation system and have been identified by several international or national analyses. They follow the objectives of the Development Strategy, NRDP and lately also NRP. An important set of measures addresses the lack of cooperation between public R&D and private sector, providing different forms of subsidies either to joint research/ development projects or to upgrading of the research infrastructure in technology centres/ parks.

#### **4.1. Supply-side measures that are targeting service related innovation**

##### *4.1.1. Finance related measures*

Here the following main measures can be listed<sup>12</sup>:

➤ *Equity support:*

- Public venture capital funds: formation of a **special development fund** (<http://www.razvojnisklad.si/en/index.cp2> ) to support entrepreneurship by the Chamber of Industry and Commerce in 2006. The Fund should support the creation and growth of new, especially more high-tech firms: support is in principle available also to service sector firms.
- **subsidised credit to SMEs** for expansion/modernisation of production capacities, thus providing longer-term financial support for the development investments (material and intangible) in SME's to stimulate competitive capacity of the enterprises, in particular on the global market, to promote and create development of environment-friendly and energy-efficient business units within SME's, purchase of high-tech equipment as well as promote research work and innovation. The measure is executed by the Slovene Enterprise Fund.

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<sup>12</sup> The list includes measures, which have been available to enterprises on the basis of annual calls.

- Subsidies to for the establishment and start up of innovative firms in innovative environment such as technology parks, business or university incubators. In such framework costs of market analysis and financial plan, promotion expenses, costs of testing and training, procurement of licences<sup>13</sup> are covered. The measure is executed by the Slovene Enterprise Fund.
- **Technology equipment subsidies for SMEs** to enhance firms' productivity and growth, and consequently improve their position on a global market. The main goal is to distribute these subsidies intentionally for specific projects, congruent with the cohesion policy of the EU. The measure is executed by the Slovene Enterprise Fund.

➤ *Fiscal measures:*

- **Tax incentives:** in 2006, the government increased the tax subsidy on corporate income tax for investment in R&D to 20%. The eligible costs include not only purchase of equipment<sup>14</sup> and new technology for R&D purposes, but also costs of labour and IPR.<sup>15</sup>

➤ *Support for public research sector:*

University and public R&D organisations' funding: public financing for academic and public R&D organisations is provided by the Ministry of Higher Education, Science and Technology, but organisationally channelled through Slovenian Research Agency. Agency administers several programmes:

- Research group financing scheme. Since 1999, this is the major basic research support programme, where five-year contracts are awarded to the selected groups of researchers. The eligibility criteria allow only researchers with Ph.D. to form the group, and selection process is strictly based on scientific excellence of the group leader as well as the

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<sup>13</sup> The interview revealed that when it comes to subsidizing intangible investment (e.g. procurement of a licence) the executing agency finds it very difficult to manage the selection procedure due to the lack of information on the market price of a licence. This decreases the chances of applicant firms for obtaining the subsidy for intangible investment.

<sup>14</sup> A 10% tax incentive on corporate income tax was available up to 2006 for all investment costs, including R&D, but focused only on equipment costs.

<sup>15</sup> Previous tax incentive where reduction of payroll tax and social contributions for newly employed R&D personnel was allowed has been cancelled in 2006.

team members. This programme absorbs major share of public R&D finance.

-Basic and applied research projects are supported by the Agency annual public calls and usually specify the priority areas for research.

-Targeted research projects, where different ministries specify their needs for research inputs in support of their strategies or implementation policies, is also supervised by the Agency. In the evaluation methodology, developed in 2006, more attention is given to the socio-economic relevance of research projects. In terms of priorities, new calls focus more specifically on the priorities set forth in the NRDP.

-A special programme for Young researchers, see details under support for training.

-Infrastructure programmes (support to participation in international conferences, organisation of international meetings in Slovenia, publications, data bases, etc.) and international research cooperation.

- *Strategic programmes for industry:* see under grants for industrial R&D.
- *Equipment sharing:* this concept has been supported via specific measures such as formation of technology centres (participation of public R&D units as well as industrial R&D); establishment of centres of excellence, where such centres would provide research facilities for all participating individual research or industrial partners and partly in formation of clusters.
- *Support for training and mobility:*
  - One of the longest kept measures, which had initially focused more on public research sector, is the **Young researchers programme**. It has been expanded in 2001 to include a special window for young researchers coming from business sector. The programme provides for the costs of M.A. or doctoral studies, including the salary, tuition and mentorship costs. Its objective is to foster employment of highly educated people in business R&D. While initially the young researchers were mostly going

to S&T studies, more recently the programme attracted also postgraduate students from other fields (economics, social science, humanities).

- The same objective is followed by a new measure, introduced by the Ministry of Economy in 2006, under which a **transfer of researchers from public research institutions to business R&D units** is supported. The measure provides for co-financing of the salaries of the researchers who have been working for at least three years in public R&D as well as a set amount of funds for additional training abroad. The specific criteria is that the researchers eligible are those with engineering or natural science background and that they will continue working in the same area of research. Since this is a new call, it is too soon to assess the success rate of the uptake of such mobility scheme.<sup>16</sup>

➤ *Grants for industrial R&D:*

- **co-financing of strategic research and development projects** of enterprises or groups of enterprises (clusters, technology platforms or other public-private R&D networks); financing provided in the amount of 25-35% by MHEST;
- support for **joint development- research projects** proposed by firms and knowledge institutions, working together within the clusters or/and technology networks or centres of excellence, especially in the priority areas (ICT, new materials, process technologies, biotechnology with pharmaceuticals, environment technologies)- financed through European Regional Development Fund (ERDF).

*4.1.2. Services (information brokerage, support, networking measures)*

➤ *Information and brokerage support*

- **Voucher system for consultancy** and training is available to SMEs under which SMEs, especially small and micro firms can apply for reimbursement of the consultancy costs if registered consultants are used.

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<sup>16</sup> A very similar measure was proposed by TIA to its Advisory and Management board, but has not been yet developed towards a call.

The area of consultancy ranges from marketing, human resources management to internationalisation and innovation. The executing agency is JAPTI. A well established programme has been partly co-financed in 2005 and 2006 by ERDF.

- **Advisory services:** a special programme has been introduced by the Ministry of Economy and is executed by JAPTI, providing information service to small and micro businesses in the area of registration and administrative procedures.
- International technology watch: **Innovation Relay Centre Slovenia**<sup>17</sup> has been established under EU co-financing at the largest public research institute in Slovenia (Jozef Stefan Institute) and University of Maribor, Centre for Interdisciplinary and Multidisciplinary Research and Studies – CIMR<sup>18</sup>. It actively promotes international transfer of technology to Slovenian SMEs.

➤ *Networking measures*

**Support to technology centres** (started in 1994). *Technology centres* are independent legal entities, established by several companies for the purposes of R&D in a specific field or branch, as well as for the provision of R&D equipment subsequently made available to companies for their development projects. There are currently 25 active technology centres.

**Support to the formation of technology platforms** was the initiative of the Slovenian Chamber of Industry and Commerce, launched in response to EU policy in the area of R&D and innovation. Under the support of MHEST there are currently 22 technology platforms, with long-term ambition to participate in technology platforms within European Research Area.

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<sup>17</sup> The mission of the IRCs is to support innovation and transnational technological co-operation in Europe with a range of specialised business support services. IRC services are primarily targeted at technology-oriented small and medium-sized enterprises (SMEs), but are also available to large companies, research institutes, universities, technology centres and innovation agencies. (<http://irc.cordis.lu/ircnetwork/network.cfm> )

<sup>18</sup> <http://www.irc.si/slo/welcome.asp>

**Technology parks** (4) are supported by Ministry of Economy (ME). Until 2005, the services they offer to SMEs located within the parks were subsidised, but in 2005 and in 2006 a special public call, supported also by the funds from ERDF provided substantially increased resources for construction of new premises and new research infrastructure investments within technology parks. Still, funding for regular activities is provided by the ME via the public call executed in 2006 by JAPTl.

Development and modernisation of technology centres, technology parks and incubators- financed through ERDF;

Preparation of strategies, programmes and new services to be offered by technology centres/ parks, incubators, clusters or technology networks and for project management- financed through ERDF; **This is probably the most explicitly service-focused measure, which was introduced in 2005 and repeated again in 2006 under EDRF.** It offered financial support to the eligible entities/ intermediaries for development of new business-related services.

New investment in **research infrastructure** within business zones, clusters or technology networks - financed through ERDF.

**University incubators** are now working at Ljubljana University, University of Maribor and Primorska University. The most advanced is the incubator in Maribor, which has been able to attract various national, international and private funds for its activities and already hosts several businesses, established by students. Their role is particularly important in training and awareness-raising, since non-technological innovation is featured regularly in their conferences and seminars.

As can be established from the above, there are hardly any supply-side measures that target directly service related innovation, however some mechanisms facilitate also the innovation in

services functions. In the past, there were some specific instruments particularly supportive to innovation in service functions of firms, such as for example, the co-financing schemes for the introduction and implementation of *ISO standards*<sup>19</sup> in the middle of 1990s. In the period 2003-2005, the Ministry of Economy subsidized the implementation of the *20 keys' method* in the companies. The measure co-financed the cost of the licence procurement from the consulting company, appointed as a partner in the project<sup>20</sup> as well as process adaptation. Chamber of Industry and Commerce also provided support to this mechanism by enabling the training of people from participating companies in regard of the adoption of 20 keys method.

## **4.2. Demand-side measures that are targeting service related innovation**

### *4.2.1. Systemic policies (e.g. promotion of clusters)*

**Clusters** have been introduced as a mechanism to support cooperation among enterprises by the Ministry of Economy in 2001. In fact, three pilot clusters have been established (automotive, tools and logistic) with the support of the state for 3+1 year (ME co-financed 40 % of the cluster's budget). Some clusters are also very successful in acquiring funds from abroad, mostly European structural funds. The experience of clusters shows that even though the transfer of technology and related innovations are deemed essential objectives of clusters, they also introduce innovations in services for their members such as for example information services, logistics, training and promotion activities.

In 2003, an internal and an external evaluation of clusters were carried out, which at the time was not a typical approach to innovation measures. The results showed different levels of success in different clusters, with some progressing even more dynamically than expected. It also revealed a low level of initial trust among the cluster members, problematic support levels of the top management in some cases and insufficient coordination of cluster-related measures at the policy level. The structure of the cluster and the leadership potential of the cluster's coordinators seem to be two of the most crucial factors of success. Another external evaluation, carried out in 2004 (Jaklič et al, 2004), found that the effects of the clustering are

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<sup>19</sup> This was supported by the Ministry of Economic Affairs, Ministry for SMEs, Development Corporation of Slovenia, Chamber of Industry and Commerce and Chamber of Crafts.

<sup>20</sup> Companies that utilised this mechanism later established their own association aimed at exchanging best practices in the system of permanent improvements.

of a long-term nature and are particularly pertinent in the area of improved communication and knowledge transfer. Furthermore, it was discovered that clustering would not have happened unless it had been supported by special measures and that the current clusters felt confident to continue even if the government support should cease. Nevertheless, in 2005 the cluster promotion measure was abolished. The measure supporting development of research infrastructure was introduced, not aimed only at clusters, but allowing the clusters to apply for subsidies to upgrade research infrastructure and propose joint research projects. This allowed for the continuity in the life of the already established clusters.

#### *4.2.2. Regulation*

Regulation conducive to competition in electronic communications is vital to furthering innovation in services. The market of fixed telephony was formally liberalised already in 2001 but it took quite some time to introduce competition, due to abusive behaviour of the incumbent and poor functioning of an independent regulatory agency (Stare, Kmet, Bučar, 2004). The market share of dominant operator is still high. An important step towards the strengthening of competition and increased broadband access to internet was achieved in 2005 with unbundling the local loop and abolishing the linking of ADSL services supply to ISDN that was imposed by incumbent operator. The unbundling has resulted in increased number of xDSL suppliers, decreased prices while securing high quality of services and stimulating introduction of new services. Further improvement of regulation was undertaken very recently<sup>21</sup> and will enable the introduction of new electronic networks<sup>22</sup> and services that should also encourage the deployment of new or improved services.

#### *4.2.3. Procurement*

No information could be obtained on the role of public procurement in encouraging innovative behaviour of suppliers of services. Recently, two new laws on public procurement have been adopted which entered into force in the beginning of 2007. The first one covers public procurement in general while the other refers to public procurement in the field of

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<sup>21</sup> Amendments to the Act on Electronic Communications were published on December 12, 2006.

<sup>22</sup> State owned companies such as Motorway Company and Slovenian Railways that have optical telecommunication will be able to offer their surplus capacities on the market thereby increasing the competition.

water supply, energy, transport and postal services. It remains to be seen whether their implementation could have any effect on encouraging innovation in services. The department in charge of legislation and procedural matters for public procurement at the Ministry of Finance has participated in various EC- supported activities, where also support to innovation through public procurement had been discussed. It can be expected that EU agreed measures in this area will eventually be integrated in Slovenian procurement policy as well.

## **5. Measures promoting services internationalisation**

In the past the Ministry of Economy provided grants to support the internationalisation of firms. This instrument was discontinued in 2006. The activities supporting the internationalisation of Slovenian firms will be transferred to newly established Representative offices of Slovenian economy abroad.

Ministry of Economy (ME) performs activities in regard of providing potential foreign investors with the relevant information on the advantages of Slovenia. The Public Agency for Entrepreneurship and Foreign Investment (JAPTI), the executing agency of the ME, is currently engaged in attracting foreign investors to build logistic centres in Slovenia, among other areas of FDI promotion.

## **6. Measures seeking to create favourable framework conditions for service related innovation**

Encouraging the development of broadband infrastructure implicitly supports innovation in services. In the framework of Broadband services development strategy adopted by the Government in 2004 some activities were planned but their implementation was very modest due also to the discontinuation of the Ministry for Information Society in the end of 2004 and consequent dissolution of its activities to three Ministries.

In the second half of 2006, a Department for Information Society at MHEST had prepared a call to support e-business introduction in micro and small enterprises. The call, for which a limited amount of funding was provided, was executed by JAPTI<sup>23</sup>. Most of other planned programmes, related to the support of e-business and promotion of ICT introduction in

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<sup>23</sup> The report on the results of the call could not be obtained at this time yet.

business sector have been abandoned due to lack of staff and financial resources of this department.

Overall, as reflected in the above survey of policy documents and related measures, the measures for encouraging innovation have so far been general in character and therefore, in principle applicable to any firm, irrespective of the sector of activity. In fact, innovation in services has been, with few exceptions, referred to only implicitly. Several measures, aimed at boosting innovation in services, which were proposed for the implementation in 2005 and 2006, have been delayed and it is difficult to judge the probability of their introduction. So even though policy documents and action plans of a more recent origin envisage the launching of specific measures to explicitly support innovation in services and horizontal policies, conducive to innovation in general, it is difficult to say what is their plausible rate of implementation and therefore, their impact on more favourable environment for service related innovation. Such measures are planned at the national, regional and municipal level as well as in individual service sectors.

## **7. Horizontal policies support to service related innovation**

Horizontality of innovation policies is a not well developed concept in Slovenian policy framework. Again, some of the strategic documents draw attention to this concept, but activities in practice seldom reflect this. The lack of coordination among different policy actors has been mentioned as one of the deficiencies of innovation policy and practice (EU Innovation TrendChart Country report on Slovenia, 2006).

Among policies, which may be supportive to service related innovation, the policies in the area of entrepreneurship promotion and in the area of education, should be mentioned, as well as several rather un-coordinated activities of different groups in the area of awareness-raising of innovation and knowledge.

Slovenia has a very long and successful track record of a support mechanism geared towards training of young researchers, which is partly administered by the Slovenian Research Agency (Young researchers at public R&D institutions) and partly by the Ministry of Higher

Education, Science and Technology (young researchers from business sector)<sup>24</sup>. This measure has attracted young people to research, and consequently improved human resources in the area of R&D and innovation.

Education and training on innovation is slowly paving its way to the curricula of tertiary education institutions. Some faculties<sup>25</sup> have introduced specific courses on innovation and innovation management into their curricula. Since the late 1990s, the Institute of innovativeness and technology has been popularising innovation among youth. Within the project *Innovativeness for youth* it published a book “Succeed with the idea”, aimed at providing support to the students, teachers and mentors in developing innovative ideas. JAPTI, Ministry of Economy and MHEST jointly finance annual awards for Innovativeness and Entrepreneurship of the Youth.

Different policies in support of friendlier business environment also have an impact on service related innovation. Except for those, already mentioned in the section 4, one should mention the efforts in simplifying the registration process for SMEs and individual entrepreneurs (craftsmen)<sup>26</sup>, introduction of e-taxes for submission of value added tax by legal persons, step-by-step introduction of services of e-government<sup>27</sup> and efforts made in simplification of certain administrative procedures. Still, there is significant room for improvement in this area.

Given the fact that innovation culture is not well established in Slovenia, any initiative that supports awareness raising, is most welcome and can have important impact on service related innovation. Chamber of Industry and Trade and its regional subsidiaries annually award the best innovation which aims at raising the innovation culture. While this award is almost exclusively given for technological innovation recently also innovation in services was awarded (innovative consultancy services). Another initiative of a very recent origin is related to the innovation journalism<sup>28</sup>. In 2006, the idea of innovation journalism has resulted in the

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<sup>24</sup> See page ..of this study for detailed presentation.

<sup>25</sup> Economic Business Faculty of Maribor, Management School in Koper, Politechnics from Nova Gorica and GEA College of Entrepreneurship.

<sup>26</sup> Service of single-point registration of activity, called VEM was provided for individuals in 2005, but its planned expansion to any legal form of enterprise, expected in 2006, has not been implemented yet.

<sup>27</sup> Mostly still at the level of providing information over Internet and various forms, but in a few areas also services are provided on-line.

<sup>28</sup> The innovation journalism is a new concept of reporting about the innovation, technology and changes. Its major aim is to overcome traditional thinking about innovation as a matter of science and technology circles

organisation of the first European workshop on the Innovation Journalism in Slovenia that was carried out in cooperation between the TIA, the Faculty of Social Sciences at Ljubljana University and by the company Vibacom. Its principal aim is to inform media representatives about their role as actors in creating innovation friendly environment. Also in 2006 TIA started with the organisation of Innovation festivals, which should become an annual event. The purpose of the festival is to establish and to deepen the cooperation between the key actors in the field of technological development and innovations.

The University of Maribor, Faculty of Business and Economics organizes already 27<sup>th</sup> annual scientific and business conference on Innovation and Entrepreneurship, which has outgrown its regional or even national framework by attracting more and more eminent speakers, consequently getting more media attention as well. Several institutions, both public and semi-private, participate in different EU-led initiatives and studies (SLORITTS- regional innovation system with follow-up activities of three “Umbrellas”<sup>29</sup>, IMPACTscan, 5SCHEMES, creative clusters, PRIME, etc.) which all contribute to awareness raising on innovation, innovation-related concepts and thus implicitly also on promotion of service related innovation.

Apart for measures of a general character, aimed at enhancing innovation, there also exist initiatives of individual service sectors. Given a very important role of tourism in Slovenian economy it is not surprising that this sector was one of the first to acknowledge that innovativeness can make a difference in increasing its competitiveness. The Strategy of Slovenian tourism 2002-2006 recognised that strengthening of competitiveness mostly depends on the development of new tourist products and increased quality of the supply of the tourism sector. Accordingly, they have introduced supporting measures to encourage innovation. In 2006, Directorate for Tourism under Ministry of Economy financed a workshop for training targeted at innovators in tourism. In addition, the Slovenian Tourist Board annually presents the award (The Sower) with the objective to encourage creativity and innovative activity among actors in the tourism sector. In 2006, the awards were given in two

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toward the one that understands innovativity as a task of the whole society. The concept was first introduced in the USA and transferred to Scandinavia and some other developed countries in the world.

(<http://www.innovationjournalism.si/>)

<sup>29</sup> One of the results of SLORITTS- regional innovation system project was the formation of three “umbrellas”, joining together partners in a specific area of activity: tourism, technology and medical services. The projects were initiated and coordinated by the Municipality of Ljubljana.

categories: innovative market communication in tourism and innovative tourist products<sup>30</sup>. As a very recent and novel initiative to promote the innovative potential of Slovenian tourism, the Slovenian Tourist Board has in cooperation with Ministry of Economy established a virtual Bank of Tourist opportunities<sup>31</sup> that will enable information brokerage. The basic concept of the Bank's functioning is to collect innovative ideas in the field of tourism and match them with the demand for the implementation of these ideas. The Bank is open to anyone having an idea (project), looking for a partner or wanting to financially support good project.

## **8. Future policy measures**

In June 2006, the Government has adopted the Programme of measures for stimulating entrepreneurship and competitiveness in the period 2007-2013, which will be carried out by the Ministry of Economy and its agencies, especially JAPTI. The programme brings forth certain new measures/ institutions, with the objective to foster entrepreneurship. The programme of the support measures is based on four main chapters:

- Fostering of entrepreneurship and creation of an environment, more friendly to entrepreneurship;
- Knowledge for development
- Development and innovation in business sector
- Financial mechanisms

The first chapter deals with measures focusing on supportive environment for enterprises: administrative simplification with strengthening of VEM (a one-stop shop for the registration of a new business unit), voucher consultancy scheme, Euro info centres and special support for target groups (women, social entrepreneurship, countryside entrepreneurship). The second chapter addresses the upgrade of the human potential within business firms for innovation and R&D by facilitating the employment of highly educated personnel, especially with S&T degrees as well as increased mobility of research personnel from public research sector to business units. Within the third chapter measures to stimulate increased R&D investment by business sector are discussed and the establishment of a new centre for competitiveness and

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<sup>30</sup> These awards are given in kind and range from free presentation at tourist fairs, exhibitions and workshops abroad, free advertisements in tourist agencies publications, free participation at seminars and forums of Slovenian Tourist Board Academy to the use of the official logotype of the award "The sower").

<sup>31</sup> [http://www.slovenia.info/?ps\\_btps=0&title=Banka+turističnih+priložnosti+Slovenije](http://www.slovenia.info/?ps_btps=0&title=Banka+turističnih+priložnosti+Slovenije)

innovation is proposed. The key objective of this new institution would be better coordination of the activities and measures in the field of innovation and improved networking among the stakeholders. In addition, third chapter includes measures for stimulating process and organisational innovations, aid for consultancy and support services aimed at innovation, support for establishment and operation of innovative groups, etc. Issues related to the financial support to SMEs, like provision for various forms of venture and start-up capital, guarantees and interest rate subsidies are discussed in the fourth chapter.

It remains to be seen how will the implementation proceed, especially since in spite of setting the improvement of coordination as one of the main tasks, the Framework provides no information as to the division of labour among the Ministries and other agencies active in the area of entrepreneurship and innovation (like MHEST, TIA, etc).

## **9. Other relevant issues and comments related to the emerging service innovation policy**

Based on the experience with the research of services & innovation policy in Slovenia and on the interviews with policy stakeholders, it is our educated guess that modest awareness of policy actors of the importance of non-technological innovation and the domination of technological innovation concept in the mindset of different stakeholders have hampered the shaping of more explicit policies, aimed at the services innovation<sup>32</sup>. The interviews confirmed time and again that understanding and adoption of service concepts, including innovation in services is weak. Even though a number of actors and institutions acknowledge the importance of innovation in services and the need to shape specific measures in this respect they admit that the technological perception of innovation is still dominant in different spheres. It has to be noted however that there are quite a few companies in manufacturing and in service activities that are well aware of the important role of innovation in services and in service functions for the improvement of competitiveness. Also, individual educational and research institutions recognize the very broad character of innovation that goes beyond technology.

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<sup>32</sup> It was also observed that neglect of innovation issues per se and not only of innovation in services is evident in policy arena.

It turned out that the basic comprehension of the concept of innovation in services was an obstacle, even during conduct of the interviews. Some of the interviewed persons have discussed the innovation in methods, processes, organisational and business models, while not being aware that all these could be related to innovation in services. This calls for the awareness-raising about non-technological innovation among stakeholders, with explicit presentation of cases of different types of (successful) innovation in services. This could make service related innovation more transparent and promoted among actors in the research (especially among researchers in science & engineering field) and policy sphere as well as within the business community.

The second major observation refers to the fact that the existing measures and instruments to foster innovation did neither explicitly discourage nor encourage innovation in services. In fact, a number of infrastructure support measures and networking mechanism were introduced in the past that have the potential and could facilitate innovation in services. They were however poorly utilised owing on one hand to already mentioned modest awareness about service innovation and on the other hand owing to the fact that in the implementation phase these measures turned out to be inappropriate for encouraging innovation in service firms or in service functions. The assessment criteria for the selection of beneficiaries of different programmes and mechanisms were ill-suited for the service firms or for the character of innovation in services, which has to do with intangible assets, non-technological innovation, methods and models. In addition to this, the institutional organisation to support innovation favours traditional (linear) models of innovation and these are basically technology related. This shows the complexity of issues that need to be considered in shaping the innovation policy conducive to innovation in services.

Finally, the availability of human capital with good knowledge of innovation issues in general and of the specificities of innovation in services in particular, seems to be essential for improving the capacity to shape the innovation policy in a more friendly manner to innovation in services. This refers to the training and skills improvement of all stakeholders involved in service innovation policy and needs to be complemented with coordinated policies and activities of different institutions.

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