

iRegions

Internet-based and mobile technologies for regions in the net economy

Cluster Management Guide

Publishable summary

I REGIONS POLICY RECOMMENDATIONS

The iRegions partners have identified and explored the conditions (good practices, lessons learned) for cooperation models within the knowledge triangle of research, business and policy in order to design, test and validate the components that will contribute to the creation of adequate environments within the clusters to foster the development of companies: such environment are called ecosystems for growth, to be understood as the “value” and the interaction of the success factors for cluster development within each cluster considered.

According to the priorities of the three clusters involved in the iRegions project, the following components for ecosystems of growth have been explored in detail:

- Networking partnerships,
- Living Labs as a tool for boosting the innovation capability of clusters,
- Business incubators as a tool for boosting the entrepreneurialism of clusters.

The lessons learned from the iRegions project with respect to those three components have been formulated in a Cluster Management Guide. This summary provides an overview of those lessons.

Setting-up efficient networking partnerships

The analysis of the networking partnerships in Kista Science City and within the CyberForum cluster have provided following recommendations for the launch and management of successful networking partnerships from the perspective of the cluster management:

- Lessons learned from Kista for the bottom-up approach when surveying companies with respect to their interests in networking partnerships:
 - Have an information package ready about your cluster before you survey companies so you can send it immediately to those who ask for it.
 - Matchmaking events should distinguish between regional and international matchmaking
 - Decide whether you want to look at number of employees or number of active people working with the company, this is especially important for SMEs as many have a limited number of employees but can have access to a larger group of people helping with different aspects of the company, either via incubation or specialized networks.
 - Link the surveys from year to year: repeat questions for those issues you want to track, use follow-up questions for those issues you want to develop.
- Lessons learned from Kista for the top-down approach:
 - Understanding what function needs to be fulfilled and linking that to the value network members get out of the network and in turn to how a network needs to be organized to deliver that value can be very useful in setting up new networks.
 - Even though the results are qualitative, the survey indicates that the research infrastructure in the region has helped companies to develop and has boosted their growth. However, in Kista, no network is organized around this theme. This means that surveying companies helped to identify opportunities for new networks and a value based approach for setting up the new networks will increase their chance of success.

- Lessons learned from the SaaS4KMU network:
 - The successful set-up and development of a networking partnership aiming at developing products and services requires dedicated network management. The neutral position of the cluster management organisation is therefore relevant. However, the cluster management organisation needs to balance its dedication towards subgroups of members and the development of the whole membership.
 - A financial commitment from the companies fosters active participation and increases the pressure for measurable outcomes.

Sustainability needs to be tackled from scratch as companies will only be ready to pay for real value. It takes time to build within the networking partnership the conditions for such value to become clear and measurable.

Setting up a science/technology-based business incubator

- **Experiences from Stockholm Innovation and Growth**

Stockholm Innovation and Growth, STING, a business incubator that itself grew from the Kista Innovation and Growth incubator, is an example of a successful and expanding business incubator. The analysis done within the iRegions project identifies the key elements of decision-making, experience gathering, implementation and execution of the business incubator with an emphasis on those that can be learned from and applied elsewhere. This report (see Annexes) will be also made available on the Kista website. Reported here is a summary of the main points of the analysis.

The relevant key elements that were highlighted within the harmonization cube the iRegions project used for analyzing Living Labs were used here as much as possible to make the information accessible. In particular, issues of service creation, infrastructure, governance, and financing were highlighted in the interviews. Scalability and sustainability were also addressed, as this incubator has itself seen innovation of service and growth of scope and practice.

The results of the interviews highlighted the fact that some key networks and networking partnerships were in fact a result of how the incubator was set up. Investigating other successful incubators, visiting them, and learning from their experience, in fact became an enabler for STING to have within its network of contacts members from other successful incubators in the world. In today's business climate, networks are an essential part of enabling growth for new companies, having an impact from project/start-up selection to who a business puts in place to lead the new companies at different stages to accessing financing in different forms.

The report concludes with recommendations to iRegions partners about the elements of incubation services that can be implemented in other regions and advice about what to consider when setting up an incubator. The report extracts lessons learned from the process in Kista and Stockholm.

Much work has been done by the Electrum Foundation, Kista Science City and STING to plan and execute the next step for STING as an ICT incubator. The major development involves growing STING into a multi-node regional incubator (rather than a cluster-centered incubator) with several outposts in those municipalities generating a sufficient number of new potential companies to justify a STING subsidiary. The plans for being able to do this have been discussed at length by both the Electrum Foundation Board and with the relevant

triple helix actors in Kista and Stockholm. Rather than starting new incubators from scratch, the experience and know-how that works for STING will now be put to good use on an even wider level than before.

- **Recommendations**

Following the study of the experiences in the project – the experiences in the cluster regions as well as the analysis of science and technology-based incubators in general - the following recommendations were identified from the work performed in Kista on its incubator:

- Involve all major stakeholders in the discussion in the beginning so that when it comes to decision-making time, everyone is on board and support (financial, administrative, and political) is more easily granted.
- Make sure the major stakeholders know this is a long-term activity. The more you agree to in the beginning the better (cost, target for number of incubated companies per year, goals for the incubator, what business areas to focus on, etc...)
- Make sure you know what kind of company you want to incubate and have strict criteria for who you let in. Factors from personal characteristics of the potential CEO to the business model must be evaluated systematically and thoroughly.
- Decide in advance how long it will take to incubate a company and make sure your partners know this and agree with it.
- Encourage companies to think about going global from the start, exporting should not come as an afterthought.
- Think about what trends impact you. Today, design and creative industries seem to be what everyone wants. Should existing incubators that work well be redirected according to new trends? Should new incubators take them into account?

Do you follow the trends or do you follow what works?

Flexibility and growth plans must somehow be built in to the incubator, and as financing becomes harder to come by, the choice of direction is not always obvious.

- Consider how you can promote and increase education effort in business leadership and entrepreneurship, preferably right from the start of the incubator process.

Living Labs – Harmonization Cube

A practical approach to realise open innovation with a regional dimension are the Living Labs. Being a “research methodology for sensing, validating and refining complex solutions in real life contexts” Living Labs were identified by the iRegions project as a potential source of contribution from the research infrastructure of ICT clusters to economic development. Although objectives and formats for Living Labs vary greatly, there is an agreement that all should be user-centered with an active participation of users within the entire development process. Most also agree that a triple-helix based consortium is needed to anchor both the work and future implementations. Usually, Living Labs build upon or create a technology platform geared to answer the needs of users in a particular situation.

At the same time, Living Labs have received increasing attention on a European level. The rising popularity is embodied by the continuously growing European Network of Living Labs (ENoLL). However, in spite of the

spread of the label Living Labs there is still a lack of a uniform definition as well as generalised findings on the practical functioning of Living Labs. Methods and tools used within Living Labs still vary widely and hamper easy transfer of lessons on the support, stimulation and acceleration of the innovation process through Living Labs. A number of Living Labs are defined with such general objectives (improving existing networks, developing frameworks for user innovation, etc.) that it is difficult to assess what is being done, how success will be measured, and what lessons can be carried over to other Living Lab initiatives. At the current stage of concept development, the Living Lab community and interested practitioners also still lack guidance for setting up and sustaining Living Labs.

Following a detailed literature review in the field of Living Labs, the so-called Harmonization Cube was identified as the most adequate methodological framework. The Harmonization Cube was developed with the collaboration of the European Network of Living Labs ENoLL in response of the need of a standardised reference methodology for Living Labs. While the Harmonization Cube is a complex construction in itself, mirroring the complexity of existing Living Labs, it still represents a simplification and systematic structuring tool. Advantages of the use of the Harmonization cube include the “bridging possibility” between existing Living Labs, i.e., “to learn from each other, benchmark the validation of user behaviour studies, exchange best practices, and interconnect the Living Labs”¹.

- **Harmonization Cube**

The Harmonization Cube can be understood as a descriptive framework for Living Labs, capturing **key elements** defining a Living Lab, different **development phases** in the Living Lab life cycle and **common aspects** of the Living Lab.

The typifying key elements of a Living Lab include:

- User Involvement
- Service Creation (idea development and testing process)
- Infrastructure (services and technologies for analysing data within a Living Lab)
- Governance (organisation of a Living Lab and the interaction between its members)
- Innovation outcomes (results of a Living Lab)
- Methods and tools (data collection and processing tools)

Those key elements can be related to three phases in the lifecycle of a Living Lab consisting of:

- Set-up
- Sustainability (mid- to long-term operation of the Living Lab)
- Scalability (expansion phase of established Living Lab)

For each of the essential elements of the Living Lab specific issues arise dubbed as:

- Organisational,
- Technological and

¹ Mulder, I., Velthausz, D., Kriens, M. (2008): The Living Labs Harmonization Cube: Communicating Living Labs' Essentials. The Electronic Journal for Virtual Organizations and Networks, Volume 10, Special Issue on Living Labs, 2008. P. 7.

- o Contextual issues.

While the organisational and technological issues rather relate to specifics dealt with inside a Living Lab, contextual issues represent external aspects beyond the Living Lab that have to be considered. An illustration of these issues will follow along with the more detailed description of the typifying elements below.

The key elements correspond to the six sides of the Harmonisation Cube. The columns of each side of the cube represent the organisational, contextual and technological issues of the Living Lab. The rows on each side of the cube have been chosen to distinguish the three development phases of a Living Lab, i.e. the setup, sustainability, and scalability phases.

A complete overview of the Harmonization cube is shown in the figure below.

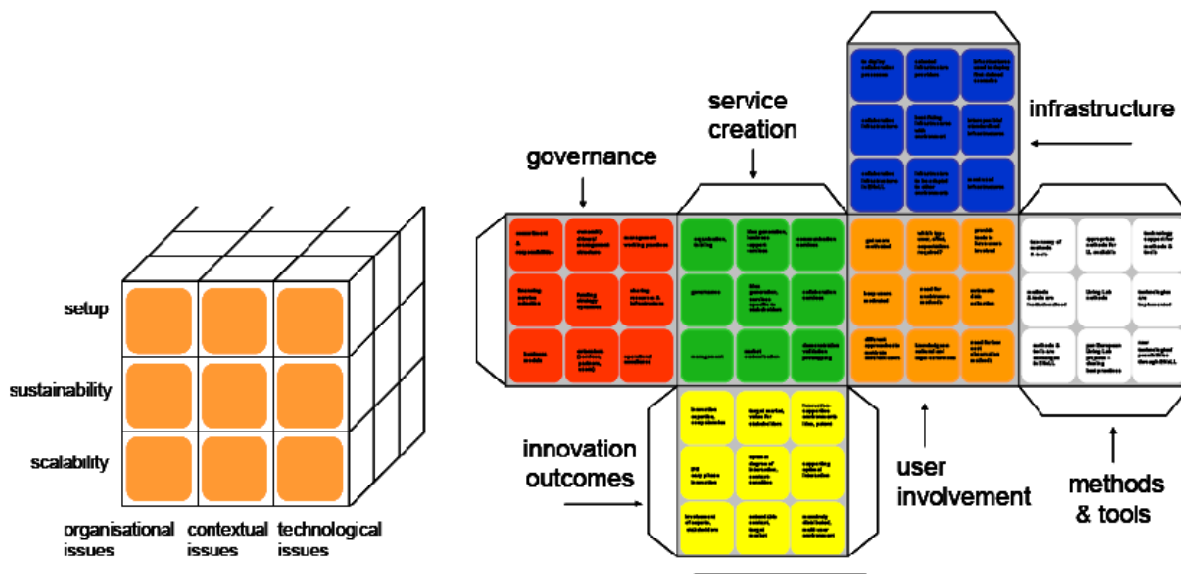


Fig. 1: Harmonization Cube

- **Lessons learned - The Harmonization Cube in practice**

The Harmonization Cube provides a descriptive framework for capturing key elements defining a Living Lab in its development phases. In order to be used in practice it needs to be translated into a concrete data collection and processing tool.

The following picture shows the results of an expert group from the ENoLL in order to develop the Harmonization Cube into a standardized guideline showing how to set up and configure a new or an existing Living Lab, and furthermore “a coherent, mature and transferable suite of methods and tools for Living Labs”¹. The guideline provides for each of the six key elements of a Living Lab an indication of the major organisational, technological and contextual issues to be addressed in each development phase of a Living Lab.

¹ Mulder, I., Velthausz, D., Kriens, M. (2008): The Living Labs Harmonization Cube: Communicating Living Labs' Essentials. The Electronic Journal for Virtual Organizations and Networks, Volume 10, Special Issue on Living Labs, 2008. P. 12.

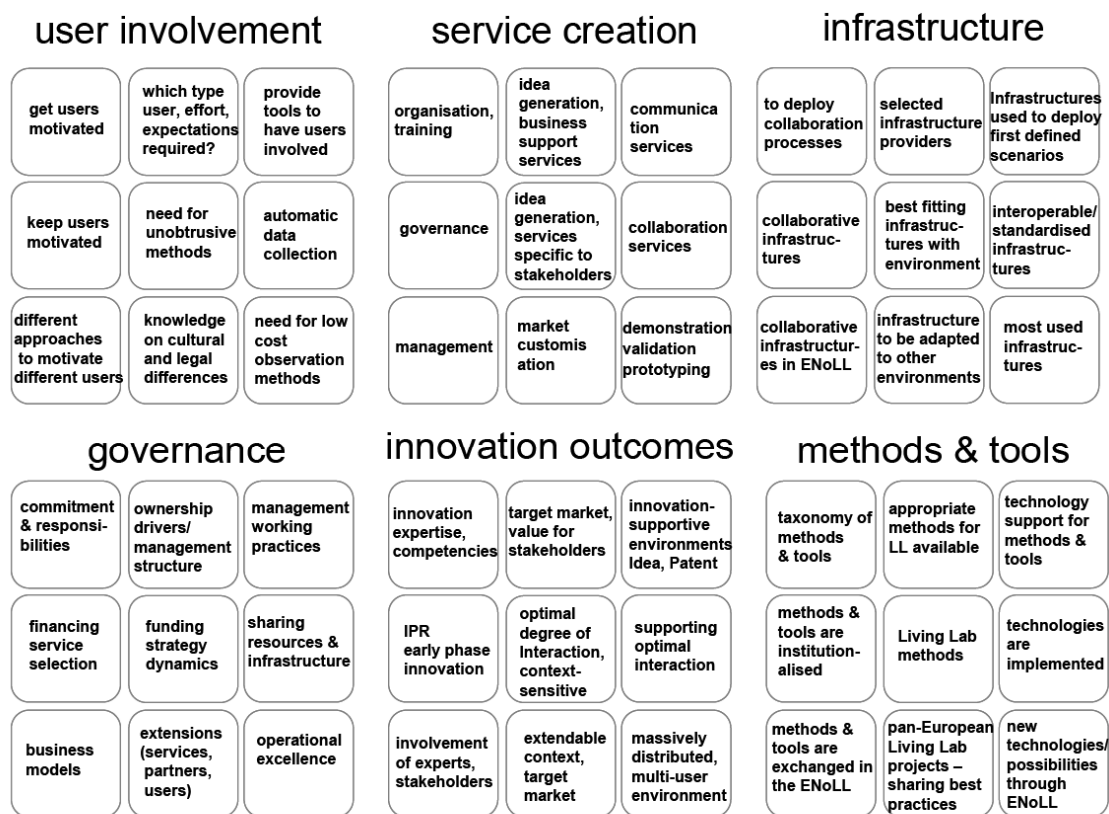


Figure 2: First Attempt to Complete the Harmonization Cube.

Fig. 2: Putting the Harmonization Cube in practice

Based on these guidelines, the Harmonization Cube was used by the iRegions partners for the definition of suitable areas and content for new Living Labs, the definition of their specifications and their business models. In addition to the mutual methodological support with the development of new Living Lab initiatives within the project, the three iRegions clusters also planned to open up their Living Labs as far as possible to each others' members for testing new products and services. Understanding the issues involved in different stages of Living Labs helps to better formulate objectives and plan for the lifecycle a Living Lab is expected to go through. Contrasting existing Living Labs allowed the iRegions partners to highlight critical issues in each region and discuss solutions implemented by other partners. The iRegions partners successfully used the Harmonization Cube as a common framework for discussing and developing Living Labs.

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