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How can science park & city form an innovation ecosystem together? Louvain-la-Neuve success story

PARALLEL 5
Linking STPs to people and cities

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HOW CAN SCIENCE PARK AND CITY FORM AN INNOVATION ECOSYSTEM TOGETHER?

The Louvain-la-Neuve success story

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Executive Summary

The creation of Louvain-la-Neuve Science Park (Belgium - 1971) is based on a “lifelong” relationship between city, university and science park. Over the years, the existing dynamics gave birth to an innovative and integrated ecosystem led from within the Catholic University of Louvain’s “third mission” (society service) : Louvain Innovation Network. This new structure federates local actors involved in entrepreneurship and innovation, addressing the entire innovation chain from fundamental academic research to stimulating, financing and supporting technological projects through spin-off creation and providing the accurate facilities to welcome each sort of company. Today, as innovation is put higher up in politicians’ agendas, LLN has become a regional knowledge driver for economic development, a “smart city” with a “vibrant center”. Key success factors in this achievement can be resumed in one sentence: LLN’s approach to innovation dismantles all barriers between technology actors in a quality environment where we cultivate interaction, cooperation and entrepreneurship.

Chapter One

Louvain-la-Neuve, a place where science park and city merge

Last year at IASP World Conference in Tallinn, the presentation of the global members statistics by IASP General Director Luis Sanz uncovered some interesting data about our science park: according to the general survey, Louvain-la-Neuve Science Park belongs to the 30.3% SPs located on a university campus and the 21.8% SPs having residential facilities as a main element available on site¹. *What those key figures suggest on paper shows in reality that the whole creation of Louvain-la-Neuve is based on a “lifelong” relationship between city, university and science park.*

In fact, at some point in Belgium’s history, a political decision enforced in 1968 the French-speaking section of the Catholic University of Louvain (UCL) to move from the city of Louvain towards a new location thirty kilometers south-east from capital Brussels. This new location would be named Louvain-la-Neuve (LLN) or Louvain-the-New. At that time, the land was only a beetroot field with a few isolated farms. Everything had to be created from scratch, so visionary leaders designed a revolutionary urban masterplan. The new Louvain would embrace all the functions of a city and add a university campus and a science park on the same spot and in a **sustainable way**: the LLN concept was born. An alliance of tradition and modernity, the youngest city of Belgium was conceived as a city of the future on the basis of a medieval university, the UCL².

Created in 1971, Louvain-la-Neuve is an “**all-in-one knowledge city**” that presents all the advantages envisioned by its innovative town leaders. The great priority was given to establishing dialogue between all different actors e.g. residents, workers, students, professors. In order to create this proximity effect, the need to confine the city to a “human size” was evident. A highly concentrated surface area of 2 km radius and 1.000 hectares welcomes 22,000 inhabitants, about 29,000 students from 125 countries and 15,000 jobs. A place to live, study, work but also rest and leisure. Alongside the classic services available in each medium city - shops, restaurants, theatres, cinema, conference center, museums (such as Musée Hergé, father of comic strip hero Tintin) -, LLN boasts one of the most dynamic shopping malls and the biggest complete sports complex in Belgium. The city is also very green, with 200 ha woods, a lake and a golf course.

Last but not least, LLN is designed as a “**car free**” city with a pedestrian-only inner city centre, making urban life much more enjoyable because everything is safely packed within foot distance. This has been achieved by raising the city centre on stilts, so that cars and trains pass underneath the city. Sustainable development is a major concern, so LLN is amongst other things equipped with district gas heating, double drainage network for rainwater and wastewater, special access for PRM (people with reduced mobility) in the inner city, and so on. Fast access to major cities like Brussels or international airports in the capital and Brussels-south is guaranteed. Over time, LLN has become so attractive that demand exceeds supply. In short, Louvain-la-Neuve is a place where the words “innovation” and “quality of life” make full sense.³

Consequently, the interconnection between city, university and science park is to be found in the very roots, the very core of LLN’s creation. But if we take them individually, those three components are insufficient to consider Louvain-la-Neuve itself as a “*self-sustaining vibrant center*” connected to a “*larger regional knowledge ecosystem*”, one that emerges as “*a new strategic framework for providing scale, efficiency and global competitive advantage*”⁴.

This all-time relationship between city and science park has become the basis for the emergence of an **innovative ecosystem: Louvain Innovation Network**. Chapter two will explain the new dynamics that have taken place in LLN through this new structure, conferring to Louvain-la-Neuve the status of “creative”, “smart city” and “vibrant center”.

¹ See IASP website <http://www.iasp.ws/web/guest/statistics>

² The Université catholique de Louvain (UCL) was founded in 1425

³ See Appendix I

⁴ Rick L. Weddle, Mapping Knowledge Ecosystems, June 2012, 53 p.

Chapter Two

Louvain Innovation Network: LLN's vibrant center for innovation and entrepreneurship

LLN has nowadays evolved from a knowledge city to a knowledge ecosystem, taking in all the local partners driving entrepreneurship and innovation internally, and actively interacting with the outer larger regional network (government, business networks, and so on).

Louvain Innovation Network

Since May 2013, “Louvain Innovation Network” (LIN) regroups all existing UCL partners and initiatives in charge of stimulating and supporting entrepreneurship and innovation. This community is composed of 6 partners (who will be further depicted hereunder): the Catholic University of Louvain (UCL), the Louvain Technology Transfer Office (LTTO), the support of VIVES investment fund for spin-off and technological start-up creation, two incubators (*Centre d'Entreprise et d'Innovation* (CEI) and Brussels Life Sciences Incubator (BLSI)), Mind&Market and Louvain-la-Neuve Science Park. LIN is considered as part of the university's third mission, serving society.

Together, they constitute the organic essence that nurtures LLN's “vibrant center”⁵, attracting international talent and investors, aiming to leverage technology and innovation on a regional scale. The main objective for their reunion is to provide with clarity the right set of tools to innovative business leaders and projects, therefore favouring the creation of new companies and the reinforcement of entrepreneurial spirit. Their combined actions address to researchers, students, innovative project owners, spin-offs, start-ups (from zero to three years) and companies (over three years). From fundamental university research to entrepreneurship, they form a complete innovation value chain available on six different locations in Wallonia and Brussels that also builds itself on a top-level international network. Put in a regional context, Louvain Innovation Network can be viewed as UCL's answer to the actual challenges Belgium and Europe are facing in terms of regional innovation and competitiveness in a period of economic crisis.

Partner 1: the Catholic University of Louvain (UCL) ⁶

Founded in 1425, the Catholic University of Louvain is the biggest university in Belgium's French community. The institution has three missions: to teach, research and serve society. The three of them focus on innovation and entrepreneurship. Spread out on six locations in Wallonia and Brussels, the university counts 5,623 working people in 200 different professions.

Mission one: Teach

With fourteen faculties covering human sciences, health sciences and sciences and technologies, UCL provides complete learning offer to 29,000 regular students from 125 countries (about 20% are foreign students). Entrepreneurship is anchored at the heart of its programs at the awarded Louvain School of Management: Minor in entrepreneurial spirit (Bachelor degree), Cross-disciplinary Master in business creation or CPME (Master degree), Executive Master in innovation and management (Executive degree). According to Best Masters.com 2012, CPME is in the top 10 Best Master in Entrepreneurship and Financial Times ranking 2011 awards the Louvain School of Management with the first position in Belgium for its Master degree and **the second position in the world for its Master in International Management**. Students have their own entrepreneurship club CréaLouv and junior company LSM Conseil. Internationally renowned, UCL is in the top 100 best schools in the world (Shanghai ranking). Recently, the university has founded with three other Belgian business schools a “LeaderSchool” for top-level managers. By January 2014, selected courses will be available on the edX platform which presents the best of higher education online (founding members are Harvard and MIT). Besides the UCL, it is also relevant to mention that LLN's academic system extends from kindergarten to third age university.

⁵ Ibid., p.8 of 53, the vibrant center or knowledge ecosystem node is defined as “the fully evolved and integrated merger of traditional science parks with the new urbanism town center concept”

⁶ www.uclouvain.be

Mission two: Research

Within the three sections mentioned here above (human sciences, health sciences and sciences and technologies), teaching and researching are done in a separate but coordinated way. The **research institute** is a second operating level that produces and implements research policies in the concerned scientific disciplines, sometimes in articulation with research poles. Both research institutes and poles are shouldered by **technological platforms**. Such platforms are centered around a consistent set of scientific and technical equipment (e.g. analysis laboratories). Finally, research centers gather members of one or more institutes around a common project, encouraging top-level cross-disciplinary research on shared concerns. More than 4,000 people are cross-disciplinary dedicated to fundamental and applied research in about **200 laboratories, 21 research centres and 16 technological platforms**.

Mission three: Serve society

While the two first missions are general to most universities, the third one - serving societal needs - emphasizes UCL's active role in stimulating innovation among the society by multiple ways like valorisation, technology transfer and sustainable development. Furthermore, UCL constantly expands its leading role in economic and sustainable development.

Partner 2: Louvain-la-Neuve Science Park⁷

With the creation of LLN Science Park in 1971, UCL was the first Belgian university to draw a link between academic and business worlds. The biggest, largest and most active science park in Wallonia is established on a surface area of 235 hectares and welcomes 185 resident companies employing over 5,200 highly skilled people. A Quality Charter established within the association of Walloon science parks (SPoW), recognised by IASP's General director Luis Sanz in 2007, ensures all members respect three criteria concerning prospective companies willing to join the science park: (1) the company has to be mainly oriented towards research and innovation, (2) infrastructures put at their disposal are tailor-made to their needs, and (3) companies should foster collaborative research with universities or research centers. This qualitative approach has proved to be a success: 80% of LLN SP's companies (start-ups, spin-offs, SMEs and large companies) have innovation and R&D in their core business. Five sectors are represented among other smaller ones: life sciences, information, information technology (IT), fine chemicals and headquarters to big companies e.g. McKinsey. The science park is co-managed by the UCL and the local public development agency (IBW). It hosts five general and specific incubators, a coworking space and a smart work center. In order to attract innovative companies (35% of these are foreign ones) or to enable growing spin-offs to build their own facilities, LLN STP offers lands under emphyteusis rules at very attractive prices. Companies also get access to UCL facilities and research workforce.

LLN SP networks extend from national - local business clubs, regional Chamber of Commerce and Industry, founding member of SPoW⁸ network (Science Parks of Wallonia) - to international ones - member of Tech Park Alliance⁹, various partnerships with Europe, North America and China. Our permanent collaboration with Wallonia Export & Investment Bureau (AWEX), the regional government-funded tool for internationalisation of Belgian companies and the attraction of potential foreign investors, has brought to us some very innovative companies and projects. A perfect illustration of this collaboration is the attraction of a unique project that will rejoice on the entire region in the years to come: the "China-Belgium Technology Center". Actually under elaboration, the masterplan comprises a 90,000 sqm infrastructure with 4 thematic incubators in key technological fields (bio and nanotechnologies, (opto)electronics, ICT, sustainable development (green engineering, new materials)), laboratories, offices, services and a hotel. Total investment is worth 250M€, financed by a Chinese consortium where the leader - Wuhan East-Lake Hi-Tech Innovation Center (WHIBI) - is an incubation pioneer and expert in China. Backed up by both Belgian and Chinese governments, the aim is to attract highly technological chinese companies to Europe and to foster research collaboration with local universities, research centers and companies.

⁷ www.llnsciencepark.be

⁸ www.spow.be

⁹ techparkalliance.wordpress.com/

Partner 3: Louvain Technology Transfer Office (LTTO)¹⁰

One-stop experts counter for the promotion of UCL's research knowledge, operating as a fully integrated technology transfer service available to UCL's research community and its partners. UCL researchers find support in funding, drafting proposals or contracts and intellectual property. Businesses and partners can identify a technological offer, discover UCL's research potential or work with a research team. LTTO brings together UCL's Research Administration with its university facilities (laboratories, research centers, research workforce), and the SOPARTEC sa, which is a venture capital company issued from the university to give support and advice to spin-offs and technological start-ups.

Partner 4: VIVES Fund¹¹

Vives is a private seed capital that invests in high-technology companies. This multi-sectoral fund supports young companies in all technological sectors, with particular emphasis on eco-innovation projects. Vives invests in companies at all stages of maturity: seed, start-up and growth. The deal flow of Vives is ensured by UCL spin-offs (right of 1st refusal) as well as by technological start-ups located within a radius of 250km around Louvain-la-Neuve. The 1st investment fund, Vives I, created in 2004, was capitalised with 15M€ by namely the European Investment Fund (EIF). The investment period of this fund is now closed.

In September 2011, Vives II - Louvain Technology Fund closed its 1st financing round at **43M€**, making it the **largest European investment fund ever initiated by a university**. Vives II is capitalised by leading national and European investors such as the European Investment Fund (EIF), SFPI-FPIM, Fortis Private Equity Belgium, CDC Entreprises (France), ING Belgium, Sofina, AXA Belgium, Dexia Bank Belgium, IRD (France), Nivelinvest, but also by Sopartec and its management team. These funds are managed by Sopartec, which in turn is charged with making investments, monitoring participation and negotiating disinvestments. Up to now, 61 spin-offs have been created thanks to the LTTO and Vives. This extra care gives spin-offs a high rate of survival, only 13% collapsed within the first three years of existence. The best example of a successful spin-off is IBA (Ion Beam Application), worldwide #2 in protontherapy.

Partner 5: Incubators

There are two incubators in the ecosystem: the *Centre d'Entreprise et d'Innovation* (CEI)¹² or **Business and Innovation Center** and the **Brussels Life Sciences Incubator** (BLSI)¹³.

Located in the science park, CEI is a technological incubator supporting innovative projects, start-ups and young SMEs. It intervenes in coaching and support prior to the creation, during the construction of the business project and supports the created businesses during their first years of development. Besides general incubation services, one may find full assistance (training, coaching, coworking, expertise in IP/HR/finance/aso) and a community for technological companies to interact and exchange experiences. About 30 innovative companies are hosted in the CEI. Due to its success, a second building was inaugurated in May 2013 (and is already nearly fully occupied). CEI is financed by the UCL and the Walloon region.

Moreover, the science park hosts 4 other incubators, one of which is dedicated to Life Sciences and is located in Brussels, just a few steps away from the UCL Faculty of Medicine, St-Luc University Clinics and various research centers. Launched in February 2012, BLSI supports Life Science companies active in biotechnology, medical devices production and medical IT solutions infrastructure. 2,350 sqm equipped laboratories, services and shared facilities are at the disposal of the residents. BLSI is an initiative of the UCL, Sopartec and the Region of Brussels.

¹⁰ www.ltto.com

¹¹ www.vivesfund.com

¹² www.ceilln.be

¹³ www.blsincubator.com

Partner 6: Mind&Market ¹⁴

Through online networking and events organization, “Mind & Market” aims to connect innovative project owners (including researchers) with entrepreneurs, companies, experts and organisms that support entrepreneurship. The latter can take part in a project as an associate, partner or mentor on a short or long-term basis, in order to bring the adequate knowledge, skills and expertise required for the realization of the project. The initiative was co-created by the UCL and a local business association AxE 4.25; and it associates with all local entrepreneurship actors. The fifth edition of its annual Forum in late April 2013 gathered over **370 participants and 64 innovative projects** (out of which 16 were UCL CPME cross-disciplinary projects in business creation¹⁵) ready to confront their ideas to the market. During this event, 42 projects pitched their project in 7 minutes in order to convince a panel of 24 experts in five thematic workshops. The best projects received prizes such as private coaching in innovation and management, free access to the CEI’s coworking space, free-of-charge office in the CEI incubator for a limited period of six months or even a free portrait published in a national newspaper and online TV. Mind &Market has also a permanent interactive website.

Other partners of the flow: local interaction and innovation activators

On a local level, the science park, business associations (AxE 4.25, Cercle du Lac), the public export agency (AWEX) and the Chamber of Commerce and Industry (CCI) help LLN fertilise interactions between the university, tenants, businessmen, project owners, researchers and brings visibility to our region for potential foreign investors. Talent attraction and researchers mobility are facilitated through direct cooperation with the university, which has already propelled towards open innovation. As the STP attracts big foreign projects (e.g. “China-Belgium Technology Center), cultural integration has become a crucial aspect in the science park, the university and the city.

Successful case studies from beneficiaries of the integrated flow

Numerous students, searchers, spin-offs, start-ups and companies can already attest the support they’ve received through one or several members of Louvain Innovation Network. We’ll take a closer look at four of them: GreenWatt, Realco, Djengo and Keemotion¹⁶.

- **GreenWatt, from organic waste to energy**
Based upon UCL Professor Mr Gerin’s research studies, a CPME thesis¹⁷ made by UCL students evaluates the opportunity of commercializing a two-stage biomethanisation¹⁸ technology (or renewable energy obtained through organic waste transformation). At the end of their thesis, the students decide to found UCL spin-off GreenWatt. After completion of a first prototype in a local farm, Vives fund enters the capital of the company in 2007 in order to finance the first industrial application realised in 2011. In 2012, GreenWatt settles up in Louvain-la-Neuve Science Park. Its approach of the South American market (Chile) in 2011 opened up the path to a unique biogas project centered on Prickly Pear. In fact, Chileans suffered a lot from the energetic crisis, production costs were too high, so GreenWatt proposed a solution to transform cactus waste into energy. Today, nothing seems to stop their international expansion to Europe, North Africa and Latin America.
- **Realco, ecological and efficient enzyme-based detergents**
Established in Louvain-la-Neuve Science Park since 1996, Realco¹⁹ is the world leader in enzyme-based cleaning and purification with its ecological biotechnological detergents. Collaborative research between Realco and multiple UCL faculties resulted in the discovery of an internationally renowned technology about enzymes. They found a way to eradicate biofilms, which are protective cocoons made of bacteria accumulation, a recurrent contamination problem in the agri-food industry. Financed by the European program EUREKA,

¹⁴ www.mindandmarket.be

¹⁵ See Chapter Two, Partner One : the UCL, Section One : Teach

¹⁶ See Appendix III

¹⁷ See Chapter Two, Partner One : the UCL, Section One : Teach

¹⁸ See www.greenwatt.fr/en/biomethanisation : “Biomethanisation is a natural process of decomposition of organic matter by microorganisms in the absence of oxygen, in darkness and under specific temperature and pH conditions. The biogas thus produced is rich in methane and can therefore, like natural gas, be burned to produce electricity and heat in a cogeneration module”

¹⁹ www.realco.be

this technology was elaborated through partnership with UCL Chemical Unity and INRA, the French National Institute for Agricultural Research. Thanks to Mind&Market, Realco was put into contact with the right UCL partners that helped the company find a solution in fighting mortal disease in banana cultures.

- **Alterface, the interactive company**

Alterface²⁰ creates interactive entertainment solutions for B2B customers such as theme parks, museums, and family entertainment centres. They design playful attractions based on media content to amuse children, teenagers and adults at the same time. The foundation of this UCL spin-off company was made possible through 4 leveraging partners from Louvain Innovation Network: (1) development by doctoral students of an exclusive technology making innovative and enjoyable use of video surveillance systems inside UCL research laboratories; (2) mobilization of the VIVES Fund for the spin-off launch in 2001; (3) help from Sopartec experts at the beginning of the operations for management and commercial issues; (4) a head office established in Louvain-la-Neuve Science Park that actually employs 25 people. Their attractions have been awarded many times, notably with Diamond Theme Park Award 2011 for the best new European attraction (dark ride “Maus au chocolat” in Phantasialand, Germany). They work towards internationalization with a US representative for the North-American market.

- **Keemotion, ultimate live sports coverage**

Keemotion²¹ is a UCL spin-off delivering enriched instant video for sports games. Artificial algorithm-based intelligence leads the technology to understand - through use of cameras that analyse the playground - the importance of each action in a sports game and delivers customized reports for ultimate sports coverage, instantly and easily. First life-size tests took place in Spiroudôme, in the basketball field. Sports coaches are thrilled by the concept, Oakland University and Harvard already bought and implemented Keemotion’s devices for their basketball Clubs. On top of their current activities, a CPME project called Moveo will help the spin-off adapt their offer to other sports disciplines such as football. Current Keemotion team is composed of: UCL researchers and a Manager of the Telecom world. Created in March 2011, the company received financial support from Vives Fund (UCL and Sopartec), Wallon region and local public investment company Nivelinvest.

In the end, the emergence of an **integrated ecosystem** such as Louvain Innovation Network proves to be the natural development of the interconnected relationship between city, university and science park that we’ve studied in Chapter One. We will now have a look in Chapter Three at Wallonia’s regional research and innovation context to further understand the role this network plays from an economic and political point of view in regional development and competitiveness.

²⁰ www.alterface.com

²¹ www.keemotion.com

Chapter Three

A closer look at innovation in Wallonia: how does Louvain Innovation Network fit in the regional knowledge context?

Innovation is set to play a key role in Wallonia's future, therefore politics that place it at the forefront of the agenda are crucial for our regional development. As most OECD²² countries experience it, we are challenged to find local new sources of activities with high added-value that will also create sustainable jobs. Regional politicians embarked upon this path in 1990 and their recent actions since 2000 show an increase in their efforts and a more strategic vision about innovation that starts to bear its fruits. The purpose of this chapter is to draw an overall picture of regional innovation in Wallonia, with its advantages and areas of improvement, and then to place Louvain Innovation Network in this context to evaluate its role in the regional knowledge context.

Research and Innovation in Wallonia - a current snapshot²³

1. Economic indicators

OECD reports that Wallonia has excellent resources in human capital, consequent investments in R&D, a great deal of universities with top-level laboratories and researchers, and also a very dense network of technological research centers. Still, it suffers from a capacity to make significant profit out of it and at diffusing knowledge to the entire productive tissue. Private R&D is concentrated in a few big private chemical-pharmaceutical companies, when a wide span of these are solely financed by foreign investors. Bearing that in mind, attention to university spin-offs, creativity and entrepreneurship are very positive. Wallonia has the greatest birth rate of technological companies in Belgium since 2003.

2. Political policies

Innovation and applied research are under the responsibility of regional authorities, whereas fundamental research and education are community-related subjects. This implies the Belgian government has to find a way to synergize their respective (and independent) regional and community political policies.

At the end of the nineties, innovation policy mix became more strategic and found its funding source within the 2005 Marshall Plan for economic development. First, public-private partnerships were supported for co-creation rather than pure transfer from one recipient to another. Competitiveness poles are emblematic of this new orientation. SMEs suddenly got access to innovation with the creation of an Agency for Technological Stimulation (AST). The will for "Intelligent specialization" moved from technology-led fields to address defined strategic activities where the region has comparative advantage and where public-private partnership presents its highest potential. Those strategic activities are crystallized in **6 competitiveness poles**: Skywin, Logistics, Greenwin, Biowin, Wagrallim and Mecatech. SMEs are encouraged to non-technological innovation in their growth strategy. Clusters provide them innovation networks, Creative Wallonia Plan supplies creativity measures, companies get advice in the Agency for Economic Stimulation (ASE) and the Walloon Agency for Export & Foreign Investment (AWEX) helps them finance all kinds of support e.g. internationalization and infrastructure creation. Concertation slowly takes place between Region and Community, in synergy with Brussels capital. Meanwhile, research and economy policies are still driven by a logic of their own, giving birth to separate framework programmes called respectively "Towards an integrated research policy" and "Creative Wallonia", fractioning technological and non-technological innovation. Without urgent reforms, this partitioned system between research and economy policies will endanger our emerging innovation system's dynamics.

This year, in an effort to rationalize and synergize relations between different regional institutions, the three government-funded agencies supporting economic development created between 1999 and 2006 - Agency for Telecommunications (AWT), Agency for Economic Stimulation (ASE) and Agency for Technological Stimulation (AST) - are merged into one same **Agency for Business and**

²² OECD: Organisation for Economic Cooperation and Development www.oecd.org

²³ OECD report on regional innovation in Wallonia, 2013, 308p, www.oecd.org/belgium/regionalinnovationwallonia2012.htm

Innovation (AEI)²⁴. This new public organisation acts as one same organic structure, in synergy with local innovation and business-supporting operators such as competitiveness poles, LIEU (Business-University Interface) and SPoW (Science Parks of Wallonia) for example. This combination of actors will enable Walloon region to sustain and develop a financially solid pool of SMEs active in cutting edge sectors with growth strategies that create qualified long-term jobs.

Lately, the European Commission has awarded Wallonia and Tuscany the title of « **European Creative District** »²⁵ out of 44 selected European projects for their exemplary support strategy to creativity as a driver for economic transformation. From January 2013 to July 2015, this project will set Creative Wallonia as a European reference, enabling Wallonia to develop transregional partnerships, multiply Walloon public-private collaboration opportunities and build an international benchmark with best practices for other countries.

The role of Louvain Innovation Network in the present context

Bearing the current changes in innovation strategy policies in mind, and the important role regional activators have to propagate them within the economic tissue, Louvain Innovation Network appears to be a perfect approach of the much-sought after creative, smart and integrated “ecosystem” or “city”.

Located in the Walloon Brabant province, Louvain-la-Neuve gravitates around Brussels’ hinterland. It is a highly qualified sub-region which attracts foreign investors and high added-value activities in core sectors such as life sciences, chemicals, engineering and ICT. Second European region in terms of R&D expenditure (7,63% GDP²⁶), most dynamic commercial city of the province²⁷, Louvain-la-Neuve builds its innovation network around the Catholic University of Louvain (also the province’s second top employer right behind GSK Biologicals²⁸).

The university chose by itself to institute a “third mission”, serving society, and to federate all local actors involved in entrepreneurship and innovation under a same roof called Louvain Innovation Network. Again, by its own will, the university generated the first and biggest European fund of this nature and coverage for spin-off and technological start-up creation, Vives Fund. Provision of the best education combined with potential for technological transfer, customized support and incubation, high quality environment and opportunities for multilevel interaction are the essence of what makes our city a **driver for regional economic development and competitiveness**. We leverage partnerships with regional actors to attract potential foreign investors while building up and maintaining the local expertise we need to create high-added value activities, services and jobs. All in all, Louvain-la-Neuve’s activities rejoice positively in the entire region, making us proud to call it “a self-sustained vibrant center”²⁹.

²⁴ Jean-Claude Marcourt Minister Website, “Lancement de l’Agence pour l’Entreprise et l’Innovation”, 25/04/2013, marcourt.wallonie.be/actualites/-lancement-de-l-agence-pour-l-entreprise-et-l-innovation-aei.htm

²⁵ Creative Wallonia, “Wallonia: District Créatif Européen”, 31/03/2013, creative-wallonia.be/actualites/-la-wallonie-district-creatif-europeen.htm?lng=fr

²⁶ L’Echo, “Brabant wallon, champion de la R&D” 11/10/2012

lecho.be/actualite/economie_politique_belgique/Le_Brabant_wallon_champion_de_la_R_D.9252799-3156.art

²⁷ DH.net, “Louvain-la-Neuve, ville dynamique” 22/02/2013 www.dhnet.be/regions/brabant-wallon/article/425778/louvain-la-neuve-ville-dynamique.html

²⁸ Sudpresse, “L’UCL fête ses quarante ans d’existence” 20/11/2012 archives.sudpresse.be/louvain-la-neuve-anniversaire-l%26%238217-ucl-fete-ses-40-t-20121120-H46EJH.html?quervand=demotte&firstHit=40&by=20&when=-1&sort=datedesc&pos=54&all=5580&nav=1

²⁹ Rick L. Weddle, “Mapping Knowledge Ecosystems”, June 2012, page 8 of 53, “In its most evolved state, a vibrant center or knowledge ecosystem node will have achieved development scale, its uses will be functionally integrated with each other and their surroundings, and it will be relatively self-sufficient and dynamically engaged and connected to the larger regional knowledge ecosystem. It will have passed a tipping point and will be a regional driver of innovation and commercialization in its own right. It will have become a talent magnet and be considered a place that matters in the regional development landscape. It will be viable and sustainable as a dense and vibrant center”.

Conclusion

As innovation is put higher up in politicians' agendas, Wallonia is challenged to find local new sources of activities with high added-value that will eventually also create sustainable jobs. In Walloon Brabant province, the role of Louvain-la-Neuve is to do exactly that. Nevertheless, a stand-alone city is not capable of leveraging such global competitiveness. This is the reason why, in our case study, University of Louvain (UCL) within its third mission in society service decided to federate all innovation and entrepreneurship local actors inside an integrated ecosystem called Louvain Innovation Network.

As the “self-sustaining vibrant center”, Louvain Innovation Network drives a unique regional knowledge ecosystem, contributing significantly to the region’s economic development, competitiveness and power of attraction for talents and foreign investors. With the attraction of international projects such as “China-Belgium Technology Center” in the science park and our special attention to open innovation, we are now opening wider and wider our doors to close collaboration with emerging countries, challenged to find the best solutions for practical cultural integration.

The road ahead is long, still we hope our exchange of experience, practices and business model will inspire other science parks to find the most suited solutions for their own development growth. Innovation-directed actions must be taken globally so we at our worst better keep up with the fast-track it implies or at our best take initiative towards a better future. For, as George Moriarty’s poem tells, “And so the Fates are seldom wrong, no matter how they twist and wind, it is you and I who make our fates, we open up or close the gates, on the road ahead or the road behind”.

Appendix I Louvain-la-Neuve

1. The location

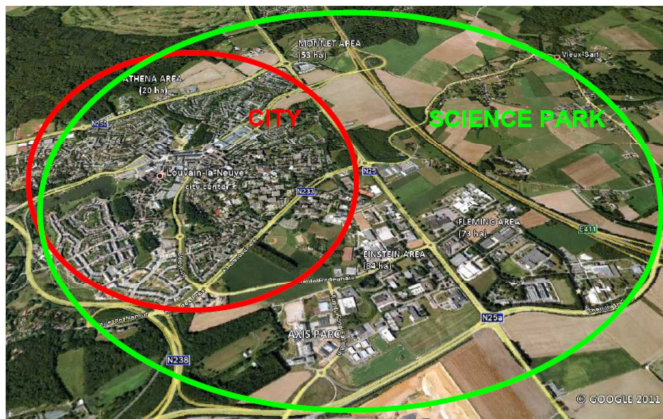
Map I - Louvain-la-Neuve in Belgium



Source: www.llnsciencepark.be

Located at the heart of Belgium, Louvain-la-Neuve is 30km away from Brussels and 194km from Luxembourg.

Map II - Louvain-la-Neuve aerial view



Source: Google Earth, 2011

Louvain-la-Neuve is an all-in-one city: a city, a university and a science park within foot distance (2km radius, 930 ha): 350 hectares inner city, 200 hectares woods, 64 hectares golf, 7 hectares lakes and 231 hectares science park surrounding the inner pedestrian city. A particularity is that lands are ceased under emphyteusis contracts, whether in the city or the science park.

2. Louvain-la-Neuve in pictures - City



Aerial view

Shopping



Shopping Mall L'Esplanade

Eating



Bar Restaurant Loungeatude

Culture



Museum Hergé

© Nicolas Boni, Atelier de Porzamparc, 2009

Folk



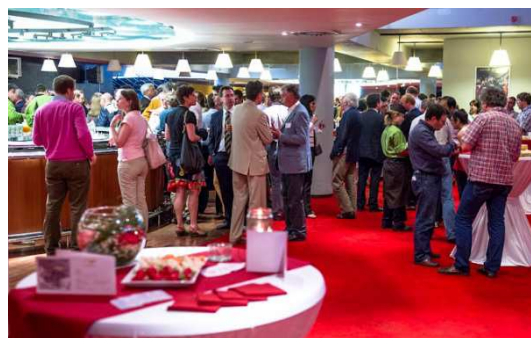
Summer event "Louvain-on-the-Beach"

Sports



Sports Complex Blocry

Business



Networking events

3. Louvain-la-Neuve in pictures - Science Park



Aerial view

Examples of incubators



Monnet center



NewTech Business Centre

Examples of companies



Dapesco



Ion Beam Applications (IBA)

Appendix II

Louvain Innovation Network, the innovation flow diagram

A complete innovation chain on the same location, from university to entrepreneurs and businesses.

Partners interact one with another but also with external partners: public authorities, business associations, chambers of commerce, and so on.

