



Bulletin of the Slovenian Business & Research Association

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Innovation Hubs – a Major Instrument of the Innovation Ecosystem

Hosted by Municipality of Ljubljana, the 4th **KEN (Knowledge Economy Network) Forum** brought together over 60 participants from 13 countries on 25 - 26 November 2014. It focused on the following pertinent issues:

- What are the implications of changes in the nature of innovation process for policy makers and stakeholders?
- Why are so many countries and regions slow in recognizing these changes, and providing rather ineffective solutions to the challenges faced at the exceedingly globalized innovation market?
- Which are the lessons to be learnt from best and next practice in building innovation ecosystems, including the role of innovation hubs?

A series of presentations (accessible on www.knowledge-economy.net) and discussions has demonstrated that competitiveness nowadays depends primarily on innovative capacity of an economy. The main changes in innovation process - recognized in the circular pattern (as opposed to the traditional, linear pattern) - can be summarized in the following points: speed, multi- and interdisciplinary, collaboration of small & large teams, and democratization, including the contribution of users and consumers of products and services.

Experience of many successful **Innovation Hubs** around the world demonstrate the huge potential of this form of concentration & integration of research, innovation, funding, commercialization and promotion - backed by efficient instruments of government support. Hubs, as the latest manifestation of trends to aggregate innovation capabilities in order to achieve critical mass, can be developed in many ways, but the most important condition of their success remains that each Hub must be designed and implemented in accordance with local conditions. They have to focus on areas of present strength and future innovation potential of the respective territory.

With full respect for all these elements, Innovation Hubs can **strongly enhance the innovation performance of a country or region**. This can be achieved by:

- encouraging and facilitating focused collaboration & partnerships, and further specialization among Hub members, as well as closer international cooperation;
- attracting world class talent;
- attracting international investors;
- increasing the international visibility of innovation activities and achievements.

Slovenia's lack of critical mass, particularly in areas where international excellence has been achieved, as well as insufficient long term linkages with best global actors - together with lack of focus on areas of promising potential - have been identified as major factors preventing needed breakthroughs in country's innovative performance.

Based on views and recommendations of the KEN Task Force, led by Prof. R. A. Mashelkar, participants of the Forum felt that this project properly addresses the challenges of improving Slovenia's economic and innovative performance. Positive assessment of the potential of this project by Slovenian Minister without Portfolio for Development and Cohesion Policy, Mrs. Alenka Smerkolj, has been appreciated.

Slovenia Key Figures, 2013

Economic and environmental performance	Slovenia	OECD	Gross domestic expenditure on R&D	Slovenia	OECD
Labour productivity			GERD		
GDP per hour worked, USD PPP, 2013	41.5	47.7	Million USD PPP, 2012	1 540	1 107 398
(annual growth rate, 2008-13)	(+1.2)	(+0.8)	As a % of total OECD, 2012	0.1	100
Green productivity			GERD intensity and growth		
GDP per unit of CO ₂ emitted, USD, 2011	3.3	3.0	As a % of GDP, 2012	2.63	2.40
(annual growth rate, 2007-11)	(+1.3)	(+1.8)	(annual growth rate, 2007-12)	(+11.4)	(+2.0)
Green demand			GERD publicly financed		
NNI per unit of CO ₂ emitted, USD, 2011	3.1	3.0	As a % of GDP, 2012	0.77	0.77
(annual growth rate, 2007-11)	(+1.4)	(+1.6)	(annual growth rate, 2007-12)	(+7.7)	(+2.8)

Source: OECD Science, Technology and Industry Outlook 2014

Editorial



The Slovenian government, under the leadership of Prime Minister Miro Cerar, president of the new and winning party of the last Slovenian parliamentary elections, not long

ago surpassed the 100 day mark since its inauguration. During this time, many issues have come to light, which are of utmost importance for Slovenia's future development to maintain modest and relatively promising GDP growth.

Several measures are to be taken to reduce the stubbornly high youth unemployment and significant shifts are expected in the area of respect for the rule of law, as well as further privatization efforts.

In Slovenia, the mass privatization process, which was a combination of 'buy out' and 'give away' methods, initially started in 1993 and lasted for many years. The result was pretty much disbursed ownership, with the government keeping majority stakes in many companies; since then the ownership concentration process has followed and still needs to be properly completed. A combination of budgetary needs and the wish to finally privatize contributed to the fact that the previous government restarted with the privatizing process. In fact, 15 relatively large and important Slovenian companies were put on the 'privatization list', of which two have already been privatized.

Once again however, a wide-ranging discussion has just begun in Slovenia, whether the list of companies to be privatized is sound, and whether some of those companies should be privatized at all. For some, such as Telekom Slovenije, the largest national telecommunication company including mobile operations, a due diligence process has already started.

Prof. Dr. Draško Veselinovič
 President, Management Board

SBRA Welcomes New Member – Slovenian Railways



The Slovenian Railways Group (SŽ) is established as a domestic and international rail operator in freight and passenger transport with a range of services based around one-stop-shop logistics, rolling stock maintenance and operation of rail traffic on the domestic rail infrastructure. The Group's business operation made visible progress in the past few years, while the optimization of work processes greatly decreased the labour costs. Moreover, the recent years show a significant growth in business revenues and volume of services. The business results this year around are highly encouraging, with freight performance peaking at roughly 18 million tonnes of goods carried, over 90 percent of which was generated in international services to Austria, Germany, Italy, Hungary, Slovakia, Croatia, and the Czech Republic. Having adopted a focus on international markets, the freight operator, SŽ-Freight transport successfully boosted its performance, greatly increasing total volumes and services sold in freight. A similar success is also noted in the passenger operator, SŽ-Passenger transport, which is constantly improving their services and increasing passenger comfort.

Slovenian rail network lies on two of Europe's designated transport corridors, with Slovenian Railways offering key connections which link Central, Eastern, and South-Eastern Europe with the biggest logistics centres in Western Europe. A combination of own sources, expertise and a lot of hard work allowed Slovenian Railways to greatly improve their business performance in but a handful of years, a trend of growth which is showing no sign of decline as revenues and sales volumes continue to rise together with SŽ market share.

SBRA Welcomes New Member - National Institute of Chemistry



The National Institute of Chemistry (NIC), with over 280 employees, is the second largest natural science research institute in Slovenia. It was established in 1946 as the chemical laboratory of the Slovenian Academy of Arts and Sciences and was transformed into a public non-profit organization in 1992. Research and development activities at the institute are organised within 17 laboratories. Close to half of those employed hold PhD degrees and up to 250 scientific papers are published on a yearly basis. Young researchers represent about 20% of the institute's staff, making NIC one of the leading Slovenian organizations for graduate-level education and training. The two branches of research are material and life sciences. NIC is the leading research institute in the field of polymer chemistry and technology in Slovenia, and is strongly involved in EU funded projects. The institute is equipped with state-of-the art scientific equipment, including AR-STEM electronic microscope with the best resolution in the region. NIC is also the nuclear magnetic resonance centre for Central and South Eastern Europe. The aim of the institute is to enhance cooperation with industry to increase Slovenia's innovation capacity.

Briefs

Business Briefs

With P.A.T.H., Philippe Starck and Riko launch the second generation of positive energy homes



After years of intense technological development, Philippe Starck and the Slovenian company Riko debut a line of "Prefabricated Accessible Technological Homes" – P.A.T.H. – a unique turnkey living solution that answers today's and future challenges of individual prefabricated housing by combining high technology, comfort, timeless design, and respect for the environment to deliver a reliable product for the people will live in it. Combining Philippe Starck's signature design and Riko's high expertise with state-of-the-art sustainable prefabrication technology, P.A.T.H. houses usher in a new area of positive energy housing. They are designed to integrate seamlessly high eco-technology systems – solar, thermal, solar photovoltaic and wind turbines, which make it possible for the homes to produce more energy than they consume. The future owners can choose between 34 different floor plans, which range in sizes 140 m² to 350 m², as well as in number of rooms. Adaptable to client's needs, living circumstances and personal requirements, P.A.T.H. models of homes also offer several personalization possibilities. As of October 2014, the different models of P.A.T.H. houses are available to buyers and future homeowners at www.starckwithriko.com and through the P.A.T.H. Distribution network.

Protein-sect – Winners of Startup Weekend: More than FOOD!

The Regional Development Agency of Ljubljana Urban Region (RRA LUR), its Regional Creative Economy Centre (RCKE), and the Student Council of the Biotechnical Faculty, University of Ljubljana organized

'Startup weekend: More than FOOD!' (i.e., second startup weekend in a series of similar events: the first concentrated on wood, while the theme of the next is still under discussion).

Intensive project and idea moulding, reshaping, and development, which took place in November 2014, was focused on creative solutions in food processing industry (from innovative recipes for nutritious and healthy food to mobile applications and a portable garden for growing vegetables and herbs).

Roughly 50 participants from various fields formed 9 interdisciplinary teams. The winning team Protein-sect developed a mealworm protein powder. The innovative product was tested among fitness enthusiasts, who were defined as the main target group. Results indicated tremendous potential of the winning idea – regardless of the 'not so traditional' main ingredient.

Port of Koper wins ESPO Award 2014



The Port of Koper in Slovenia has been awarded this year's European Sea Ports Organisation (ESPO) Award in recognition of its work in creating a sustainable future for the port and its surroundings. Koper was presented with the Award at a ceremony in Brussels on 4th November 2014.

The theme of this year's ESPO Award was Innovative Environmental Projects. Koper won the 2014 Award for its project, No Waste, Just Resources!, which aims to reduce the amount of waste through encouraging its reuse or reprocessing into environment-friendly materials, and includes such innovations as the use of paper mill sludge as an anti-dusting agent, the introduction of a heating system that uses recycled wood, the operation of the waste separation centre and composting plant and the reuse of marine silt as a construction material.

The ESPO Award 2014 attracted twenty projects from ports from all over Europe compete for the prize. Koper beat shortlisted projects from the ports of Huelva, Lisbon, Marseille and Rotterdam.

Research Briefs

Knowledge Management Festival in Slovenia



KM-FEST are clusters of international events for promotion, development and exchange of new ideas, knowledge, and its dissemination and transfer to the hands of potential users, co-organized by partners of the international virtual laboratory – LENS Living Lab (www.3-lab.eu).

The KM FEST presents a compilation of simultaneous applied research, industrial development, professional dissemination, collaboration and social events. The working title of the last KM FEST in Slovenia was »Smart Logistics and Factory of the Future«. The latest event included a 3 day expert seminar, 2 workshops for selected professional communities, 1 collaborative R&D project meeting and several supporting social networking events. The main focal points of discussions were logistics's emerging business models supported by enabling technologies and need for holistic innovations. The discussed theories and models were supported by presentation of selected practical examples from different industries.

The co-organizers of this KM FEST were LENS Living Lab partners: Faculty of logistics - University of Maribor (host), Institute of Technology and Innovation from SDU Denmark, Project and Technology Foundation India, Technology Research Center of Thessaly from Greece and Toolmakers Cluster of Slovenia.

For more, go to <http://kmfest.com/>

9th Slovenian Innovation Forum



The 9th Slovenian Innovation Forum, organized by SPIRIT Slovenia and the Slovenian Research Agency, provided the opportunity to showcase a wide range of innovations and business ideas present in Slovenia.

It included presentations of the most notable scientific achievements in the field of technology by the Scientific Research Council - Excellence in Science 2013. The overall purpose of both agencies was to bring together researchers, innovators, industry representatives, as well as to present the excellent scientific contributions made over the year to the general public.

Director of the Slovenian Research Agency, Prof. Dr. József Györkös, gave the keynote speech, where he emphasized how inextricably intertwined research, innovation and societal challenges are, and added, that such events represent a solid step in the right direction, connecting science and business.

Jozef Stefan Institute to Help Europe Meet Big Data Skills Gap

Open University researchers are behind an innovative project to establish a European Data Science Academy (EDSA) – a new online platform for training data scientists across Europe. The Academy will help organisations and businesses across the EU meet the urgent demand for professionals with the skills to manage big data. Demand for professionals with the skills to manage large amounts of data is expected to grow by 160 percent by 2020. With investment of €2.9m from the EU, development of the EDSA will draw on the expertise of a number of leading educational institutions and data science research organisations from across Europe. Participating organisations are: Jozef Stefan Institute, Open University (UK), University of Southampton (UK), Fraunhofer IAIS (Germany), Open Data Institute (UK), Royal Institute of Technology (Sweden), ideXlab (France), Persontyle (UK) and Eindhoven University of Technology (Netherlands).

Regional Briefs

The City of Ljubljana received the bronze Access City Award 2015



The recognition places Ljubljana among the most successful European cities in the field of public space accessibility for people with disabilities. More than 60 European cities participated in the competition to receive the Access City Award, which is given out by the European Commission. The City of Borås (Sweden) received first place, while Helsinki came second, with Ljubljana securing third place at the solemn award event on 3 December 2014 in Brussels. Other finalists in the competition included Arona (Spain), Budapest, Logroño (Spain) and Luxembourg.

Ensuring accessibility to persons with disabilities has for many years been one of the key priorities and ongoing activities of the City of Ljubljana, especially in the field of spatial planning, development of transport infrastructure, provision of public transport and social activities such as education, culture, sports, social care and health.

Ljubljana, Earth-Friendly Municipality 2014

For the third consecutive year, the City of Ljubljana has been awarded the "Planet Earth-Friendly Municipality 2014" title under the Municipalities category. The evaluation committee of a nation-wide competition in Slovenia has thus reaffirmed successful and sustainability oriented efforts of Ljubljana – Green Capital of Europe 2016 for a better quality of life. With numerous activities and experience, Ljubljana can set an example to other municipalities. Ljubljana is the only municipality among participating ones, which has until now produced a strategic noise map as part of the requirements of the Directive 2002/49/EC.

Ljubljana ranked on the Global Top 100 Sustainable Destinations 2014



Ljubljana has been invited and nominated as a global Sustainable Destination in 2014 because of its active work in the field of sustainable development. Ljubljana is among several Slovenian destinations introducing the ETIS indicators (the European Tourism Indicators System for sustainable destinations, developed by the European Commission), and the first Slovenian destination which was assessed by the GSTR – a tool which, besides European indicators, also includes global indicators for sustainable destinations. The tool allows user to compare destinations on a global level.

For further information, go to <http://greendestinations.info/top100/>

Start:up Ptuj



The initiative is a part of Start:up Slovenia, a comprehensive entrepreneurship programme built to create an effective ecosystem for entrepreneurial talents and support ambitious startups. The aim is to place Ptuj on the map of entrepreneur-friendly cities. Start:up Ptuj is largely funded by a variety of European projects, as well as the Municipality of Ptuj. In 2014 over 250 participants attended the 15 workshops and events that were organized, and developed 12 business ideas.