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Report on Community Engagement Models

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Executive Summary

This paper aims to explore the use of Living Labs in home energy management. It focuses on community engagement models and the methodologies for engaging different communities across Europe in Living Lab energy management activities. This will incorporate good practice on development of community champions, community marketing and user training modules. Living Labs have been acknowledged in Europe as an open innovation instrument and have organised themselves in a European Network of Living Labs (ENoLL).

Introduction

Living Labs aim to involve the community in the development of new services and products. It is a system enabling people, users/buyers of services and products, to take active roles as contributors and co-creators in the research, development and innovation process. They are a method of community engagement. Living Labs are a relatively new concept supported by the European Network of Living Labs (founded in 2006) as an initiative sponsored by the European Community through a number of European projects and coordinating actions. The aim is to place new solutions development into real-life applications and to put technology-driven innovation to the test and spur new demand-driven innovation ideas.

The practical, user-centred approach to project development aligns with the Living Labs methodology. The focus is on strong involvement of users and their representatives throughout the duration to ensure end-user acceptance and uptake. Solutions are tested in real life and a consolidated set of requirements and validated functional specifications emerge as a result.

Understanding Community Engagement

Community engagement has been an effective tool for many years, with the suggestion of a community being a group of people who hold something in common. A community has tended to be associated with two key aspects: firstly, people who share locality or geographical place; secondly people who are, or share, communities of interest. An individual may be a member of multiple communities at any one time, and may also move in and out of one or more communities over the course of time. Engagement is the

involvement of the public, either as individuals or as a community, activities which affect them. Traditionally this involvement can take a number of different forms, usually differentiated by the type of relationship that the public are invited to engage in.

The three traditional main forms of engagement are:

Research: collection of information through approaches such as opinion surveys, where there is no ongoing dialogue between the public and commissioning body.

Consultation: a limited dialogue is entered into, to discuss a particular policy or service issue. People are brought together as representatives (in demographic terms) of a particular community.

Participation: an ongoing dialogue is entered into between the public and the commissioning body, often about a range of policy or service issues. These tend to be community rather than individual focused.

The aim of the Living Lab concept is to extend the notion of community engagement to a participative model whereby users engage with and influence the activity.

What is a Living Lab?

The European Network of Living Labs (EELL) defines a Living Lab as both a methodology for User Driven Innovation (UDI) and the organisations that use it.

“A Living Lab is about experimentation and co-creation with real users in real life environments, where users together with researchers, firms and public institutions look together for new solutions, new products, new services or new business models.

But also Living Labs are about societal involvement, about promoting innovation in a societal basis, involving academia, Small to Medium sized Enterprises (SMEs), public institutions and large companies in an Open Innovation process that because it happens in real environments, has an immediate impact. This is how Living Labs aim to contribute to a new innovation system where users and citizens become active actors, not only passive receivers”¹.

¹ www.openlivinglabs.eu

Why Living Lab Methodology?

Living Labs are particularly helpful in the use of technology as they allow users direct experience of the systems and interfaces. Recent research studies shows that 70% to 80% of new product and service development that fails, not for lack of advanced technology, but because of a failure to understand real users' need.²

Involving users at the earlier stage of the R&D process, helps developers understand the relationship between new innovative concepts and related users' behaviour, within specific situations. A good illustration of the need to take into account users at the earlier stage of the R&D process, concerns the place of trust in man-machine communication. The web has brought another level of conscience as the devices are used to connect people for shared activities. In many web applications, it is the case: for instance in commercial transactions (e-commerce). It is therefore necessary to understand trust building mechanisms 'in the real life'.

A 'living lab' is neither a traditional research lab nor a test bed (functionality and usability tests) but rather an 'innovation platform' that brings together and engages stakeholders, such as end-users, researchers, industrialists, policy makers at the earlier stage of the innovation process, in order to experiment breakthrough concepts and potential value for both the society (citizens) and users that will lead to breakthrough innovations.³

Methodology and Tools for Living Labs

The CoreLabs⁴ project has investigated methods and tools for Living Labs and established a respective taxonomy. The current Living Labs are using a diversity of technologies, infrastructures and applications and some host specialist technology providers and research institutes. Best Practices have been analysed in order to ensure interoperability by either defining the use of de-facto standards or suggesting extensions to existing ones where applicable. The methods & tools category within the interoperability cube describes different methods and tools used within the existing European Living Lab at all stages.

² http://www.ami-communities.eu/wiki/ECOSPACE_Newsletter_No_5

³ <http://www.ami-communities.eu/drupal/node/28>

⁴ Project CoreLabs; D5.1 - Methods&Tools, Inventory & Taxonomy" Version 0.5, October 2006

To effectively target the Lisbon agenda, new holistic innovative and powerful innovation approaches are needed⁵. The approach is to build systems - Living Labs - which engage and empower large groups of citizens in open real-world experimentally driven innovation processes

Integration of the project in the Living Lab infrastructure. A full Living Lab service offering not only requires product and service development and evaluation methodologies, but also a mechanism for the integration of the customers' product or service into a Living Lab to provide it to the users. The efficient, transparent and smooth integration accomplished by the Living Lab provider is the key for trust and convenience of the customer. It also can work as a first product/service testing depending on the level of development (market launch testing).

Co-creation. The core service of the Living Lab is to facilitate the co-creation of a product, service or application development. This co-creative product development process can be decomposed into four phases: Product Idea, Product Concept, Product Development, and Market Launch. The methods are divided into traditional market research methods and internet based methods allocated to the process phase they are most appropriate.

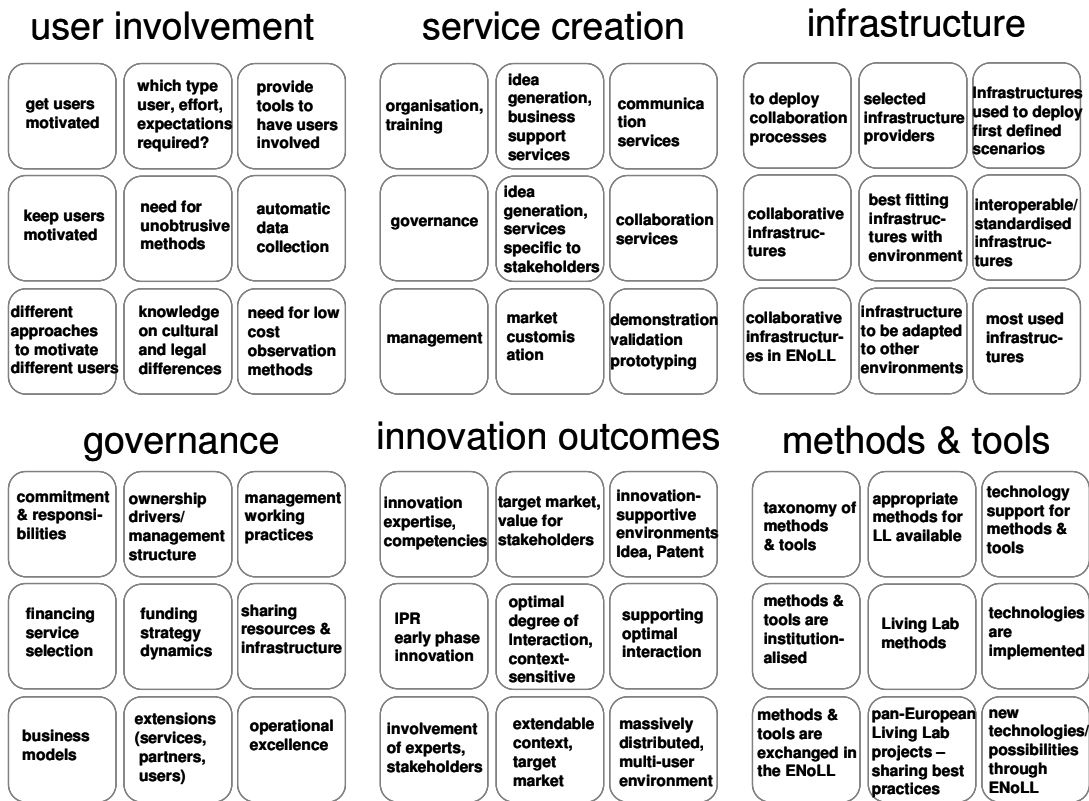
Data preparation. To fulfil the customers' expectations regarding the results and to reduce the complexity of the evaluated data, the Living Lab provider offers a standardised data preparation. The great advantage of the standardisation is the comparability with the results within other Living Labs in the network and the confirmation of the expected output in the run-up to the usage of the Living Labs.

Figure 1: Harmonisation Cube⁶, shows how these all map into a harmonisation cube and shows the essentials of a Living Labs, including applications. The Harmonisation Cube also illustrates the synergies between Living Labs.

⁵ Building Labs Roadmap 2007-2010 Recommendations On Networked Systems For Open User-Driven Research, Development And Innovation http://ec.europa.eu/information_society/events/cf/item-display.cfm?id=818

⁶ Project CoreLabs; D5.1 - Methods&Tools, Inventory & Taxonomy" Version 0.5, October 2006

Figure 1: The harmonisation cube



Key principles for Living Lab operations ('CORES')

The key principles of Living Lab operations identified by the CoreLabs⁷ project are Continuity, Openness, Realism, Empowerment of users and Spontaneity.

Continuity – Creativity is strengthened by a multitude of views originating from broad experience and cross-border collaboration. Good cross-border collaboration must be built on trust and building trust between people from different backgrounds and work/life cultures takes time. Experiences that are gained, and views that are broadened, also take time. Additionally, business opportunities can only be finally validated through real market experiments. Capability to plan and run such experiments is built on practical experience, carried by people working, in continuity over time, in the Living Lab environment. Users

⁷ Project CoreLabs; D5.1 - Methods&Tools, Inventory & Taxonomy" Version 0.5, October 2006

and partners build trust and 'context unique' knowledge over series projects, innovation cases and business experiments.

Openness – The innovation processes must be as open as possible. This is essential for gathering of many perspectives and to bring enough power to achieve rapid progress. Further, since innovation is about new ways/things generating values for its users/customers, it is inherently difficult to foresee all potential beneficiaries. There are numerous examples where a particular product concept was anticipated to have a certain usage scenario and market but when openly introduced to the market, the strongest pick-up was from unexpected category of users for an unexpected type of usage.

Realism - Realistic behaviour of users and stake-holders is necessary in order to generate results which are valid for real (realistic) markets. A Living Lab must be seen by its users and stake-holders as a 'natural environment' – today or in the near future. The focus on innovation in real-life/work environment is also key factor which differentiates the Living Labs mode of operations from many other types of open environments for co-creation (such as Google Earth, Second Life etc)

Empowerment of users – The engagement of users is fundamental in order to direct the innovation process, based on user needs and desires. However, in order to get the full effect from user engagement, it is not sufficient to use them as 'guinea pigs' for testing. Living Labs efficiency is based on the creative power of significant user communities and the most important enabler of user power is obviously to empower and motivate users to engage – not only in one project or case but in continuity over time. Experience show users having wide experience from various innovation processes are more effective as innovators.

Spontaneity - In order to succeed with new products and services, it is not enough to offer more and improved, professional/serious functionality, but also functionality to inspire usage, meet personal desires and fit and contribute to social and societal needs. When developing innovations which meet this complexity of needs and desires, an interactive process is required that explores and address users needs, sometimes however, it seen that the initial feedback is assumed to be the most important. It is also very important to have the ability to detect, aggregate and analyse spontaneous user's reactions and ideas over time, along a product/service full lifecycle. This means that Living Labs methods and tools must enable innovation in continuity, not only innovations at events, in single projects

or campaigns. Note again that this need applies not only to end users, but to all kinds of users in all relevant roles/organisations along the product/service value-chain.

Community Marketing

The Community Marketing method engages audiences through continuing conversation and active debate. Users trust user feedback, with social media focussed to engage communities in debate. The dissemination of resultant user generated data can therefore be seen as a marketing tool.

Community marketing evolves a natural reserve of information to improve communication channels, user ownership and maintain continuing promotion through:

- Connecting user with user to increase product adoption
- Connecting provider with user to develop commitment and satisfaction

Whilst Web 2.0 User Pools should be used to directly connect users in a forum of feedback, and best practice, to promote sharing and build relationships, it must also be taken into consideration those within the community that may not have home access to the required equipment in order to participate on line. Thus face to face communications or the instigation of community access hubs is a must within effective community marketing.

All these type of third party resources are a transparent method of establishing 'off home turf' round-table discussions where users and providers can record their true thoughts on products, services, ideas and solutions.

Sustainable community marketing requires a sustainable resource for returning users, providing information and discussion, asynchronously. Social media and user pools will be used to create user owned data that result in a library of sustainable communication, and therefore marketing, through the resulting resource of recording conversations, enquiries and responses.

Traditional contracted, or 'sponsored', community marketing, that uses advertising and unethical direct marketing, has led to scepticism among users around the use of brands in

signposting to social media. Resources, therefore, will be promoted by community members that can develop a cycle method of marketing, communication and referral. These community members, in addition to the organic marketing, need to promote 'guided', as opposed to 'sponsored', marketing through quantified tasks and development to produce Community Champions that have audiences and the motivation to lead.

Community Champions

A 'Community Champion' encourages local community groups and individuals to take small actions, by creating an action plan to create a more sustainable future for the Living Lab. The aim of a champion is to act as a bridge between individuals and groups who often do not understand the complexities of a particular issue or technology. Community Champions are selected from the existing Living Lab population.

User Training

User training aims to empower the Living Lab participants to be self supporting and to gain an insight into the technology. Due consideration is to be given to Internet access availability and training on it's use either within the home or community environment ensuring that true representation across a community is possible and does not exclude those that may otherwise be disadvantaged through lack of access to technology. This section will be further expanded as training is developed for users.

Governance

The governance structure of a Living Lab describes the way it is organised and managed at differing levels such as strategic or operational... These (organisational, contextual or technological) aspects are related to the life cycle of the Living Lab.

The strategic level deals with issues such as:

- how Intellectual Property Rights and exploitation of results are dealt with
- the way stakeholders are involved (financial contributions, commitment, responsibility, influence), financing: public-private-partnership, commercial
- the ownership of the Living Lab, i.e. its services, infrastructure, and the responsible entity for Living Lab (dedicated organisation or consortium)

- the management structure, e.g. director, steering board, (technical) program committee, user committee
- the driver and nature of the Living Lab, e.g. community-driven, research driven, business/industry driven, technology driven, open/closeness: sharing resources/network
- Living Lab development: consortium dynamics (e.g. additional partners, user groups), subsidy/funding policy and the definition and adjustment of the agenda.

Whilst the operational level includes aspects such as:

- working practices for the day to day management;
- execution & monitoring of the living lab goals regarding the synergy, quality, progress monitoring and internal communication;
- the way new software and services are introduced and validated,
- responsibilities and liabilities;
- the definition of user group/ awareness of being part of Living Lab;
- dissemination and external communication:
- national and international consolidation;
- the way projects are organised and funded.

Living Labs and Energy Management

Though all Living Labs have a main role to facilitate user engagement in innovation, Living Labs appear and emerge in great variation. Some Living Labs have geographical or demographic focus like rural or urban areas or young or elderly people. Living Labs have the potential to connect a wide range of innovative tools. They can support well-guided individual and group behavioural changes triggered by immediate sensory feedback showing the related actual savings in terms of money, energy, carbon footprint at individual and group levels, within and across regions and countries. Living Labs can be a critical tool to stimulate innovation and widespread adoption in specific domains.

Energy has become a primary concern in Europe due to climate change and the high dependency on expensive and unstable energy imports, raising environmental, economic and strategic threats. The Energy Policy of the European Commission addresses these issues and puts a strong emphasis on the contribution of new energy technologies to a new economic paradigm, the so-called low carbon economy. As such the media has alerted the public to monitoring energy consumption as a method of producing household saving and improving the environment. The Living Lab will therefore interact with communities that do not have an existing alternative energy culture.

Implications for other Dehems Work packages

The Living Labs concept is fundamental to the success of the Dehems project. The aim is to place newly developed solutions into real-life and to put technology-driven innovation to the test of practice, thus it is the Living Labs which will inform and drive the project.