



Finland: Forum Virium Helsinki

A user-driven approach to developing smart city services, mobile apps and open data

Executive Summary

Through its smart city initiatives, Helsinki is making innovative use of mobile technology, engaging with citizens and opening public sector data up to all interested parties.

Since 2007, a network of “Living Labs” has been providing test and experimentation environments where user communities can work with producers to co-create innovative smart city services in the Helsinki Metropolitan Area. A number of successful trials and commercial projects, such as a traffic information platform and Helsinki Region Infoshare, have been deployed in Helsinki, which has also run open data competitions, such as Apps4Finland, to inspire start-ups, citizens and established companies to utilise open data resources.

This network is overseen by Forum Virium Helsinki, a private non-profit organisation owned by the City of Helsinki. Forum Virium Helsinki is tasked with the development of new urban digital services in collaboration with the private sector, the municipality, other public sector organisations and Helsinki residents. Forum Virium Helsinki’s projects span six key areas - smart city, wellbeing, new forms of media, innovative public procurement, innovation communities and growth services. As part of the user-driven approach, smart city ideas and proposals are sourced from a wide variety of stakeholders, including citizens of Helsinki, public and private service providers, developers, and technology companies.

Helsinki’s smart city strategy is supported by the development of a mobile application cluster and a focus on open



data. Forum Virium Helsinki has set up the Helsinki Region Infoshare project in collaboration with City of Helsinki Urban Facts –department, to make regional information quickly and easily accessible to all through www.hri.fi.

Introduction

In 2005, the City of Helsinki and several media and telecommunications companies, such as Elisa, Nokia, TeliaSonera, Tieto and YLE Finnish Broadcasting Company, founded Forum Virium Helsinki. Its mandate is to develop new digital services that are based on the real needs of the users in collaboration with private companies, city authorities, other public sector organisations and the residents of Helsinki. It has two primary objectives: to identify and create better services, and to open up new domestic and international markets for local companies. Forum Virium Helsinki serves a variety of roles, from the provision of pure advisory services to the full management of projects, defining strategy, initiating,

coordinating and consequently evaluating smart city projects throughout their entire life-cycle. It also helps shape the development of ecosystems by engaging users and providing support for start-ups and app developers.

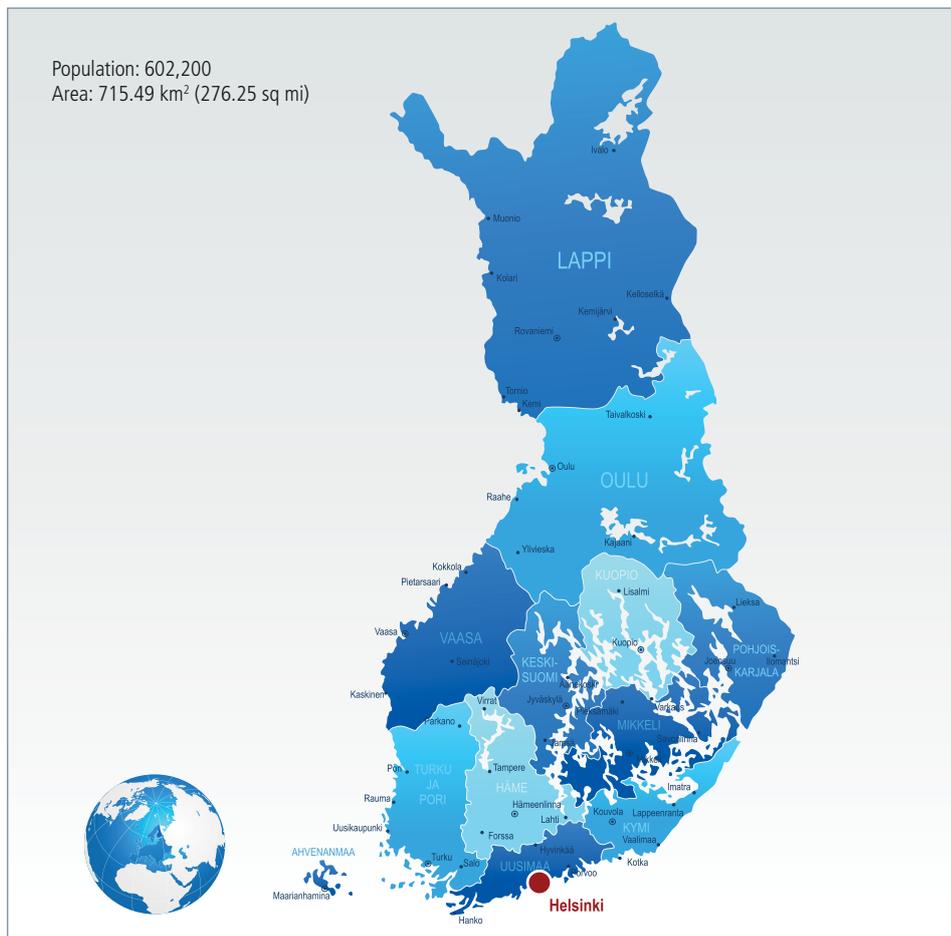
Its projects span six key areas:

- **Wellbeing** – the development of healthcare-related digital services that promote a healthy lifestyle and tackle the challenges of aging
- **New forms of Media** – the development of new kinds of media services on consumers’ terms
- **Smart city** – the development of public and private digital urban services that make living in the city easier
- **Innovative public procurement** – rejuvenating public services by procuring innovative solutions
- **Innovation communities** – sharing best practices of user-driven innovation
- **Growth Services** – boosting the internationalization of SMEs

A number of Forum Virium Helsinki's projects, such as the development of a traffic information platform have led to successful commercial deployments following extensive trials, whereas others aim to implement the strategic goal of Finland towards open data such as the Helsinki Region Infoshare project. The traffic information platform, for example, captures real-time data and informs citizens about traffic congestion, roadworks, accidents or elks spotted on the motorway. Although most of the information comes from the public authorities, ordinary road-users can also contribute by reporting exceptional incidents. After the completion of the trial project, Destia Traffic used the platform to commercially launch a similar traffic information service in Scandinavia and the Baltic countries.

The strategic need for making the regional information quickly and easily accessible to all led to the Helsinki Region Infoshare project in Helsinki. The project is coordinated by the City of Helsinki's Urban Facts and managed by Forum Virium Helsinki. There are about a thousand different data sets in the service, for example on the living conditions, economy, wellbeing, employment and mobility of the region. The data is available for free and in usable format through the web service www.hri.fi. Making public data accessible enhances the citizens' knowledge and understanding of their region and home municipality, which in turn improves the prerequisites of active citizenship. The project has been endorsed by the mayor of Helsinki, Jussi Pajunen, who recognised Helsinki Region Infoshare as the Achievement of the Year in 2012.

One of the recent projects overseen by Forum Virium Helsinki is called Walk and Feel Helsinki. It was initiated in the summer of 2011 to help cruise passengers to become acquainted with Helsinki and provide them with a new way to explore the city. Tourists can use their mobile handsets to tap NFC tags or scan 2D barcodes attached to signposts, to access a range of digital information about nearby points of interest, on their way from the



harbour to the city centre. Access to this information is provided via the mobile phone's web browser or a dedicated app. An extended Walk and Feel Helsinki service was launched in September 2012, placing NFC tags at every tram station to enable passengers and tourists to touch their phone to receive information about the next tram's arrival. This project was partially-funded by the EU.

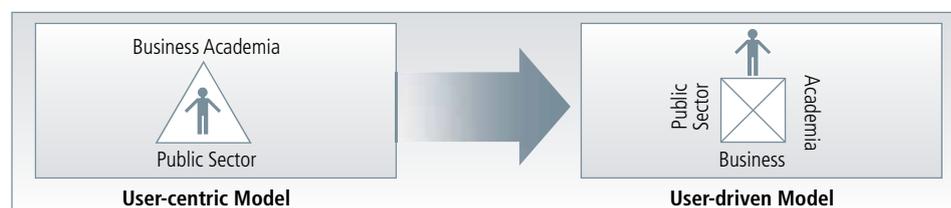
on a network of Living Labs (test and experimentation environments where users and producers co-create innovations) and their partners in the Helsinki Metropolitan Area. This user-driven approach is built on the principles of open innovation and encouraging collaboration between private and public organisations to develop and commercially launch new ideas and services (see Exhibit 1).

User-driven model behind smart city projects

Overseen by Forum Virium Helsinki, Helsinki's smart city initiative is based

in the vast majority of smart city initiatives around the world today, ordinary citizens are involved primarily

Exhibit 1: End-users are being involved throughout the life-cycle of the projects



Source: http://www.openlivinglabs.eu/sites/enoll.org/files/HLL_brochure_0.pdf

in the last stages of project deployments. Forum Virium Helsinki set out to turn that model on its head, giving end-users an important role right from the start, making them equal partners with public and private sectors and academia in the process of submitting, testing and developing new concepts and ideas. Forum Virium Helsinki's process for advancing smart city projects follows the seven stages in the model shown in Exhibit 2. During the first three stages, the city's development needs are identified, drawing on input from end-users and citizens, collected e.g., via online channels, and from municipal and private service providers. As part of this process, "developers" collect end-user feedback, comments and improvements, analyse this data and report it to the utilizers. "Utilizers" (private or public companies that develop products and services) then collaborate with the "enablers" - municipalities and financiers that deploy general city infrastructure, such as roads, traffic systems and street furniture, to develop the final product.

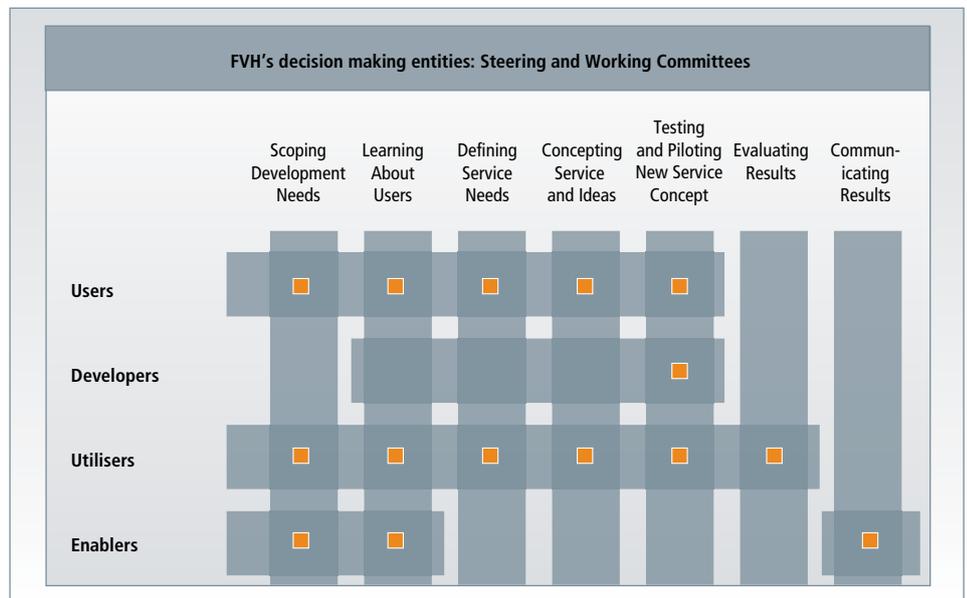
The steering committee appoints a working committee to set the operational direction of the projects and design and test the services through trials during the last four stages of the process.

Mobilising the smart city ecosystem

Helsinki's smart city strategy encompasses the development of a mobile application cluster and a focus on open data - the concept of making public sector data openly available to interested parties who can then use it to develop new services.

Opening data and making it available for the developers is an on-going process in Helsinki. Already in 2009 Helsinki Region Transport Authority (HRT) opened all of its public transportation data interfaces to the developer community. It has led to very promising results, as now HRT has approximately 50 mobile applications - made by the developers - serving different needs of the commuters and travellers in Helsinki Region. As part of its open data strategy, Helsinki Region Infoshare project

Exhibit 2: Forum Virium Helsinki's project initiation and evaluation process: key stakeholder engagement



Source: Forum Virium, GSMA analysis

distributes open public sector data to all interested parties. The developed apps, visualizations and web services are linked to the Helsinki Region Infoshare website. Moreover, Apps4Finland, a competition organised by Forum Virium Helsinki and the Finnish Association for Internet Democracy for the past four years, has released e.g. environmental data and spatial information through the Helsinki Region Infoshare site. The data has been used for a wide range of applications, from Helsinki Public Transport Visualized to Tax Receipt (<http://www.verokuitti.fi>), which allows citizens to calculate the total amount of direct and indirect taxes they pay monthly, and Visualisointi, which provides information on the most popular public library books in the past four years.

Forum Virium Helsinki runs both competitions and Living Labs projects to drive the development of a mobile application cluster in the region. One example of a recent success is an augmented reality GPS application from a Finland-based start-up BlindSquare (<http://blindsquare.com/>) that pulls in information on the user's immediate surroundings from FourSquare and the

Open Street Map. Blindsquare recently won the first prize at The Open Cities App Challenge in Barcelona in November 2012, and the Apps4Finland prize for the best application in December 2012.



"Forum Virium Helsinki aims at harnessing the innovation capacity of the entire urban community, by

promoting the enablers of the open smart cities of tomorrow: open data, international harmonization, and versatile cooperation between different players in the innovation field: cities, developers, private and public entities, and city residents. The stimulation of the entire innovation ecosystem is in the heart of making things happen."

Jarmo Eskelinen, CEO, Forum Virium Helsinki

The engagement and promotion of mobile start-ups and other SMEs is at the heart of Helsinki's smart city strategy. Forum Virium Helsinki is ensuring that start-ups are included in smart city projects and runs the Growth Coaching programme to support SMEs develop international growth strategies, secure funding and promote their services, among other things. SMEs are also supported through the city's SME Partnership Programme, which is funded by the Innovation Fund of the City of Helsinki and governed by The Business Development Unit of the City of Helsinki.

Conclusions and Learnings

The development of Helsinki's network of Living Labs and the work of Forum Virium Helsinki provides several important lessons for the implementation of smart city projects:

- Forum Virium Helsinki has a track record of creating sustainable smart city projects, such as Helsinki Region Infoshare, thanks to a robust project trial and management process. Like other cities across Europe, Helsinki is having to cut smart city budgets as a result of the recession, but it continues to develop new projects by searching for value for all stakeholders.

- Successful smart city initiatives typically depend on an extended ecosystem of innovative companies. The involvement of start-ups and SMEs is crucial – in Helsinki, Forum Virium Helsinki's special support for small companies has been critical to the success of its smart city initiatives. Equally important is the establishment of an open environment that supports creative activity and innovation, driven predominately by the needs of end-users.
- Support for open data encourages innovation in smart cities. The Helsinki Region Infoshare Project is an example of a successful open data portal in Europe, placing Helsinki at the forefront of open data initiatives, ahead of other European cities, such as London, Manchester, Paris and Amsterdam, who are also working on open data.

Forum Virium Helsinki: Partner Background

Forum Virium

Forum Virium Helsinki is a private non-profit organisation fully-owned by the City of Helsinki. The City of Helsinki and several media and telecommunications companies, such as Elisa, Nokia, TeliaSonera, Tieto and YLE Finnish Broadcasting Company, founded Forum Virium Helsinki in 2005 to improve Helsinki's international competitiveness and develop new digital services.



The GSMA Connected Living Programme

The GSMA's Connected Living programme is a three-year market development initiative whose mission is to help mobile operators accelerate the delivery of new connected devices and services. Our target is to assist in the creation of 700 million new mobile connections, whilst stimulating a number of service trials and launches in the Automotive, Education and Healthcare sectors. The Connected Living programme is also working with the city of Barcelona, the Mobile World Capital, to develop and showcase smart city services. Our work focuses on the adoption of mobile based solutions and services to ensure that the cities of the future are safe and healthy places to live and work.

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Connected Living