



# Mobile@JIT

A centre with  
a “Wow” factor.

2011-2012



Research on  
future mobile  
services!

## Content

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# MobileLife

## Mobile Life - A centre with a “Wow” factor

*We cannot resist the opportunity to start this yearly report by mentioning VINNOVA’s review of our progress. They concluded that in a relatively short period of time we have established ourselves as an international research lab with a “wow” factor; furthermore, they were of the opinion that we have made outstanding progress and have developed a distinctive multidisciplinary Centre living up to VINNOVA’s guidelines. Let us say that we are very happy to have received such a positive evaluation.*

As the reader of this yearly report will soon notice, last year’s activities contribute a great deal to this impression of Mobile Life as a vibrant locus for strategic innovation. This is visible in various ways, not least in our continuous large presence at the ACM SIGCHI Conference on Human Factors in Computing Systems, which is the common denominator for publishing our interdisciplinary research.

We continue making important contributions to emerging mobile technologies and their enjoyment with a large number of papers, honourable mentions, and awards of various sorts, which make visible the strength and consistency of our research. During the year we also took on the task of hosting the Mobile HCI conference in August. Together with our industrial partners and most notably our strong supporter the City of Stockholm, we managed to organise an event with a record number of participants and highly appreciated contents which inspired our research community.

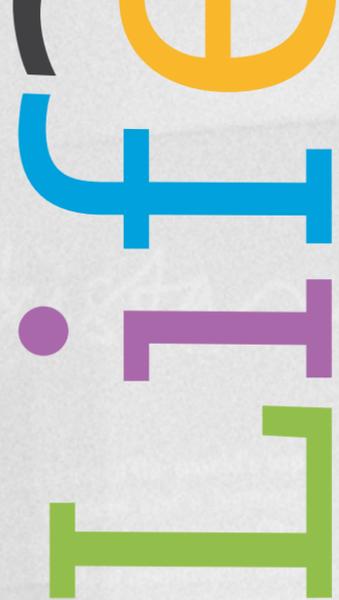
During the year we have also revisited our research plan, which involves the painstaking labour of first opening the floor for new ideas, scrutinising them, and then negotiating which ones to select, to arrive at the best possible plan for our future collaborate efforts. The Centre Management Group was very much helped by our esteemed Academic Board, the Board of Directors, and all our other colleagues. This work, which has resulted in a text that argues forcefully for an emphasis on enjoyment and consumer values, has already been used to spur new forms of collaboration in Kista.

We have also found new partners to play with. We welcome IKEA as a partner to support us in the development of digital technology that evokes consumers’ “love”, and ABB with whom we will investigate control room experiences. We started off by working with big companies that are interested in the type of long-term strategic innovation that the Centre was founded to promote. Over the years, it has also become natural to

work in a more specialized way with small- and medium-sized companies. We are looking forward to continuing this collaboration in the pervasive games area with Company P and welcome MovintoFun as a new partner. We are also happy to welcome KTH and the school of CDC as a new research partner. Their positive attitude has been visible, among other things, in their efforts to include us in strategic government funding projects and the new European Institute of Technology. They are an important research partner that will contribute by providing research content and supporting the proliferation of the activities in our area.

In these activities, and other activities described in the yearly report for 2011 and 2012, we can begin to see what will be the legacy of the Centre. In our recent publications, there is a more mature articulation of the characteristics of enjoyment experiences and how these combine with digital technology. The theoretical work on bodily movement, pervasive gaming, and production systems for amateur-generated content is important here, together with the concrete examples as presented in our recent book “Plei-Plei”. It is very much up to us to continue on this path to provide our partners with an improved foundation for future technology development.

Oskar Juhlin, Centre Director



## Introduction

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*The Mobile Life VINN Excellence Centre provides a neutral arena where researchers and industrial partners work together. We focus on creating new interaction models; finding efficient and user-oriented methods for developing mobile services; gaining a deepened understanding of the unique properties of the future mobile life; creating a future mobile services ecosystem by exploring alternative universes for infrastructure, business models, and new roles for industry; and finally developing a range of novel mobile services for mobile media creation, play, social interaction, and bodily awareness.*

The Mobile Life Research Centre at Stockholm University is located in Kista, near Stockholm, Sweden. The Centre started in 2007 and has funding until 2017. In four years, the Mobile Life Centre has grown to encompass about 50 researchers exploring experiential, leisure-oriented, and playful mobile and ubiquitous interactions. The research is interdisciplinary, involving researchers from computer science, interaction design, sociology, and psychology, but also game designers, artists, dancers, and fashion experts. The Centre's competitive edge lies in doing serious research about what we might normally describe as "unserious" activities in collaboration with our industry partners Ericsson, Nokia, Microsoft Research, TeliaSonera, Bambuser, and Company P. We also have close collaboration with the city of Stockholm. We find inspiration by doing studies on people's mundane and creative leisure activities such as horseback riding, hunting, parkour, dancing, or role-playing games. We use those insights to spur innovative design processes, resulting in mobile applications, sensor-based applications, pervasive games, mobile mash-up services, new mobile media, technical platforms, and materials to support amateurs' creativity. The results range from publishing ambitious books on new playful activities, such as pervasive games and social media on the road, to generating and demonstrating innovative mobile and leisure-oriented applications and finding new methods for design and evaluation. During the last year we published nine journal articles and 37 peer-reviewed conference papers in highly renowned venues. Six of the papers won awards at conferences such as CHI and CSCW.

We continue to appear in press and media, get invited to give talks, and present ongoing research. The most salient Centre activity this year was our hosting of the 13th international conference on Mobile Human Computer Interaction, Mobile HCI 2011. The conference was very successful, attracting about 400 participants. The conference spanned four days and the highlight of the social activities was a reception in the Golden Hall organised by the City of Stockholm, one of Mobile Life's partners.

In all, the Centre is now well-established as a significant research organisation. During this year it has taken a further step forward and extended its responsibilities beyond our own joint venture.

# Centre Partners

*Stockholm University is the principal of a consortium that is formed by partners from the major companies in the mobile industry, together with research organisations, public sector representatives and innovation systems actors. Here, we present the partners that are currently active at the Centre.*

## Research organisations

*Stockholm University:* Mobile Life is organised as a unit within the Department of Computer and Systems Sciences (DSV) in Kista. The Centre is physically located on the Kista campus in the Electrum building. The research at the Centre is closely connected with undergraduate and graduate education at Stockholm University and the Faculty of Social Science. Students employed by the Centre will be enrolled in the master's and doctorate programs at the University, primarily at the Department of Computer and Systems Science. Senior researchers will be actively involved in the formation of such programs, primarily within this department but also in other departments at Stockholm University and the Royal Institute of Technology (KTH).

*SICS and Interactive Institute:* The Swedish Institute of Computer Science (SICS) and the Interactive Institute (II): The role of SICS and the Interactive Institute at the Mobile Life Centre is that of joint executors of research together with Stockholm University. SICS and the Interactive Institute have their main offices in Kista. During the period, SICS and the Interactive Institute have together received half of the VINNOVA funding (3.5 MSEK/year) and have co-funded the Centre with matching amounts. The funding and co-funding are equally divided between SICS and the Interactive Institute.

## Industry partners

*Ericsson* - Ericsson is a world-leading provider of telecommunications equipment and related services, to mobile and fixed network operators globally. Ericsson has deep knowledge in present and future telecommunications systems, including content and communication oriented services for mobile devices and the connected home. Ericsson provides the Centre with concrete technology as well as access to the company's deep knowledge of present and future telecommunications systems, including content- and communication-oriented services for mobile devices and the "connected home".

*TeliaSonera* - TeliaSonera is the leading telecommunications company in the Nordic and Baltic region. TeliaSonera brings to the Centre its vast experience of service provisioning, both regarding cultural and business technology, but also multiple platforms, including both fixed and mobile telephony, hotspot wireless communication, portals, and communities.

*Microsoft Research* - Microsoft Research has identified three key domains in which support from Microsoft will assist university researchers in achieving the greatest progress: the emerging computing environment, the transformation of science through computing, and the advancement of the computer science curriculum. Through its focus on social and mobile services, the Mobile Life Centre targets the first of these areas. The researchers at the Centre have a well-established collaboration with Microsoft Research in Cambridge, in particular to improve our understanding of the use of information technology in everyday life.

*Nokia* - Nokia is a world leader in mobility, and is driving the transformation and growth of the converging Internet and communications industries. Nokia manufactures a wide range of mobile devices and associated services and software for music, navigation, video, television, imaging, games, business mobility and more. The Centre's research is focussed on similar areas, giving it the ability to pursue design-oriented research at a high level. The Centre is able to apply Scandinavian design traditions to the commercialisation of services and applications, and it holds a leading position in design-oriented research on mobile applications.

*Bambuser* - Bambuser is an interactive mobile video streaming platform, that enables users to quickly and easily stream and share live mobile video through all of their favourite social networks, including Facebook, Twitter, and many more, through seamless integration. Used by both professional broadcasters and consumers worldwide, Bambuser is the simplest and most dynamic video streaming solution available for WiFi mobile devices, webcams and DV-cameras. Featuring mobile and browser-based live broadcasting, one-click social sharing, platform-agnostic chat, geo-location tagging, and integrated web storage, Bambuser is the smart mobile video solution. Bambuser is currently available for iPhoneOS, Symbian, Android, Nokia Maemo, and Windows Mobile operating systems, and supports over 200 different mobile devices worldwide. Bambuser enables anyone to quickly and easily harness the power of live social video.

*Company P* - Company P is located in Stockholm. Company P was formed to address the growing demand by the theatre audience to participate and become

an integral part of the drama enabled by new digital interactive technologies and social media. The company P is in a pursuit of a type of entertainment that as a product is enjoyable to consume and watch, and as a game and event is interesting to dig into as deeply as you choose; entertainment that is broadcast and distributed by means of the most available and effective channels that the new technologies allow; entertainment that exploits the new possibilities for storytelling, expression, and experiences provided by new media.

## Public sector representatives

*City of Stockholm Municipality* - Within Sweden as a whole, the Stockholm region and Kista in particular play a crucial role in the establishment of a consumer-oriented service industry. This role has been recognised by the City of Stockholm, which has chosen to start and/or participate in several initiatives focusing on this sector, including the Kista Mobile Showcase, and the Mobile Life Centre. The City of Stockholm plays a naturally central role at the Mobile Life Centre, by providing multiple channels for local collaboration, dissemination, and take-up involving both small and large companies.

The City of Stockholm contributes to the Centre by being prepared to serve as a test-user representing the public sector in several domain projects. Furthermore the City strives to be a coordinator and collaborator with regard to various mobile initiatives in the city.

*Kista Science City* - Kista is a "science city" – a creative melting pot where companies, researchers and students collaborate in order to develop and grow. The foremost sector in Kista is ICT. Few places on the planet can demonstrate the same high concentration of expertise, innovation, and business opportunities within ICT. Kista Science City brings to the Centre its project "Kista Mobile & Multimedia Network", an active business-oriented network for people and companies within mobile services and the multi media industry. The network is a meeting point for researchers, entrepreneurs, and industrial management in an international environment with a strong focus on business. It serves as an important component of the ecosystem where local government, academia and industry work together for growth.

## Innovation systems partner

*STING* – STING, Stockholm Innovation & Growth, founded in 2002 and based in Stockholm, is a world-class ecosystem for innovative start-ups. The ecosystem encompasses comprehensive business development support, its own financing sources, and access to STING's broad network – all interacting with each other to

accelerate the building of Sweden's new international growth companies. STING works primarily with innovative start-ups within ICT, Internet/media, medtech, and cleantech, and supports entrepreneurs and innovators from academia, research institutes, and the business sector. STING is headquartered in Kista Science City – in the middle of one of the world's premier ICT clusters. STING is a supportive partner at the Centre and contributes its expertise as a business incubator. STING has been a partner since the start of the Centre in 2007.

# Research

*Mobile Life conducts research on leisure, pleasure, and play. This includes the good life and how the technology can be a part of all aspects of life. By focusing on consumer-oriented mobile services spanning areas such as entertainment, socialisation and work, the Mobile Life Centre will add to and strengthen the Swedish innovation system. Emergent technologies within the mobile sector have the potential to support activities of everyday life, and we therefore need to expand on the existing user-research base which has mainly been focused on work settings.*



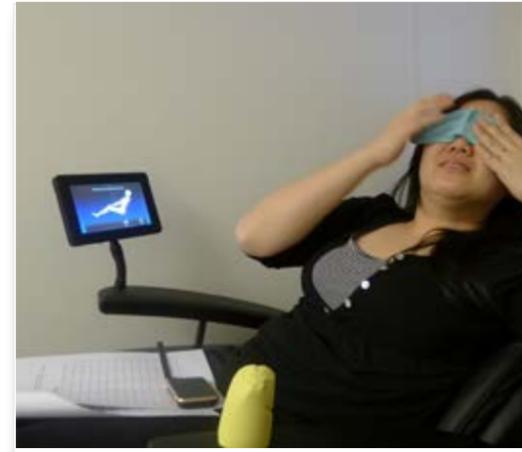
*Social Properties of Mobile Leisure*



*Generalised Interaction Models*



*EcoFriends*



*Designing for Supple Systems*



*Affective Health*



*mFashion*



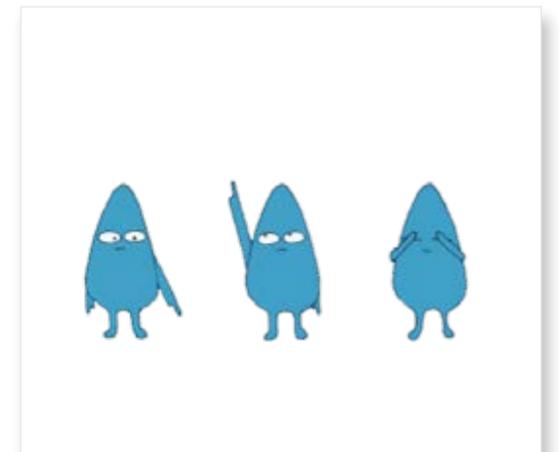
*Pervasive Games*



*Mobile 2.0*



*MoreVideo*



*Playful Experiences*

## Research / Social properties of mobile leisure

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Research at the Centre explores on the one hand playful experiences and leisure, and on the other hand the new opportunities that arise from mobile services exploiting intrinsic properties of mobility, such as access variability, ad-hoc meetings with other devices, context awareness, access to information depending on geographic location, and positioning relative to other users or resources. In this project, we conduct studies of such social properties to provide a social science oriented framework for future research and design in a broad sense. It serves as a shared arena for studies with a strong focus on social interaction, and which the design outcome is framed on a general level.

The project's work on the interaction between humans and animals and on technology to support such interaction, has inspired a design study for a social media for canines (conducted by Elisa Chiodo who was a guest PhD student in the Centre) as well as the foundation of a special interest group (SIG) at the CHI 2012 conference.

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*Hunting with dogs*

## Research / Generalised interaction models

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The Generalised Interaction Models-project (GIM) was started in order to explore the broad topic of future interaction models for mobile phones and mobile devices. Mobile interaction is fundamentally social- and experience-oriented in nature, having at its core communicative action rather than information handling. This year we have examined a number of challenging and somewhat unusual ways of thinking about interaction and design that fundamentally challenges the original conceptions of interaction in Human Computer Interaction (HCI). This has resulted in two full papers presented at the CHI 2012 conference, one of which was awarded the distinction of best paper.

First, we wanted to explore alternatives to the legacy of the desktop computer paradigm for interaction design. We conducted an analysis of a fascinating piece of machinery often referred to as one of the predecessors of the modern day computer, the Jacquard loom. We looked at qualities in design and interaction from a number of different perspectives: how historical tools, crafts, and practices can inform interaction design and the role of physicality, materiality, and whole-body interaction, in order to

rethink some current conceptions of interaction and design with regard to computational devices. As a second step, we explored the concept of agency in order to understand the process of how design materials “talk back” to designers. In so doing, we illustrated the various levels at which agency emerges in the context of intensive short-time prototyping sessions. It is often assumed in HCI that the designer is an agent who acts intentionally in the design process. Recent notions of agency provide a way of analysing the performative role of design materials, rather than merely viewing them as representations ascribed by designers’ actions. The notion of agency places emphasis on the emerging properties of materials and how they actively contribute to the unfolding of design activity. The analyses showed how interaction design to a large extent is driven by emergent characteristics of available materials. The results have implications for understanding material interactions and materiality in interaction design.

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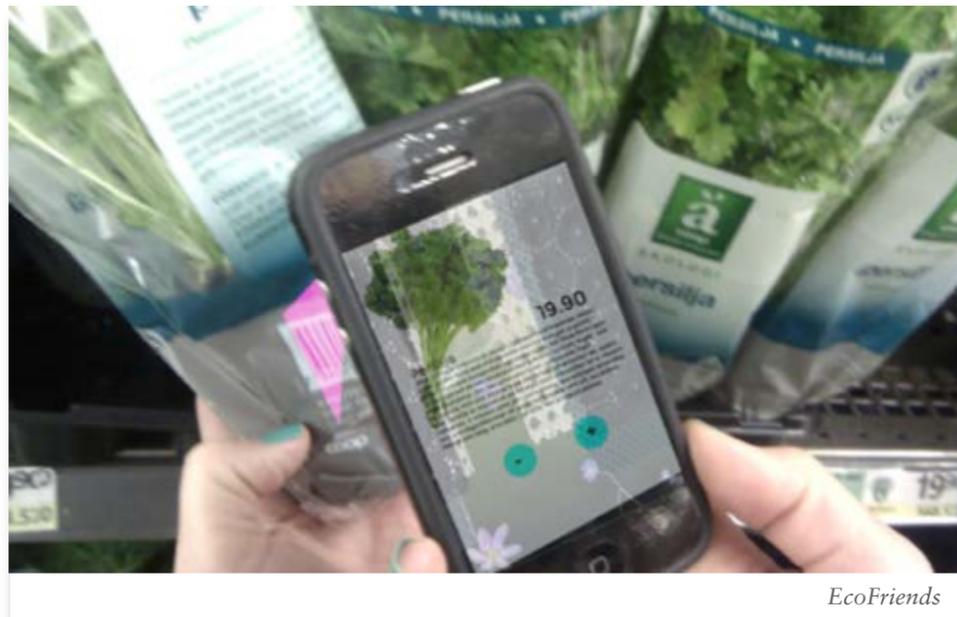


*The Jacquard loom at Sidenväveriet in Stockholm*

## Research / EcoFriends

The Ecofriends application was designed to encourage people to reflect on their everyday grocery shopping from social and ecological perspectives. Ecofriends portrays the seasonality of various grocery products as being socially constructed, emphasizing subjective dimensions of what it means for a product to be in season, rather than attempting to communicate it as an established fact. It provides the user with unexpected information (news, weather, blog posts and tweets) about the place where the product was grown, and visualises how the product's popularity shifts throughout the year, among the user's friends, among chefs and other food experts, and among the general public. Key findings from users' first encounters with the system concerned aspects of trust, how information fragments worked as reflective and conversational catalysts, and how several of the participants found the system's portrayal of season to be thought-provoking.

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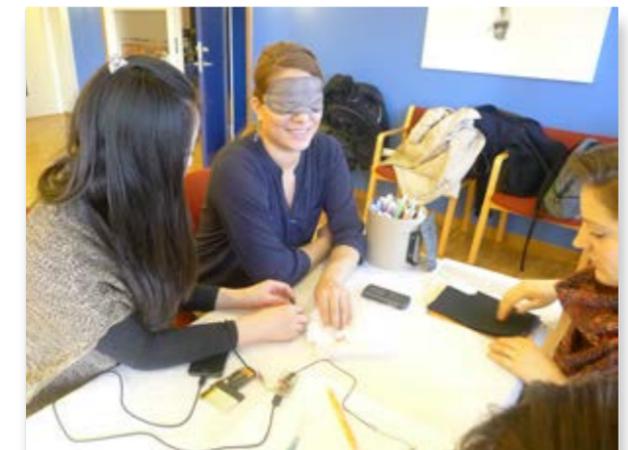
## Research / Designing systems for supple interaction

The IMPACT-project focused on designing a toolkit for experimenting with what we call somaesthetic experiences with mobile devices. The notion of somaesthetic experiences provides a holistic framework for bodily experiences that integrates soma (body), emotion, and aesthetics. The toolkit includes wireless sensors and actuators connected to mobile phones and attached to our bodies. Bin (Tina) Zhu together with Jordi Solsona and Pedro Ferreira, experimented with various kinds of expressions that end-users might be interested in conveying. The idea is to explore earlier ideas about a general communication mechanism that allows end-users to "talk" through a magic box with sensors and actuators, either connected to users' mobiles, or located somewhere else.

We designed a massage test, to explore how people convey their haptic experience of massage to remote friends. The understanding gained from this study is now being put to use in designing the IMPACT toolkit for communication between people on a somaesthetic level. We also held brainstorming workshops together with the University College of Arts, Crafts and Design (Konstfack) in January and March at which we sought to better understand the experience of different materials in combination

with digital interactions. We tested combining different vibrating devices together with different materials, and placing them on different parts of our bodies in order to sensitise ourselves to such experiences. In the future, we will use IMPACT to try out forms of expression and bodily communication in different context and domains.

Project leader:  
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## Research / Affective Health

The Affective Health system picks up on two basic bodily manifestations of short-term stress, skin conductance and pulse, and mirrors this data back users on their mobile phones – both in real-time, enabling a bio-feedback loop, and over time (days or even months) to help users to detect behaviour patterns in their everyday life that affect their bodily reactions to short-term stress and relaxation. The interface on the phone is an evocative, animated, colourful interactive portrayal of their bodily data. Affective Health has been well-published and well-received in the numerous presentations we have given on the topic of interactional empowerment and suppleness. In fact, it has been so well-received that we decided to enter Affective Health in the SSF/VINNOVA joint competition/ training on commercialising results. We were selected and were awarded 500 KSEK to undertake the first steps towards commercialisation. In this process, we have met with various actors in the sector (Affectiva Ltd, AT&T, Philips, Ericsson, Holst Centre Eindhoven, Stress Research Centre at Stockholm University, and many others) to map out where our first customers might be found, who else is approaching the market, and the best channels to reach customers. For Ericsson, our work in this area has been a piece in the larger puzzle of how best to serve the health and well-being sector.

Project Leader:  
Jakob Tholander, jakob@mobilelifecentre.org



*Affective Health*



*Affective Health*

## Research / mFashion

The increasing emphasis on experiences within mobile interaction design has put the selection of colours, materials, and form at the fore. However, the discussion of such aspects of design research has not yet accounted for how the users themselves, as well as industry, notice these aspects, e.g. as forms of fashion and view them in relation to peoples' complete outfits.

We argue that fashion logics are a part of the context in which users select colour and material. Neglecting to understand fashion dynamics might lead to both missed opportunities, and a decrease in the take-up of new applications. Thus teasing out the difference between consumption of mobile experiences as some sort of de facto product and symbolic fashion-oriented experiences is of critical importance for design oriented-research in the mobile area. How do we need to account for fashion logics in mobile interaction design? How can we understand the purchase and use of mobile technology as a form of fashion consumption? Where and when do

mobile design overlap with fashion design and the fashion industry? What unexplored fashion areas would be interesting to combine with mobile design and where do they come from?

During the year we have continued to conduct research in this area. In particular PhD student Yanqing Zhang and Professor Oskar Juhlin have contributed to several workshops, within the areas of both human computer interaction and fashion theory. Yanqing Zhang has initiated a study on the history of Nokia's fashion and designer phones, as well as continued the analysis of the fashionology of mobile design. The scope of the project has been expanded to include design, with a conceptual and futuristic investigation of the outfit-centric design concept of designer Cristine Sundbom.

Project Leader:  
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*mFashion (photographer Anneli Sandberg)*



*Hand with "design" element*

## Research / Pervasive Games

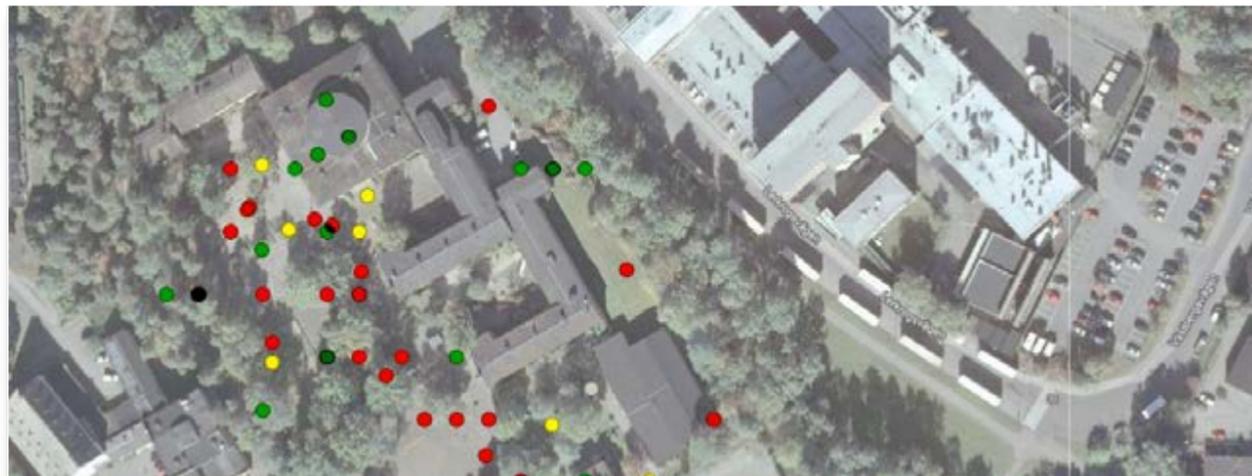
Pervasive games are games that are played in the world around us, rather than on computers or mobile phones. Their main attraction lies in that they are their being reality-based, drawing upon a real world which that is richer, more varied, and emotionally and historically more interesting than any made-up game world can be.

In recent years, pervasive games have become increasingly mainstream. Today, a vast number of location-aware mobile games exist that are downloadable to your phone, at the same time as various cross-medial productions mixing TV, web presence, and physical events have become increasingly common. The Pervasive Games project and its predecessors have been extremely influential in mapping out the design space for pervasive games. During the previous two years, we have both studied commercial productions and contributed to the development of commercial or near-commercial games in collaboration with industry.

The Pervasive Games project came to a close during this year. During this time, two research questions were brought into focus. The first was how our design knowledge about pervasive play can be made useful outside the scope of pervasive games. The second was how to design pervasive games to be scalable, both in terms of time and number of players.

In the “Solberga” experiment, we explored how the dialogue between city planners and the inhabitants of a neighbourhood can be improved by playful means. Together with the Culture Department in Stockholm City, we carried out a workshop at a school located close to a construction site. The study was based on “I’m Your Body”, a tool for collaborative storytelling that we developed the previous year in collaboration with Kista Theatre, as well as the video-based storytelling methods used by the Culture Department uses in “Young people’s stories” (Unga Berättar).

On the first day of a two-day workshop, we asked the school children to use the “I’m Your body” system to mark “good” and “bad” spots in the landscape. On the second day, they created video-based stories associated with the places they personally found most important. Combining these two methods allowed us get both an overall feel for the soft qualities of the school surroundings, and rich descriptions of the most important places. In fact, the project was so successful that the results were incorporated directly into the city planning process, as part of a compulsory “children impact assessment” analysis. The participants furthermore had fun and felt empowered and involved. The encouraging results from the Solberga experiment have lead to the starting of a new project within Mobile Life, Citizen Dialogue.



Solberga

### Codename Heros

From a more game-centric perspective, we decided to tackle a critical outstanding question for pervasive games: that of scalability. The most attractive aspect of pervasive games is their physicality and tangibility - that the interface is the world, and not a web page or a mobile phone. Even so, those commercial pervasive games that aim to run in the long-term and to scale to an arbitrary number of users have been forced into purely screen-based interfaces.

To address this issue, we designed a game “Codename Heroes”. This game is a concept prototype for “massively multiplayer” pervasive games, that is, games that are intended to run continuously and scale to an arbitrary number of players. “Codename Heroes” uses tangible artefacts, physical locations, and meetings with people as key elements in the game. Our solution was to let players create game objects and select game locations. The game was also designed to be gender-aware from the start - we wished to make the game attractive to and beneficial for a young female audience. Understanding the constraints and design opportunities that this perspective provided became a second focal issue for the design concept.

In “Codename Heroes”, the players play the role of secret agent with magical superpowers. The superpowers

can be used to send messages to other agents, to do quests together, to spy on other teams, and to battle the “enemy”. Players construct magical artefacts that hold their powers, so that they can share powers with their friends and team-mates. Technically, “Codename Heroes” uses a combination of Bluetooth, image recognition and GPS technology to attach a magical meaning to locations, objects, and encounters with other players.

Initial workshops with players show that the game mechanics are fun and attractive to young women. The game is currently under implementation and has been continuously tested in player workshops during the spring of 2012. A public roll-out is planned to happen during the Ung’08 festival in August, and a long-term test is planned for the autumn of 2012.

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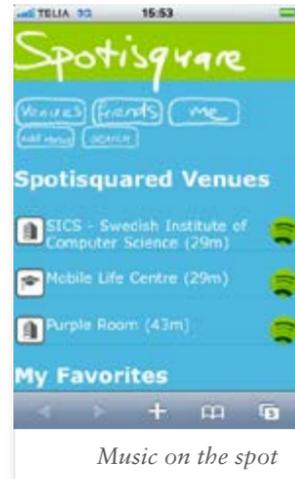
Players

## Research / Mobile 2.0

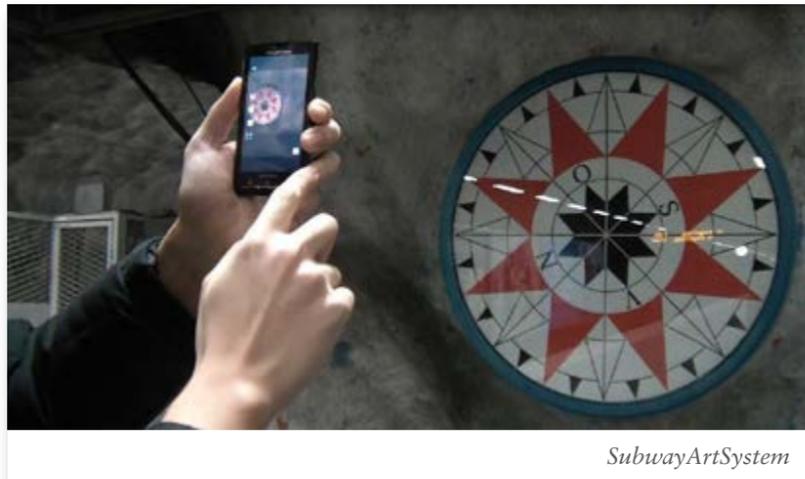
The rapid proliferation of mobile devices and embedded sensors has facilitated the rise of new mobile services with increasingly complex capabilities. App stores have provided researchers with the opportunity to reach a potential audience of millions of users of research apps. The Mobile 2.0 project explores the possibilities of this new ecosystem by developing mobile services that leverage uniquely mobile settings - by developing mobile innovation methods, and by conducting "Research in the Large" through widely distributed apps powered by existing platforms and services.

### Research in the Large: mobile research within a changing ecosystem

The Research in the Large project has built an international community of academic and industry researchers with a shared interest in how to leverage wide distribution channels and big data through workshops. The project has also published a special journal issue. Insights from this community and our own public mash-ups (incl. Spotisquare, Pic-In, PhiSquare, NearMe) illustrate the importance of academic-industry exchange of insights, and understanding "startup-style" methods within research projects. This includes considering the consequences of using existing services as research materials, and understanding how services grow large. To understand the current patterns of user-initiated service distribution, a survey investigated current word-of-mouth practices and the motivations of 203 mobile service users' reasons for providing and considering recommendations. Additional interviews highlighted triggers for providing and accepting recommendations, which were dependent on personal preferences, context, and service.



Music on the spot



SubwayArtSystem

### The phone as a sensor: location

Within the project we also worked actively to extend our understanding of the capabilities of the Phone as a Sensor, focusing on location by combining quantitative and qualitative perspectives. The importance of acknowledging qualitative characteristics of large-scale user-generated datasets was highlighted by exploring "social idiosyncrasies" in a location-sharing data set. During the summer of 2011 our "Drawing the City" project asked over 80 people in Chicago to create hand-drawn maps focusing on their perception of the city. This made it possible to better understand how people view their physical surroundings; correlations that may exist, for example with technology use; and the use of classic, low-tech methods as design inspiration.

### Mobile Innovation

A rapidly changing ecosystem requires new innovation methods. The "Magical Bits" method was introduced to help designers brainstorm about device capabilities and experience an end product before it is even conceptualised (best short paper award DESIRE'11). Lars Erik Holmquist's "Grounded Innovation" book also highlights Mobile 2.0 mash-ups and apps. Further insights have been presented in a keynote at AppNation and a panel at SIGGRAPH Asia.

### Project Leader:

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## Research / MoreVideo

We are inventing and investigating mobile collaborative live video mixing. A first generation of applications in this genre, make it possible to broad-cast live video streams from various types of use contexts over mobile networks such as 3G (see for example bambuser.com and qik.com). We are exploring a second generation of such applications, to make professional techniques for collaborative live video editing available on mobile platforms.

Using networked camera phones, we show how it is possible to mix live concurrent video streams from multiple users for public display on the Internet and locally. The design space includes adapting these new possibilities - previously only available to professional TV-production teams - to the needs of amateurs in various contexts of use. These could include such situations as youth soccer matches broadcast by player's parents, as demonstrated by the Instant Broadcasting System, as well as night clubs or public exhibitions - with visitors broadcasting their images. The project has aimed to gain an understanding to today's mobile media usage and based on this knowledge to design and evaluate two new mobile video mixers.

During the last year we have continued to conduct research in this area. Most notable is our contribution, that won the best paper award at the 2012 conference on Computer Supported Collaboration (CSCW). In it we discuss differences between designing video applications for amateurs and professionals. We have continued to make efforts of moving a research prototype into a commercial environment by initiating a step-by-step process of commercialisation of results from the Centre, as well as continued to expand the "MoreVideo" concept to include a wide range of sensor data.

### Project Leader:

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Mobile Vision Mixer

## Research / Playful Experiences

Designing for play and playful experiences has been a central theme at Mobile Life since its start, and is an integral part of several of the projects at the Centre. This project serves to further tie the research at the Centre together around a shared discourse on playful experiences. The result is a book that is titled Plei-Plei and is accompanied by a rich collection of online materials on the website [www.playfulness.info](http://www.playfulness.info).

As playfulness was not only a central theme not only for the researchers at the Mobile Life Centre, but also a key ingredient in some of the work at Nokia, Ericsson and Microsoft, it was urgent to compile an overview of much of the research performed in this area.

During 2011–2012, this project focused on finalising a book that gathers together many of the results from Mobile Life, MSR, Ericsson, and Nokia, with a focus on playfulness. The book presents a diverse set of ideas, methods, tools, and ways of seeing playfulness. We can broadly divide these into studies of playful practices in the world, how we are (and should be) playful in our design processes, and our attempts to design technology that may spur playfulness, in particular those systems that spur bodily playfulness (as this has been a long-standing topic at the Mobile Life Centre).

### Studies of playful practices

In the section containing studies of playfulness as it occurs in practices in the world, we present a whole range of playful activities ranging from carefully crafted and well-organised practices to the propensity to have fun with whatever is available – mere play. Organised practices

for pleasure may include hunting, going to a sports bar, or taking a horseback-riding lesson. “Mere play” was found, for instance, in studies of users who received a mobile phone for the first time. Jussi Holopainen from Nokia helped frame these studies of playfulness in widely differing activities. He writes about how playfulness depends on our state of mind; we are in “either a playful (telic) or serious (paratelic) metamotivational state at any given time.” He provides some clues as to why we are pulled into a playful mode, and what may spur it. Similarly, in the introduction to the book, Barry Brown from Mobile Life discusses how, in a sense, play is work and work is play.

### Playfulness in the design process

Playfulness is recognised as a key ingredient in any design process. Introducing the topic, Cristian Norlin from Ericsson goes so far as to claim that “without play there will be no design”. Still, play is notably absent from the literature on how the design of interactive artefacts is really done. Instead, we have been lured into believing that design can be “organised and structured”, streamlined into a rigorous process. This section continues by introducing a range of methods that can be used to spur more play and creativity during the design process: Nokia’s PLEX-cards, Inspirational Bits to explore the experiential aspects of the digital materials, Transfer Scenarios that shift experiences from some unique practice into design for a larger population, or the employment of nature walks as a resource for design.

### Playfulness spurred by digital artefacts

Apart from understanding the playfulness surrounding

technology, or play as a way to liberate our creativity and design systems, we may also want to build digital interactions and artefacts that spur playfulness. Obviously, this may be a goal of game design. But it may also be true for systems that allow two households to communicate – as discussed by Sian Lindley, MSR, when discussing the system Wayve. Introducing this section of the book, Lindley chooses to build her views on how to spur play on the idea that it is when we break boundaries and allow ourselves to go outside “the world” that we can be playful. “When people are “just playing” they can act differently; they can be mischievous and sneaky”. Systems that aim to spur play need to cross those boundaries. It should be noted that playfulness can never be determined by the system – it always requires a user who decides to be playful with/through the system.

A range of systems at the Centre have been designed to spur playfulness. EcoFriends allows you to be playful regarding your choices of organic food, TellTable allows kids to playfully create their own stories, and mFashion allows us to engage with our desires for self-fashioning and fun. And there is a whole range of other examples. The diversity of the systems presented here reflects the very real diversity of the experiences we refer to under the broad heading of “playfulness”.

### Systems that spur bodily playfulness

Ylva Fernaeus, Mobile Life, provides us with an introduction to the special playful pleasures around our corporeal, physical, moving bodies. Touching, engaging in balancing or rhythmic activities, affective loops, performance of and participation in movement, and

simply doing nothing (casual leisure) are discussed in her introduction.

Following her introduction we are given examples of digital interactions that directly address our bodies such as the Lega, which allows museum visitors to express their experiences through movement and touch; dancing with BodyBug; supporting parkour-activities in the city; or playing with multi-touch on a surface made of ice.

### The book

Our aim is to launch the book and website during the summer of 2012. We hope that it will be bought by design schools, that designers will carry it in their handbags, and scribble in it when inspired, and that it will encourage the interdisciplinary field of interaction design to articulate and engage with playfulness in all the different ways outlined in the book.

The way that this project was able to pull together people from different backgrounds and different companies, and touch the core of what they are attempting to achieve in their daily work, was, in our view, a major achievement.

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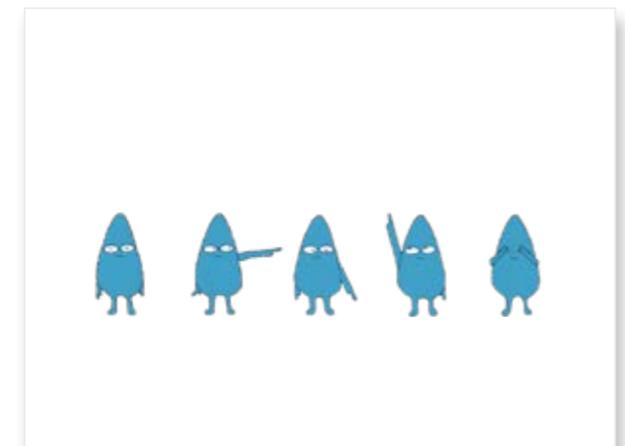
*A designers Handbook*



*Research interpreted*



*Responsive web solution*



*A playful addition*

# Publications

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## Book

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Tsui, K., Desai, M., Yanco, H., Cramer, H. and Kemper, N. (2011), Measuring Attitudes Towards Telepresence Robots. International Journal of Intelligent Control and Systems (IJICS) special issue on “Quantifying the Performance of Intelligent Systems”, 16, 2.

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- Chalmers, M., McMillan, D., Morrison, A., Cramer, H., Rost, M., Mackay, W. (2011). Ethics in Large Scale User Trials and User Generated Content. In *Proceedings of CHI 2011 Workshop on Ethics, Logs and Videotape*, Vancouver, Canada.
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## Doctoral thesis

Denward, M. (2011). *Pretend that it is Real! Convergence Culture in Practice*. Malmö högskola.

## Master Theses

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Jiminez, Javier. (2011). *Experience Centred Evaluation of a Robotic Eating Aid*. MSc Thesis, Department of Computer – and Systems Sciences, Stockholm University.

Kashanipour Morvarid. (2012). *Mobile Fashion Application, Explore Solution for Mobile Phone as Fashion Item based on “Outfit-centric” Accessory Concept*. MSc Thesis. KTH, Royal Institute of Technology.

Larsson Alan. (2011). *Design proposal for the mobile Fascinate project*. MSc Thesis. Umeå University.

Mercurio, Johanna. (2011). *Affective Health – En fältstudie av ett system inom området hälsa och livsstil*. MSc Thesis, Linköping University.

O’Kane, Aisling Ann. (2011). *Towards Vulnerable Automation: Exploring the Connections between Affective Experience and Trust in Technology*. MSc Thesis. Department of Computer- and Systems Sciences, Stockholm University.

Pradthana Jarusriboonchai. (2011). *Memory is all around: How can technology motivate family members to come together*. MSc Thesis. Department of Information and Communication Technology, KTH, Royal Institute of Technology.

# Activities

*Apart from presenting peer-reviewed publications at international conferences, the Centre aims to organise a variety of activities to disseminate the results of the research conducted within Mobile Life. These activities can take the form of giving invited talks at conferences, companies, and organisations, as well as organising workshops and seminars. Listed below are some of the external and internal activities organised during the year at which Mobile Life has participated. The big event this year, organised by the Mobile Life Centre together with SICS, was the 13th international conference on Mobile Human-Computer Interaction, Mobile HCI 2011. The conference was very successful, attracting about 400 participants from 28 countries. The conference spanned four days and the highlight of the social activities was a reception in the Golden Hall that was hosted by the City of Stockholm, one of Mobile Life's partners.*



Markus Bylund, Gyllene salen

## External activities

2011. Kristina Höök participated on the jury of the Open Stockholm Award. Stockholm City Municipality released many different databases with information about Stockholm – maps, customer feedback, etc. - and app developers were invited to submit app ideas in several different categories.

2011. Kristina Höök was elected to the board of Forskning & Framsteg, one of the most well-known popular science magazines in Sweden.

May 2011. Oskar Juhlin participated in the workshop “Urbanisation – A possibility to build a sustainable society” at the 3rd Nobel Laureate Symposium on Global Sustainability, Stockholm Sweden.

June 2011. Oskar Juhlin was invited by the German Stifterverband and the British Embassy in Berlin to give a presentation at their joint conference on Enterprising Knowledge. Oskar shared the Mobile Life VINN Excellence Centre's experiences of working in close

collaboration with industry. Among the companies at the conference were Philips, Volkswagen, and Procter & Gamble.

July 2011. Sebastian Büttner visited the Human-Computer Interaction Lab at Hasso-Plattner Institute Potsdam, Germany, and presented Phi<sup>2</sup> and Pic-In.

July 2011. Lars Erik Holmquist gave a presentation at the CONET European summer school on “Networked Embedded Systems: Humans in the Loop” in Bertinoro, Italy. The talk was titled “Understanding Digital Products” and provided an overview of the research and development of mobile and ubiquitous systems.

August 2011. Henriette Cramer gave two presentations on mobile 2.0 studies of location-based services and mash-ups:

- Motorola Research (Libertyville, IL, USA), August 10
  - Motorola Design (Chicago, IL, USA) August 11
- September 2011. UbiComp 2011: Research in the Large workshop, Beijing, China.

September 2011. Oskar Juhlin gave a talk on “Technology as entertainment – different paths to success” at the Nordic Telecom conference in Kista Stockholm.

September 2011. Alexandra Weilenmann and Oskar Juhlin organised the panel “revisiting mobility” at Mobile HCI.

October 2011. Oskar Juhlin was invited to present his research at the COST Twin Tide Training School, Design and Evaluation of Innovative Interactive Systems in Bertinoro, Italy.

October 2011. Oskar Juhlin gave a presentation on the Mobile Life Centre at Nokia Research, Lausanne.

October 2011. Kristina Höök gave an invited talk at Svenska Kommunikationsdagen. <http://www.popkom.se/page/283/284>.

November 2011. Kristina Höök gave a Keynote speech, “Move that Body! Involving users emotionally, bodily and socially”, at IASDR (International Association of Societies of Design Research) – 4th World Conference on Design Research, Delft, Holland.

November 2011. Kristina Höök gave a keynote at Nokia Experience Day, which gathered ~100 user-experience researchers and developers in Helsinki, Finland.

November 2011. Oskar Juhlin presented “Social Media on the Road” in a panel at the American Anthropological Association in Montreal, Canada.

November 2011. Kristina Höök participated on the jury of Mobilgalan.

November 2011. Kristina Höök and Arvid Engström presented some of the results from Mobile Life to Göran Olofsson and Kimmo Kivirauma at an event jointly hosted by Interactive Institute and SICS.

November 2011. Mobile Life attended the annual event Mobilgalan organised by the magazine Mobile Business and the Mobile Life partner Kista Science City. Mobile Life demonstrated research results during the exhibition at the Mobile Innovation Alley. EcoFriends was presented by Carolina Johansson, IMPACT was presented by Jordi Solsana, FascinatE was presented by Alan Larsson, Outfit-centric fashion accessories were demoed by Morvarid Kashanipour, and the Affective Health system was presented by Johanna Mercurio.

November 2011. Kristina Höök and Johanna Mercurio met with two representatives of Microsoft Sweden, Ann-Charlotte Båth and Dag König, to discuss possible collaborations and ideas for seminars.

December 2011. Kristina Höök gave a talk on consumer-oriented Internet of Things at the KTH TEDx Open seminar.

December 2011. Mobile 2.0: Lars Erik Holmquist, Henriette Cramer, Mattias Rost, Zeynep Ahmet, Xia Ruixue, Mobile 2.0 – The Future of Mobile Apps: Mashing It Up and Getting It Out There! Panel at SIGGRAPH Asia's Symposium on Apps, Hong Kong.

December 2011. Annika Waern gave a winter vacation lecture at “Tom Tit's Experiments” in Södertälje on life as a game researcher and on current trends in computer and pervasive gaming.

January 2012. Barry Brown and Kristina Höök gave a

talk on Swedish State Radio in January. The topic was the Internet of Things and the possible new media this might bring.

January 2012. Johanna Mercurio gave an invited talk on Affective Health at Datamuseet IT-centrum in Läns museet, Linköping. The theme for their seminars this spring is Technology and Health. This was followed by an interview on Radio p4 Östergötland. The topic was Affective Health and how similar sensor technologies can affect our daily life.

February 2012. Mobile Life participated in the conference on Consumer-oriented Internet of Things together with Ericsson Research, Jan Höller, Microsoft Research, Steve Hodges/Stephen Johnston etc.

February 2012. Kristina Höök gave an open seminar in the Tuesday Seminar Series at Stockholm University. March 2012. Henriette Cramer spoke about mobile 2.0 studies of location-based services and mash-ups at MIT Comparative Media Studies.

March 2012. Seminar given by Kristina Höök at IAMCP ([www.iamcp.se](http://www.iamcp.se)) – a gathering of MS-collaboration partners in Sweden.

March 2012. Johanna Mercurio, Elsa Kosmack-Vaara, Fredrik Wetterhall, and Deniz Akkaya demoed Affective Health at CeBit, Hannover, as part of the Stockholm node for the EIT ICT Labs. Johanna Mercurio also gave a talk on Affective Health at the CeBit Lab Talks for Health and Well-being together with Jean Gelissen, node director in Eindhoven.

March 2012. Kristina Höök gave an invited talk to Manfred Tcheligi's group at Salzburg University, Austria.

March 2012. Johanna Mercurio represented Mobile Life and demoed Affective Health to Austrian delegates together with Kista Science City AB. The visitors were representatives from ICT companies in Austria.

March 2012. Kristina Höök gave a talk at the conference “IT och personer med funktionsnedsättning och äldre 2012”.

March 2012. Oskar Juhlin was invited to present “Social media on the Road” at Xerox Research Europe in Grenoble.

## Visits at the Centre

May 2011. Mobile Life participated at SICS Open House. The keynote speaker was our own chair of the board, Martin Körling, Ericsson. Kristina Höök moderated the presentations. In the afternoon, demos were presented at SICS. As always, SICS's well-received event attracted close to 350 people.

June 2011. The Mobility studio organised a partner meeting with the EU-project FascinatE in Kista. 22 researchers with different affiliations such as BBC, Fraunhofer, and ARRI participated.

June 2011. Magnus Larsson and Fredrik Alfredsson from ABB Corporate research visited the Centre. Oskar Juhlin presented Mobile Life, and demos were presented at the Centre.

August 2011. The Centre was visited by a group from H&M to discuss the mobile revolution and what Mobile Life can contribute to the fashion industry and the retail market. The research at the Centre was presented and prototypes were demonstrated.

August 2011. SICS and Mobile Life were visited by a delegation from Zhejiang University.

September 2011. Mobile Life organised an open house in conjunction with the Mobile HCI 2011 conference attracting a total of 80 visitors both from academia and industry. The researchers at the Centre presented their work and demonstrated prototypes.

December 2011. Sara Öhrvall, Bonnier R&D, with colleagues visited the Centre in December. The purpose of the visit was to discuss possible future collaboration between Mobile Life and Bonnier R&D. The work of the Centre was presented along with a number of specific projects.

December 2011. A group of PhD students from Chalmers University in Gothenburg visited. The group consisted of 14 student from the research program Proviking.

March 2012. Mobile 2.0. Matthias Korn, a PhD student at Aarhus University, visited Mobile Life. His work ties into the location-based services theme in Mobile 2.0, within the domain of citizen participation.

## Workshops

**One of the aims of the Centre is to stimulate and inspire a mutual transfer of knowledge among academia, industry, and the public sector – also referred to as the Triple Helix. One tool for achieving this knowledge transfer**

**is the organisation of workshops at the Centre during the operational year. The Centre organises both internal workshops for the industry partners as well as workshops that invite attendees from other institutes, universities, or companies.**

April 2011. During the year the Playfulness project organised workshops and idea sessions including all the industry partners to produce the Playfulness book. The book will be launched in fall 2012.

April 2011. Pervasive Games organised several workshops and meetings during the spring with the City of Stockholm and performed a study in Solberga. The results from the Solberga project will feed into the Citizen Dialogue project, which began in April 2012.

May 2011. MoreVideo organised a workshop at Nottingham university and the Horizon Centre with participants from Horizon and Nokia.

May 2011. Mobile 2.0 organised workshops at CHI and UbiComp A workshop was organised on Ethics in Large Scale Trials & User Generated Content at CHI 2011, together with Wendy Mackay, Matthew Chalmers, Donald McMillan, and Alistair Morrison.

June 2011. Pervasive Games organised a workshop with Company P and Nokia on design ideas.

June 2011 Kulturen i ögonhöjd. Pervasive Games.

June 2011. Solbergaprojektet, utvärdering, Pervasive Games.

June 2011. The Centre held a two-day workshop with all participants at the Centre – industry, public sector, and academics – with the Mobile Life Advisory Board at Krusenbergs Herrgård. The work focused on the next step for the Centre and future challenges.

August 2011. The Supple project organised a workshop with Ericsson.

August 2011. Workshop and project planning, LiveNature (August 16–17).

September 2011. Games design Heroes, Pervasive Games (September 5–6).

September 2011. Cross-partner meeting, Playfulness book (September 22).

September 2011. At UbiComp in Beijing China, Mobile 2.0 organised the second workshop on Research in the Large: App Stores, Wide Distribution Channels & Big

Data in Research, together with David A. Shamma, Yahoo! Research, and Frank Bentley, Motorola Research.

October 2011. Design workshop, The LiveNature project organised a design workshop at Bögs gård with participants from Mobile Life (October 12).

October 2011. The Centre organised the second Mobile Life Industry Day with steering group meetings and invited speakers. The theme for the days was the Internet of Things. We had discussions on opportunities, new business, new apps, and new “things”, with an emphasis on business models and the identification of players in the eco-system.

October 2011. Pervasive Games organised a workshop to plan for the Citizen dialogue project with the City of Stockholm.

November 2011. Mobile Life held an inspirational workshop together with representatives from different departments at TeliaSonera.

November 2011. IKEA visited the Centre, and in conjunction with their visit, LiveNature organised a design workshop and Pervasive games organised a game design workshop.

November 2011. The Centre organised a workshop with attendees from different department at TeliaSonera. November 2011. mFashion held a workshop at Nokia in Helsinki that discussed future technology and material.

December 2011. The Generalised Interaction project organised a workshop on Aesthetic Explorations. An explorative workshop on baking, sensors, behaviour, and time with participants from Mobile Life Centre, Sophiahemmet, and Konstfack, with the baker Sebastian Boudet guiding the baking process.

January 2012. The Affective Health project organised a two-day workshop on social sharing with Ericsson, Philips research, and Holst technology.

February 2012. LiveNature organised a workshop at the Centre with participants from Ericsson, Gothenburg University, and a visiting researcher from Politecnico di Milan.

February 2012. Generalised Interaction organised a two-day workshop using the new method “Nature – a source for design” with the goal of creative brainstorming about concepts related to the sharing of bodily data. The workshop took place in the forest at Järvafältet with participants from Philips Research, Ericsson Research, and

Holst Technology.

March 2012. Generalised Interaction organised a dance workshop at the Trinity Laban Conservatoire in London, together with Microsoft Research.

## Seminars

**During the year, Mobile Life has continued to organise its series of open seminars. Presenters have been external speakers invited both nationally and internationally as well as speakers from the Mobile Life Centre. The seminars are held in the premises of the Centre partner, Kista Science City, in Kista Science Tower.**

2011, April 6. New mobile and locative media, proximity encounters and the social construction of urban experiences: An ethnographic study in the uses of DragonQuest 9. Christian Licoppe, professor of Sociology and the head of the Social Science department at Telecom Paristech.

2011, April 20. Where Reality and Fiction Overlap: Alternate Reality Games as a Space of Real Virtuality. Mela Kocher visiting scholar from Switzerland.

2011, April 27. Understanding People and Animals: What we need to consider when designing technology for human-animal interaction. Alexandra Weilenmann, associate professor at University of Gothenburg and Oskar Juhlin, professor at Stockholm University.

2011, May 4. Break the rule : Re-Reading the past for media-innovation. Oguzhan Ozcan, Professor in Design at University of Mälardalen.

2011, May 25. Working with video in the Affective Health project. Elsa Vaara, PhD student and industrial designer at Mobile Life Centre.

2011, June 1. The Tube: Formgiving Discourse - not Form Follows Norm. Cristin Sundbom, MA in Design.

2011, June 8. User Experience of Social Ad Hoc Networking: Findings from a Large-Scale Field Trial of TWIN. Kaisa Väänänen-Vainio-Mattila, visiting professor at Stockholm University.

2011, June 15. Unpacking Social Interaction that Makes us Adore – On the Aesthetics of Mobile Phones as Fashion Items. Yanqing Zhang, PhD student at Mobile Life/ Stockholm University.

2011, August 17. Investigating Emotions in Creative Design. Corina Sas, PhD in Human Computer Interaction at Lancaster University.

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2011, August 24. Analyzing the Affective Meaning of Feature Movies. Luca Canini.

2011, August 29. Sleeping at Internet Cafes: The Next 300 Million Chinese Users. Tricia Wang, Sociologist and Ethnographer (US).

2011, September 7. Future of Bio-Product Design- Exploring the Impact of Biomaterials and Bioprocesses on Future Product Design. Olof Einarsson, industrial designer, Konstfack, University College of Art, Crafts and Design.

2011, September 14. Augmented Reality Case Studies in Interactive Media Design Education. Asim Evren Yantac. Researcher at the Interactive Media Design Department, Yildiz Technical University, Istanbul.

2011, September 21. Interactive Television, Living Labs and Heterogeneity. Dave Randall. Research fellow at Lancaster University.

2011, September 28. Tales from the cubicles: How to do research outside the reserve. Cristian Norlin, Master Researcher at the User Experience Lab at Ericsson Research.

2011, October 3. Simple haptics, sketching tools for haptic Interaction Design. Camille Moussette, PhD student at Umeå Institute of Design.

2011, October 19. Intermediate-level Knowledge in Interaction Design Research. Kristina Höök, Professor at Stockholm University.

2011, November 23. From Hybrid Spaces to Experiencing Augmented Places. Matthias Korn, Ph.D. fellow at Aarhus University, Denmark.

2011, November 30. Thou shalt sport a banana in thy pocket: Gendered body size ideals in advertising and popular culture. Jacob Östberg, Associate Professor at the Centre for Fashion Studies, Stockholm University.

2011, December 14. Designing for Social Innovation. Ramia Mazé, PhD. Research leader at Interactive Institute.

2012, January 25. Problemet utan namn: Neuroser, stress och kön i Sverige från 1950 till 1980. Maria Björk, PhD in History of Science and Ideas, Uppsala University.

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## Doctoral Thesis

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*Marie Denward successfully defended her Doctoral thesis, Pretend that it is Real! Convergence Culture in Practice, at Malmö högskola, October 7th.*

### Abstract

Media convergence has mainly been defined and explained as a technological and industrial phenomenon; as the process where new technologies are accommodated by existing media and communication industries and their cultures of production. One consequence of convergence in today's hybrid media landscape is that the previously distinct borders between production and consumption have become blurred. This means that convergence also takes place as a bottom-up social process initiated by media users that move almost anywhere and everywhere in search of entertainment experiences of their liking. This thesis sheds light on the different types of media convergence that took place in the process of making the transmedia storytelling production Sanningen om Marika. The Swedish public service provider, SVT, and the pervasive games upstart company, The company P, combined their expertise in broadcasting and games development to craft this 'participation drama'.

During five months in 2007, the production offered Swedes nationwide rich possibilities to interact and

participate, or just to watch or lurk on the production's various platforms. Using an ethnographic approach, field studies were conducted throughout the design, implementation and production phases. The analysis shows that even if instances of convergence could be identified, the collaboration did not proceed smoothly. The companies' different media logics with their differing cultures of production created tensions and frictions. The different logics of television, internet and games - different in quality demands and with different audience participation models - made it difficult to create a hybrid production. Television genres blurred fiction and facts, and the ordinary was blurred with activities of games and play in the production, making the audience reception and interpretations differ extensively. Lastly, the designed audience participation did not remove the asymmetrical relationship between producers and users in media, but instead highlighted issues of hierarchies, lack of participant empowerment and inequality between participants.



Marie Denward

# Media

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*Mobile Life is a nationally and internationally recognised research locus and the media bring a great deal of attention to the results and researchers. Since its start in 2007 the Centre has appeared in national and international media more than 86 times, most notably in the Swedish Radio broad casting SR P1, TV4 News, Computer Sweden, Svenska Dagbladet, Metro Teknik, Ny Teknik, Veckans Affärer, Forskning&Framsteg as well as international media. A list of the press- and media appearances follows:*

April 2011. Oskar Juhlin on “Nyhetsmorgon” TV 4, It was on the corner of 56:th and Lexington in New York that the first phone call with a handheld device was made on April 3rd, 38 years ago. The phone weighed 1 kg and the battery could be used for 20 minutes. In an interview on the TV 4 news program “Nyhetsmorgon”, Oskar Juhlin comments on some of the mile stones for mobile phones during the 38 years that have passed, and on future challenges for the mobile phone.

May 2011. IT i Värden, Article about Affective Health in the Internet journal “IT i värden”.

June 2011. MFashion in VINNOVA NYTT, Match your mobile phone with your dress! Article in VINNOVA Nytt about the Mobile Life project, mFashion.

June 2011. Mobile Life in VINNOVA NYTT, About Mobile Life in VINNOVA Nytt, p 8.

September 2011. “Less apps and the return of the URL”. Oskar Juhlin in a video interview by Stockholm IT region. He talks about the trends in mobile devices, their purpose and the strengths of the Mobile Life Centre, and the choice of Stockholm for an international conference on mobile devices.

September 2011. Commercialisation of Affective Health. Kristina Höök discussed the progress being made in the process of commercialising of the Affective Health system at SSF (Swedish Foundation for Strategic Research). The pre-study has convinced her and the business developer, Fredrik Wetterhall, that this will be a successful product on the market.

November 2011. Kristina Höök interviewed in the magazine Ny Teknik about mobile phones and emotions.

December 2011. Interview with Kristina Höök in Dagens Nyheter. How smart can a mobile phone become? Kristina talks about emotion-based communication for mobile phones.

December 2011. Article about the Mobile Life VINN Excellence Centre. In June, Oskar Juhlin was invited by

the Stifterverband für die Deutsche Wissenschaft to give a presentation about the Swedish innovation system and in particular about the VINN Excellence Centre. The event was followed by an article.

December 2011. 10 million SEK for “emotional” research. Kristina Höök, Professor at the Department of Computer and Systems Sciences and director of research at the research institute SICS, is awarded 10 million SEK in grants from the Foundation for Strategic Research. The funding is for research on emotions and the interaction between man and machine. Kristina Höök will also receive a grant from the Research Council for this research.

April 2011. Kristina Höök about feelings and the future mobile phone. Mobile technology can be used in so many ways to help us work faster. Technology is our friend, we decide how over its development, explains Kristina Höök in the interview. The article says that Kristina Höök’s combination of humanism and technical optimism are mirrored in the six design concept that she is trying to put to practical use. Article in the magazine Tele 2 Business.

June 2011. Petra Sundström in “Ingenjörssamfundets magazine”. Show your emotions your mobile phone.

January 2012. Top ratings for Mobile Life Centre. Stockholm University spreads the news about VINNOVA’s positive review of Mobile Life on their website in

November 2011. January 2012. Johanna Mercurio interviewed in Swedish Radio P4. Johanna is discussing Affective Health and Technology. The interview is conducted in Swedish and can be found at 13 min. and 15 in the program. Johanna is also promoting the Internet of Things conference on the 9th of February.

January 2012. Affective computing. Kristina Höök in Interaction-Design.org.

February 2012. IDG lists 62 creative persons in the Swedish digital world. The list includes Kristina Höök and Alexandra Weilenmann.

February 2012. “The Internet of Things day in Kista” DN. Kista new hub for Internet of Things. Today, Thursday, is the starting point for a new centre dedicated to the Internet of Things, in Kista. With the technique we can monitor our health, enjoy ourselves with role play and games and work out more efficiently, says the researcher Kristina Höök.

February 2012. “The Internet of Things” day organised by SICS in Kista. Interview with Kristina Höök in the magazine Computer Sweden regarding the Internet of Things and the possibility for Sweden to be a leader in the area if it focuses on consumers.

March 2012. What will happen when the things talk to each other? Article in “Hjälpmiddelsinstitutet” web newspaper.

March 2012. Oskar Juhlin is interviewed on Studio Bronx on the next generation of mobile video where he also showed some prototypes of what these could look like.

March 2012. The most powerful IT-women in Sweden. The annual list of the most powerful IT-women in the world. Kristina Höök is in 18th place.

March 2012. Svenska Dagbladet writes an article about the “Internet of Things Day”, organised in collaboration with SICS and Mobile Life. “Internet of Things” is very much about writing apps and programs not only to work on smart phones and computers, but in the real world” (Adam Dunkels).



## The Organisation

### People at the Centre

Oskar Juhlin, Professor, Centre Director  
Annika Waern, Professor, Co-Director  
Barry Brown, Associate Professor, Research leader  
Kristina Höök, Professor, Research leader  
Lars Erik Holmquist, Professor, Research leader  
Anna Ståhl, SICS, Ph.D.student  
Alan Larsson, II, Master student  
Annika Waern, SU, Professor  
Arvid Engström, II, Ph.D.student  
Barry Brown, II, Associate professor  
Bin Zhu, KTH, Ph.D. student  
Can Kilicbay, Atlas Copco/KTH, Intern  
Carolina Johansson, SU, Research assistant  
Celia Yanqing Zhang, II, Ph.D.student  
Cristine Sundbom, Stockholm University, Designer  
Deniz Akkaya, KTH, Master student  
Elena Balan, II, Research assistant  
Elena Márquez Segura, SICS, Ph.D.student  
Elin Örnevall, II, Ph.D.student  
Elisa Chiodo, Politecnico di Milan, Visiting Ph.D. student  
Elsa Kosmack-Vaara, SICS, Ph.D.student  
Fani Athina Papadogoula, Sthlm University, Master student  
Farnaz Zangouei, SICS, Research assistant  
Gail Johnsson, SICS, Intern  
Goranka Zoric, II, Researcher  
Hannah Shi, Stockholm University, Master student  
Henriette Cramer, SICS, Researcher  
Jakob Tholander, SU, Researcher  
Jarmo Laaksolahti, SICS, Researcher  
Javier Jiménez, Stockholm University, Master student  
Johanna Mercurio, SICS, Research assistant  
Jon Back, SU, Ph.D.student  
Jordi Solsona, SICS, Ph.D.student  
Kaisa Väänänen-Vainio-Mattila, Tampere University of Technology, Nokia visiting professor grant  
Katja Grufberg, Stockholm University, Research assistant  
Kim Nevelsteen, II, Ph.D.student  
Kristina Höök, SU, Professor  
Lars Erik Holmquist, SICS, Professor  
Louise Barkhuus, Stockholm University, Researcher  
Marcus Lundén, SICS, Research assistant  
Maria Holm, SICS, Coordinator  
Maria Lindström, SICS, Master student  
Maria Normark, Södertörn/VINNMer, Visiting researcher  
Marie Denward, II, Researcher  
Mark Perry, Brunel University/II, Researcher  
Markus Westerlund, SICS, Ph.D.student  
Matthias Korn, Aarhus University, Visiting Ph.D student  
Mattias Jacobsson, SICS, Ph.D.student  
Mattias Rost, SICS, Ph.D.student  
Mela Kocher, Zurich University of the Arts/II, Visiting researcher  
Miguel Pais, KTH, Master student  
Morvarid Kashanipour, II, Master student

Mudassar Ahmed Mughal, Stockholm University, Ph.D.student  
Oskar Juhlin, Stockholm University, Director/Professor  
Pedro Ferreira, Stockholm University, Ph.D.student  
Petra Sundström, SICS, Researcher  
Petter Hannerfors, II, User experience designer  
Pradthana Jarusriboonchai, SICS, Master student  
Ramin Toussi, KTH, Master student  
Sayed Naseh, Stockholm University, Research assistant  
Sebastian Büttner, Stockholm University, Research assistant  
Sergio Gayoso Fernández, II, Master student  
Stina Andrén, SICS, Master student  
Tengjiao Cai, SICS, Master student  
Ylva Fernaeus, SICS, Researcher  
Youle Chong, II, Designer  
Yuyu Zhao, II, Master student  
Zeynep Ahmed, Stockholm University, Research assistant  
Zhengwu Zhang, II, Master student

### Members of the board

Chair: Niklas Björk, Ericsson  
Richard Harper, Microsoft research  
Roger Bengtsson, TeliaSonera  
Jyri Huopaniemi, Nokia  
Christer Norström, SICS  
Staffan Ingvarsson, City of Stockholm  
Gudrun Dahl, Stockholm University  
Ulf Eriksson, SU Holding

### Deputies:

Alex Taylor, Microsoft Research  
Mikael Anneroth, Ericsson  
Viljakaisa Aaltonen, Nokia  
Karin Öhlander, City of Stockholm  
Mats Danielsson, Stockholm University  
Christopher Sandberg, Company P  
Christina von Dorrien, Interactive Institute

### Academic Advisory Board

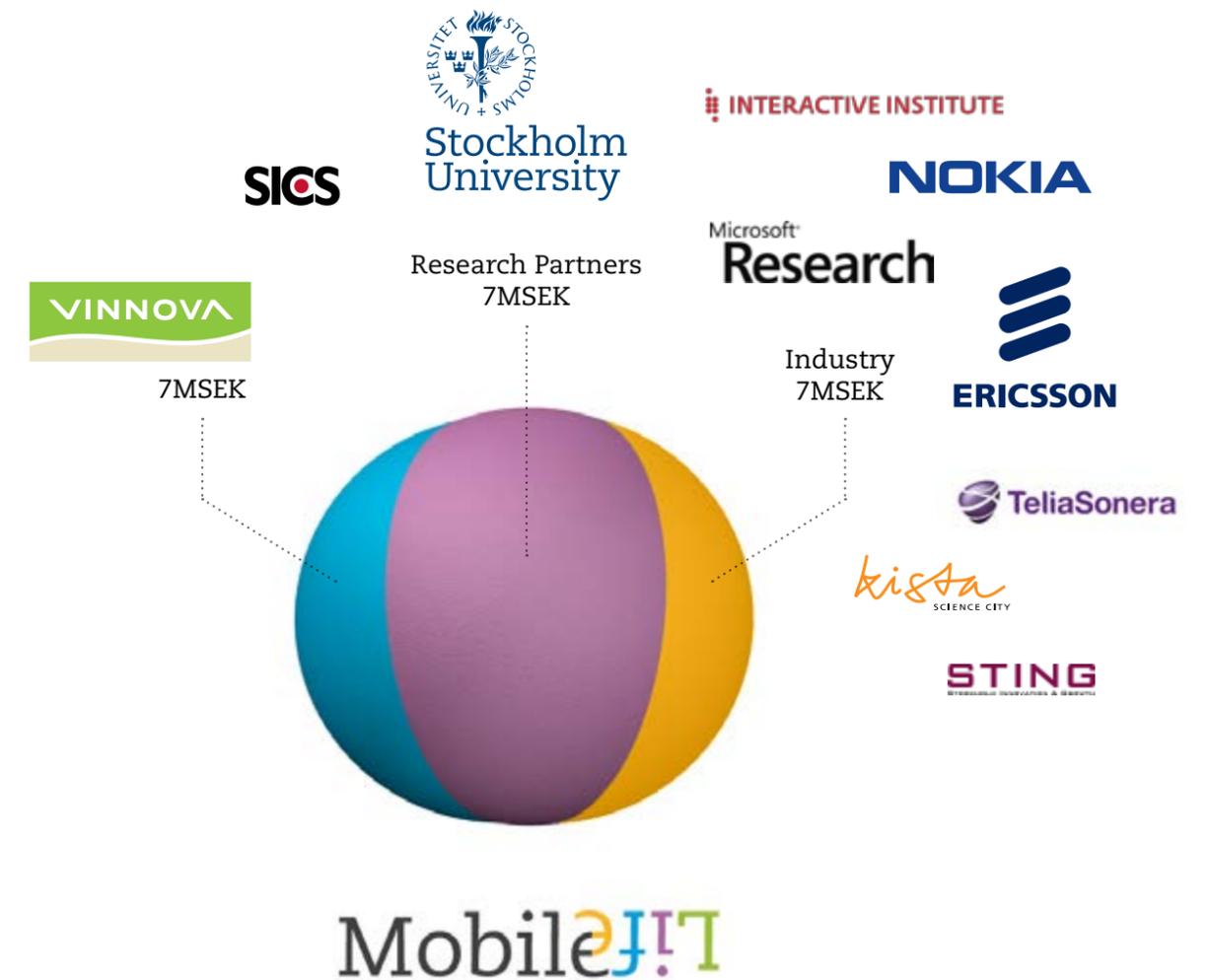
Paul Dourish, Professor, Donald Bren School of Information and Computer Sciences, University of California Irvine, USA  
William Gaver, Professor, Department of Design, Goldsmith University of London, UK  
Masa Inakage, Dean, Graduate School of Media Design, Keio University, Japan  
Tom Rodden, Professor, School of Computer Science and IT, Nottingham University



## Funding

*VINN Excellence Centre is an initiative by VINNOVA to stimulate and increase collaboration between industry, public organisations and universities, research institutes and other research-performing organisations. VINNOVA's funding model for the VINN Excellence Centres is that the university (together with the research organisations) and the industry each match the funding from VINNOVA.*

The Mobile Life Centre is funded by VINNOVA on a ten-year grant, from 2007 to 2017. The Centre receives an annual contribution from VINNOVA, the research partners and the industry that totals in 21MSEK (2.2 M€) in cash and in-kind per year.



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Bambuser, Company P, City of Stockholm, Kista Science City, STING