



Ministerial
Programme 2012

附件 4

Connected Living

The next wave of mobile devices

Ton Brand, Programme Director
Connected Living Programme
Monday 27 February 2012

STC
التصالات السعودية

ERICSSON

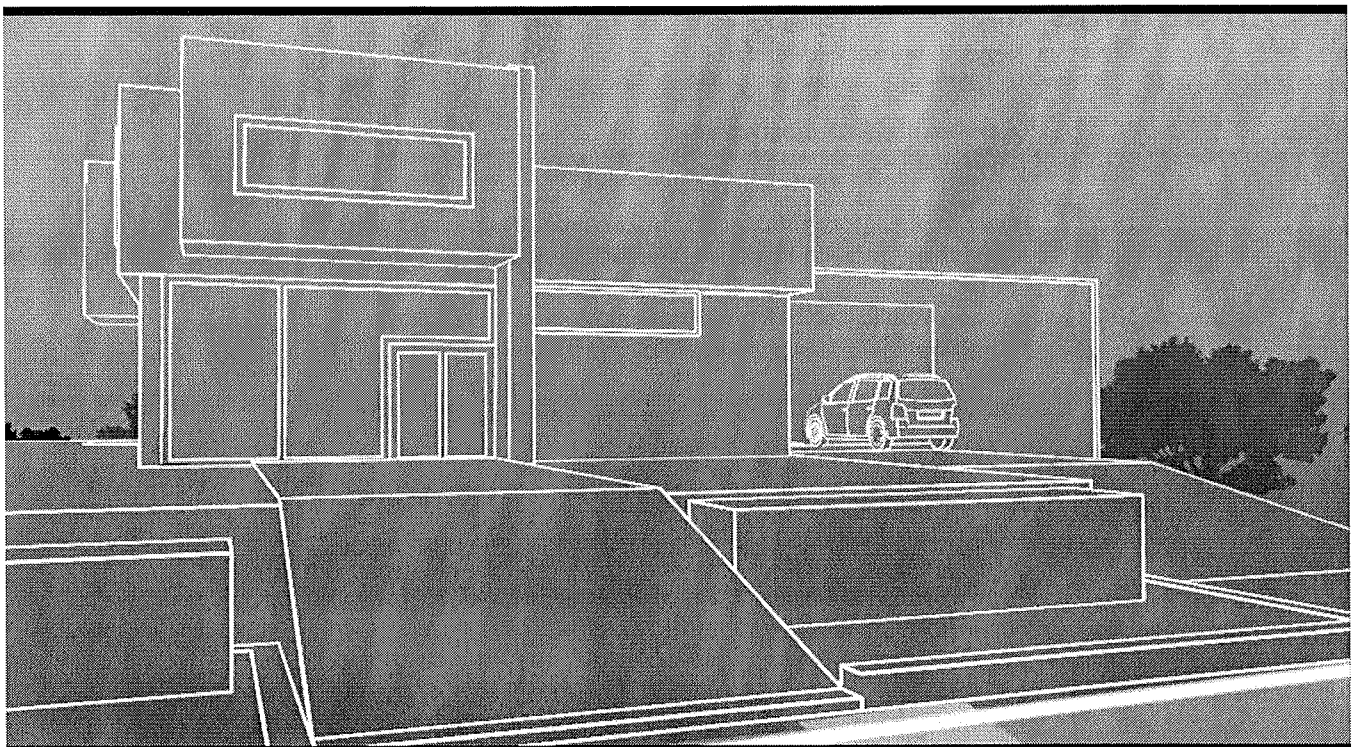
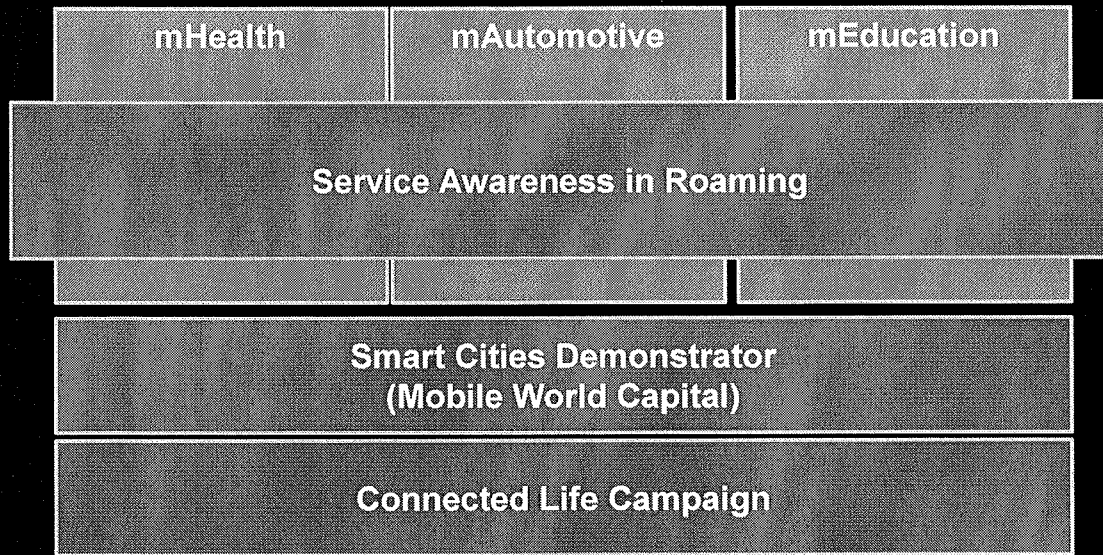
HUAWEI

Generalitat de Catalunya
Government of Catalonia

Our agenda

- Overview of GSMA programme**
Ton Brand,
- 16.15 **How can regulatory policy accelerate or impede market growth?**
Jeanine Vos, mHealth Executive Director, Connected Living Programme
- 16.30 **Ericsson Mobile Health Remote Patient Monitoring System**
Peter Håkansson, Manager Sustainability Research, Ericsson
- 16.40 **mHealth Demonstration – Vitality and Blue Libris Remote Monitoring**
Clay Owen, AT&T, Senior Director of Communications
- 16.50 **Ericsson cloud orchestration - ICT Solution for Connect to Learn**
Paul Landers, Programme Manager, Ericsson
- 17.00 **Planning For Data Growth: L-band Supplemental Downlink Spectrum Opportunity**
Wassim Chourbaji, Senior Director Government Affairs, Qualcomm
- 17.15 **Audience Q&A**

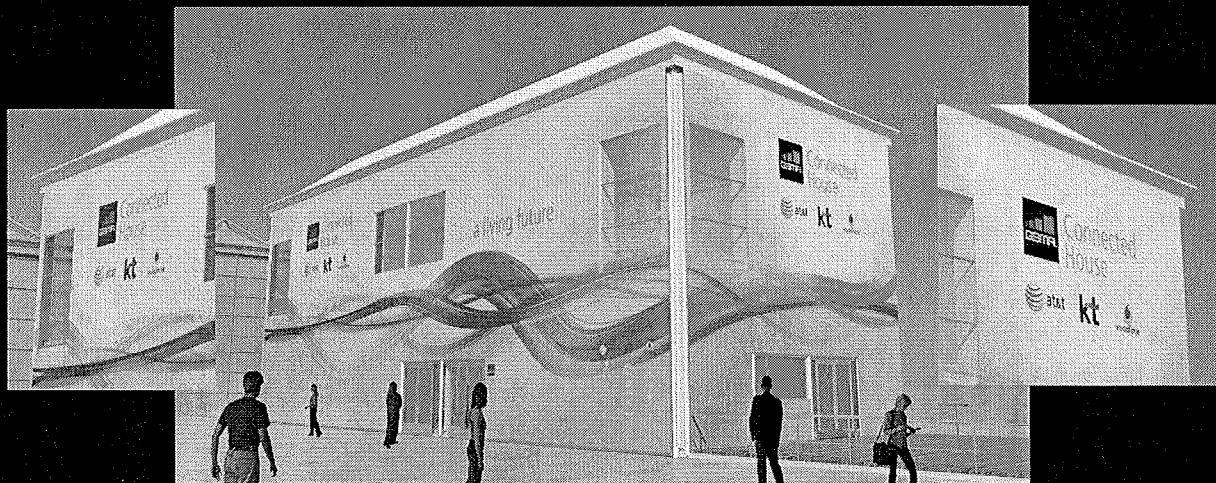
Connected Living Programme structure



More examples.....



Connected House 2012



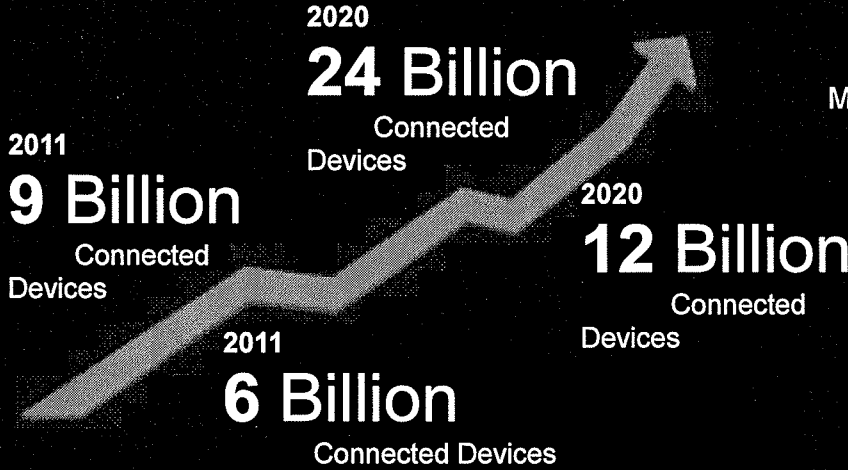
Ministerial Tour, Wednesday between 11.00 and 12.00

Valuing the market opportunity



Global Revenues & Impact of the Connected Life

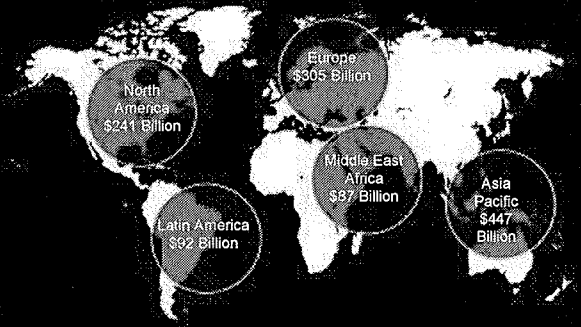
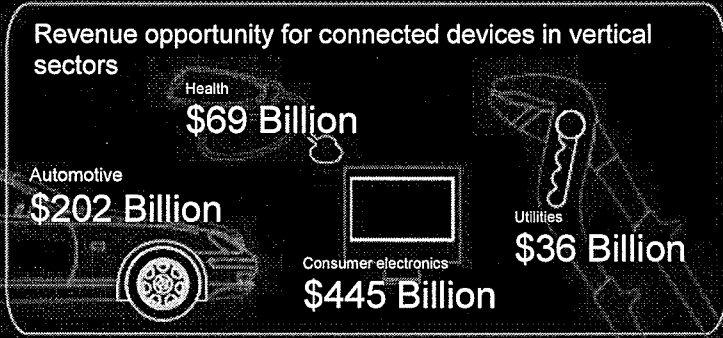
The Connected Life by 2020



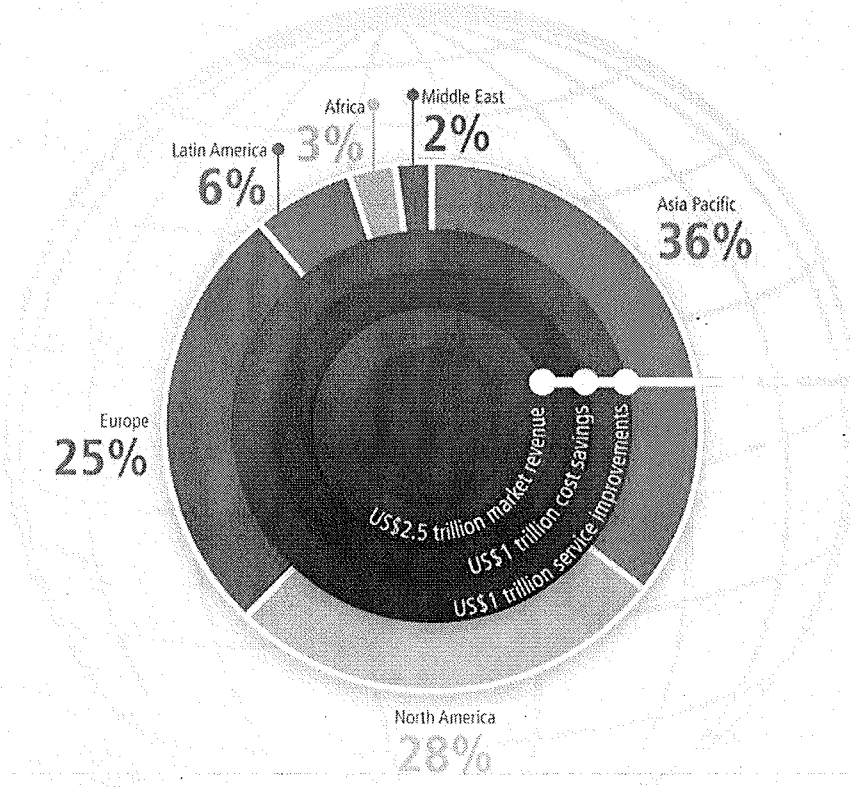
Revenue Opportunity For Mobile Network Operators in 2020

\$1.2 Trillion

7x increase on 2011 expected revenues



CREATING OPPORTUNITIES THROUGH CROSS-INDUSTRY COLLABORATION



Business Impact of the Connected Life 2020

US\$4.5 trillion

Connected Life market revenue
US\$2.5 trillion

- US\$1.2 trillion addressable by Mobile Network Operators

Cost savings resulting from Connected Life
US\$1 trillion

Service improvements resulting from Connected Life
US\$1 trillion

The Connected Life, with 24 billion connected devices projected by 2020, will create new revenue streams, business models and service improvements, and through industry collaboration can make a global business impact of US\$4.5 trillion.

Programme Objectives



Accelerate the development of Connected Living services in agreed adjacent vertical markets

Stimulate trials, launches and demonstrations in Automotive Education and Health vertical markets

Stimulate operators to challenge the existing service awareness and roaming model to reflect vertical market requirements

Collect and publish market analysis and statistics on the global adoption of Connected Living

Stimulate cross industry collaboration

Regulation can add value....



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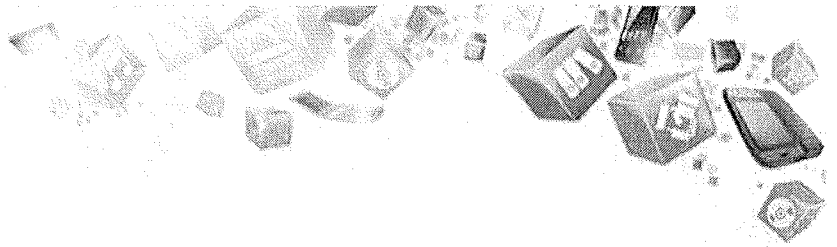
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Connected Living

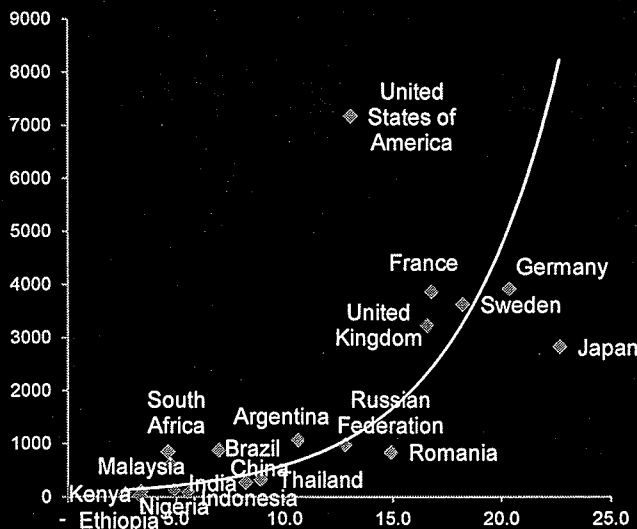
Jeanine Vos
Executive Director, mHealth
Connected Living Programme
Monday 27th February 2012



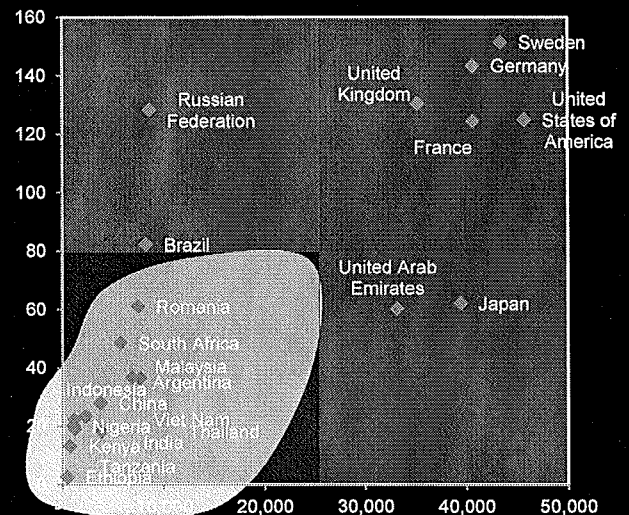
Healthcare systems are under pressure



Per Capita Health Expenditure (PPP Int. USD)
and % of Population Aged above 65, 2009/2010



Number of Physicians, Nurses per 10,000
population and GDP per Capita (USD) , 2010

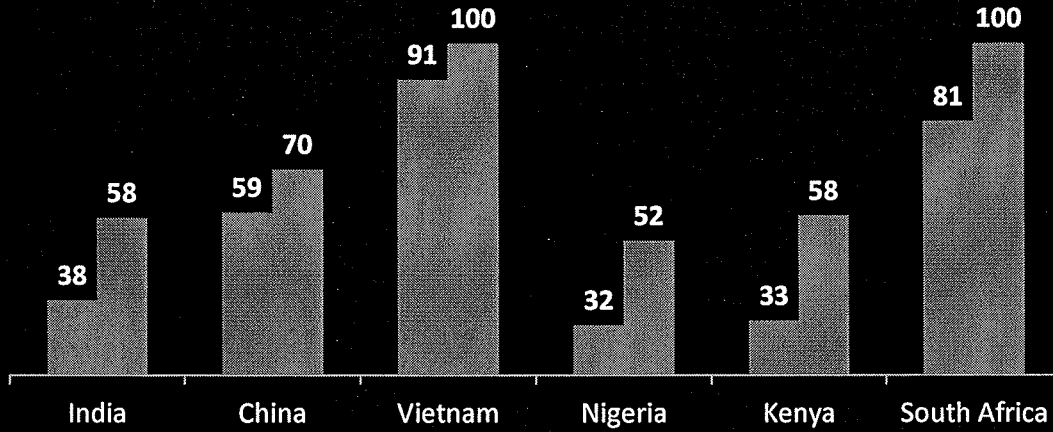


Source: WHO, The World Bank, OECD, PwC analysis

Mobile provides ubiquitous technology platform



Comparison of Penetrations of Improved Sanitation Facilities and Mobile Phones in Selected African and APAC Countries, 2014E



- Access to Improved Sanitation Facilities - 2014E
- Mobile Subscriber Penetration - 2014E

Source: UN, EY analysis

To reduce costs, increase access, improve care



Prevention

Diagnosis

Treatment

Monitoring

The collage illustrates various mobile health applications:

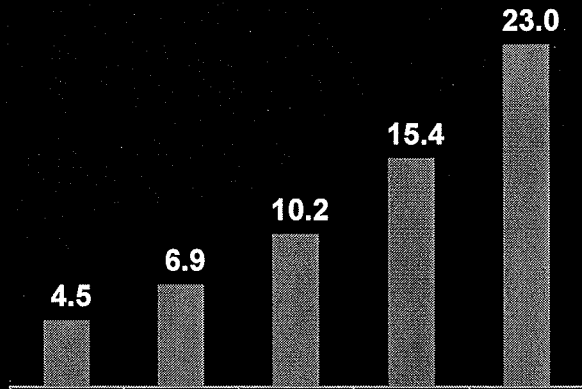
- Prevention:** A smartphone displaying a fitness app with a 'Jog' screen, a person jogging, and a 'Pause' button.
- Diagnosis:** A smartphone displaying a medical app with a 'Feeding' screen, a 'Weight Change' screen, and a 'Lack of Energy' screen.
- Treatment:** A smartphone displaying a 'Personal Reminders' screen with a 'Social Network Support' screen.
- Monitoring:** A smartphone displaying a 'Monitoring' screen with a 'Personal Reminders' screen, a 'Social Network Support' screen, and a 'Pillbox Coordination' screen.

Other images include a person using a mobile device, a hand holding a pillbox, and a person using a mobile device.

Significant growth in mobile health is foreseen

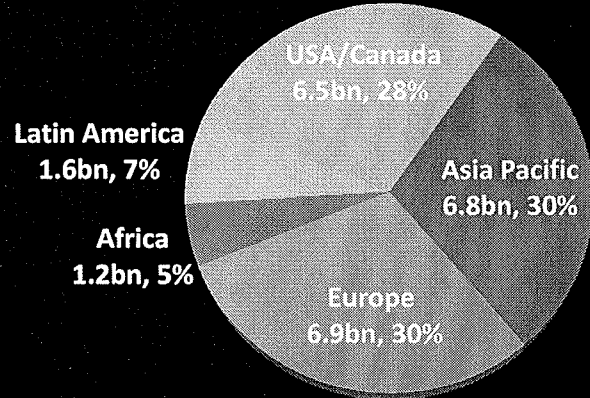


Global Mobile Health Revenue, 2013E-2017E, in USD billion



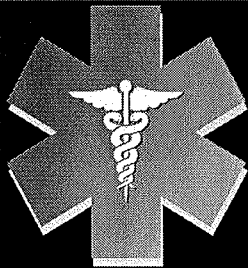
Source: PwC analysis

Mobile Health Revenue by Region, 2017E, in USD Billion and % Share



BUT CAN ONLY BE REALISED WITH GOVERNMENT AND REGULATOR SUPPORT

Different motivations in healthcare and telecoms

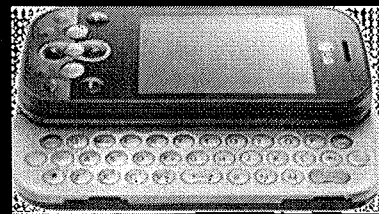


Patient Centric

Safety first

Demonstrate efficacy

'At least, do no harm'



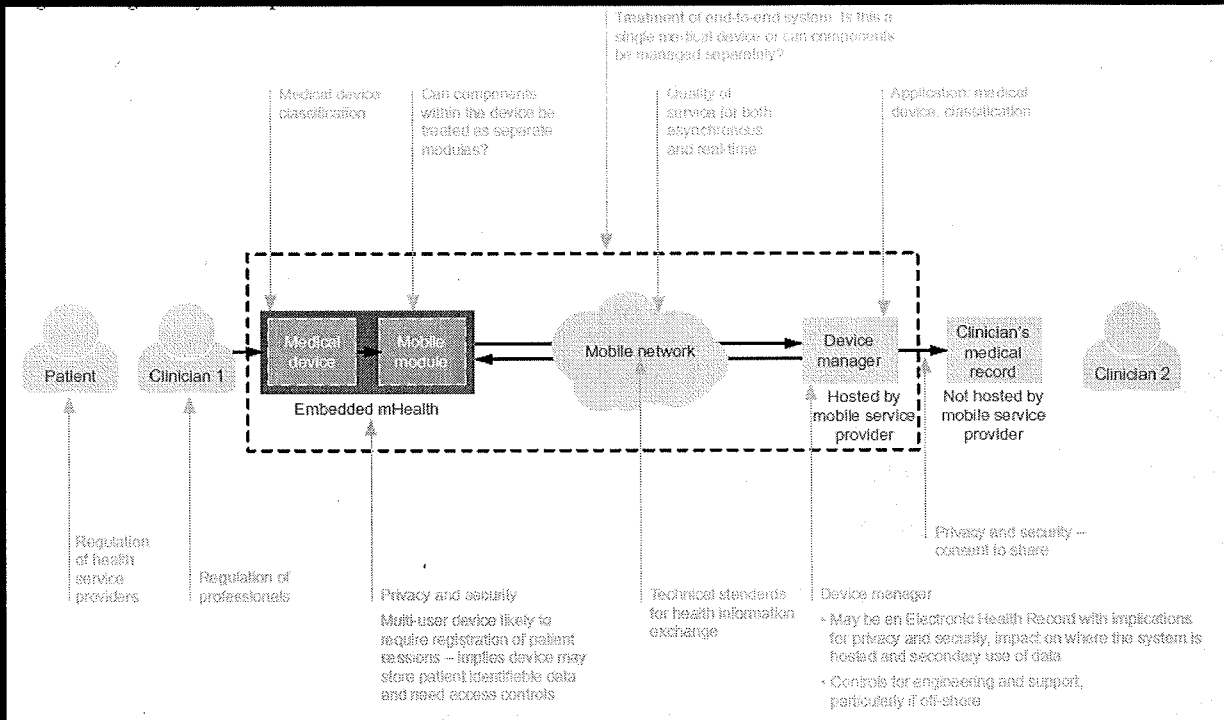
Market Centric

Maximize consumer value

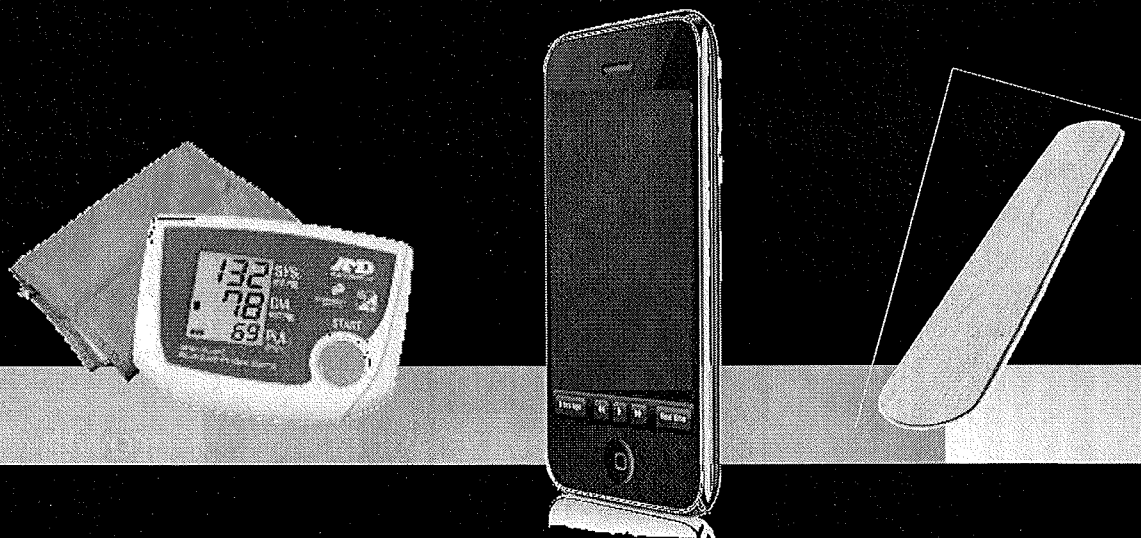
Foster competition

'Just enough'

Policy and regulatory touch points



Ensuring safety and effectiveness



Healthcare policies and regulation for growth



Policy themes

Patient empowerment

Develop policies that promote user autonomy, which will in turn drive mHealth adoption

Reimbursement

Move towards reimbursement schemes that reward positive health outcomes and support the adoption of innovation

Regulatory themes

Devices

Introduce a proportionate approach to what constitutes a medical device and how it is classified

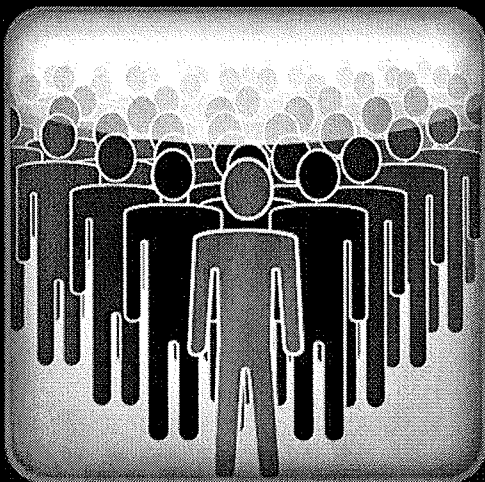
Systems and interfaces

Promote interoperability and common standards to enable scale and plug-and-play experience

Telecoms government and regulator engagement



Realising scalable and sustainable mobile health deployments



- Raise awareness of the benefits of mobile health
- Educate healthcare stakeholders on mobile capabilities
- Promote interoperability and common standards
- Provide spectrum for growth
- Support cross-industry initiatives



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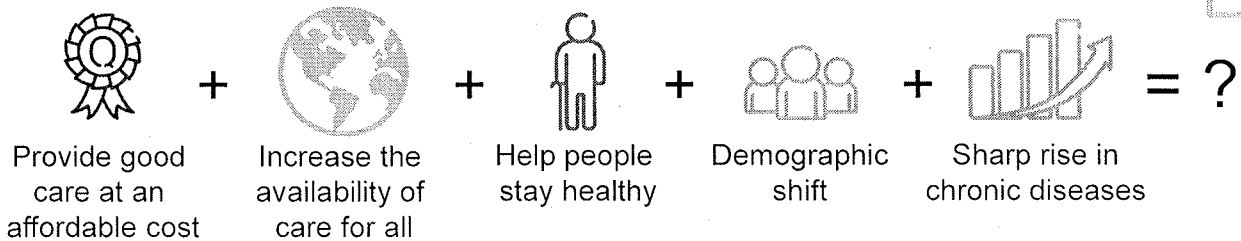
Ericsson Mobile Health Remote Patient Monitoring System

Peter Håkansson,
Manager Sustainability Research,
Ericsson



Modern Healthcare systems

- challenges and Pain points



Healthcare mega trends

- Distributed healthcare
- Patient centric, personalized healthcare
- Higher demands from patients

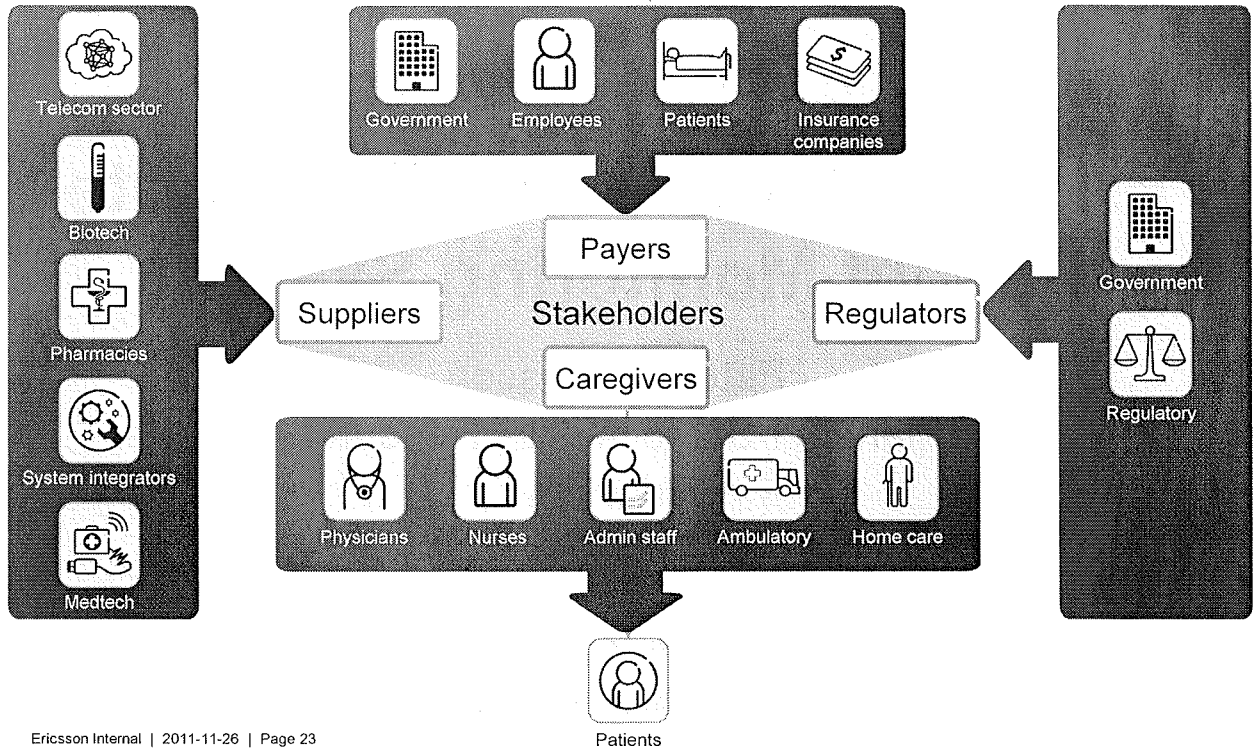
mHealth is part of the solution

- Higher efficiency in care delivery
- Enabler for distributed care
- Mature technology

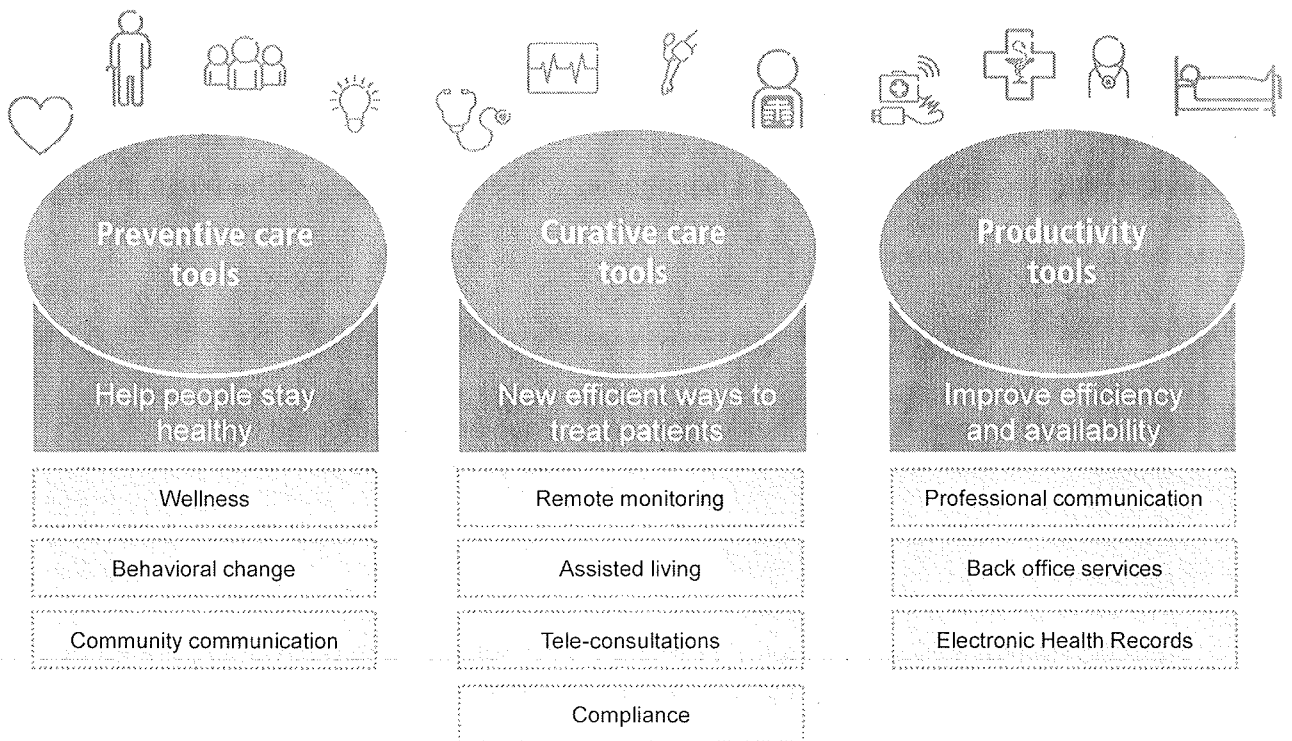
Mobile Health, mHealth is a term for medical and public health practice supported by mobile connected devices, such as mobile phones, patient monitoring devices, etc

Healthcare: a complex ecosystem

- under constant pressure

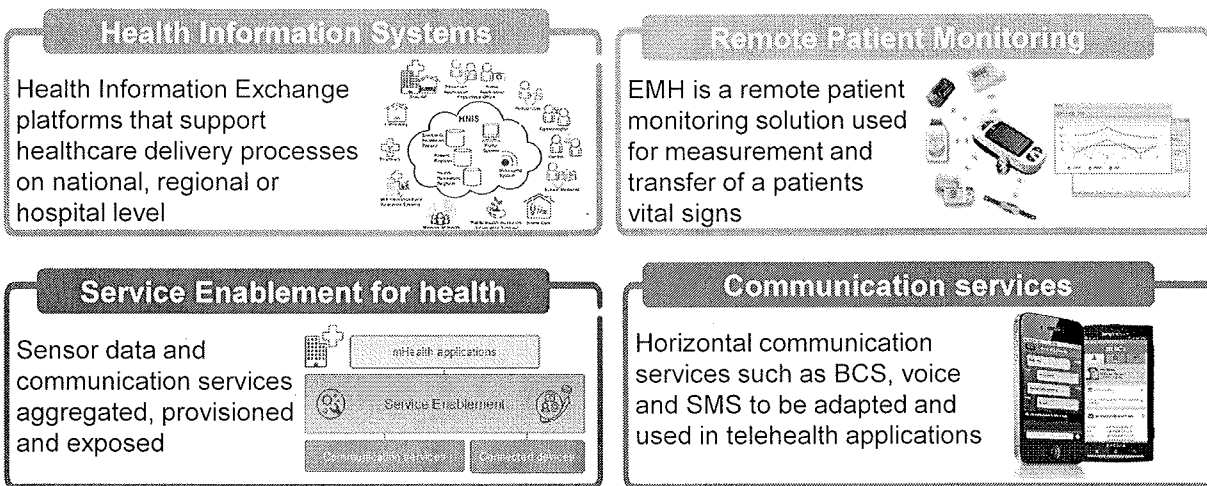


Market segmentation



Ericsson Healthcare offerings

-high level overview



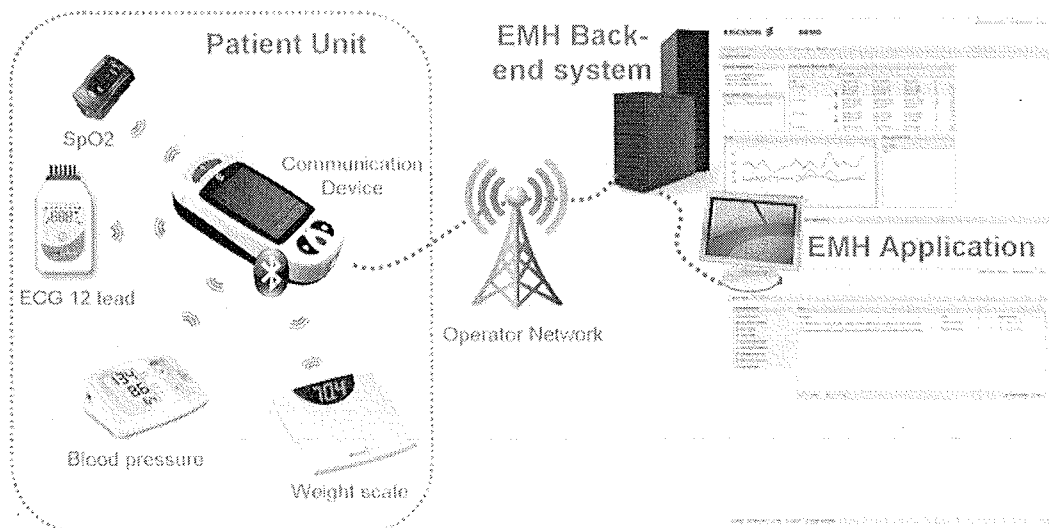
Ericsson has both horizontal and health specific solutions for the healthcare market. Mainly indirect market channels like through operators and other enterprises

Ericsson Mobile Health

Remote monitoring using mobile networks

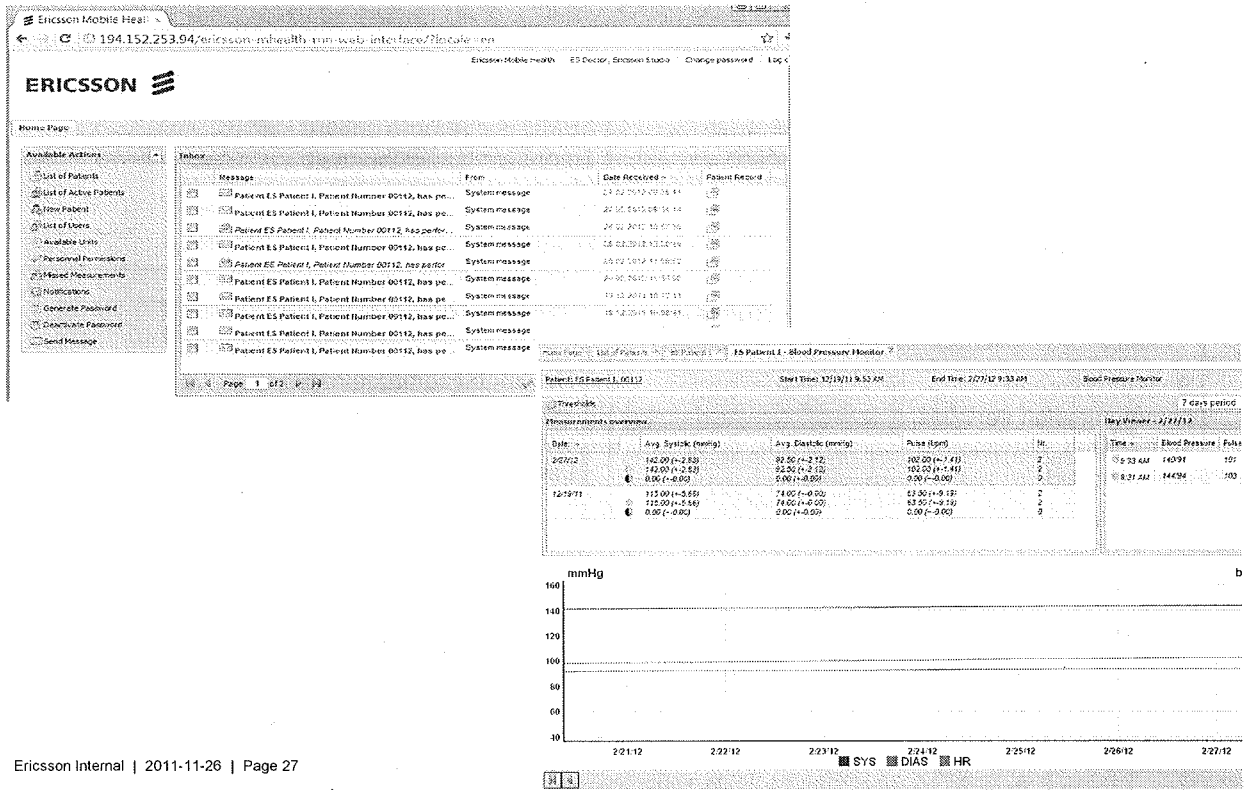


- › Ericsson Mobile Health (EMH 3.0)
- › Remote monitoring system that is measuring body values and transmitting the data over mobile networks from patients to healthcare providers

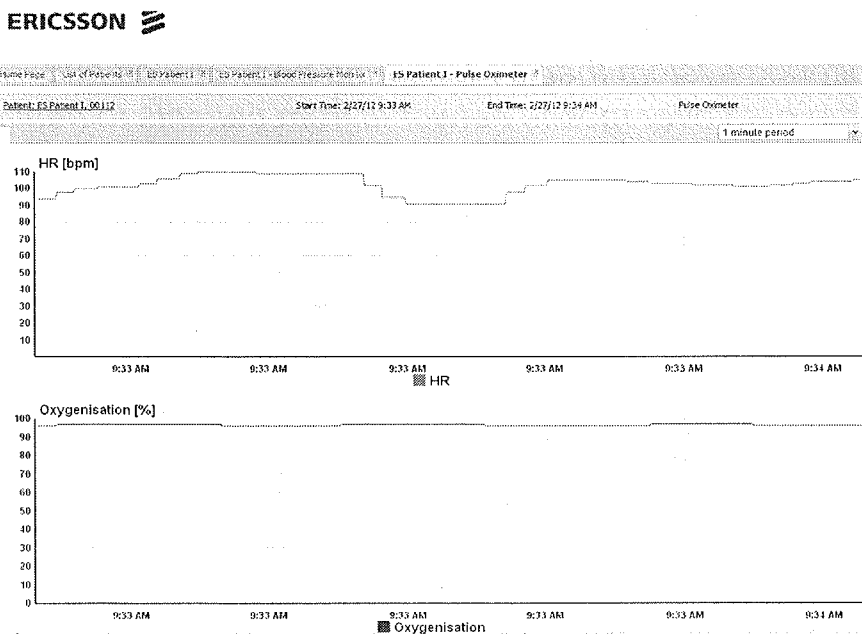




Web interface



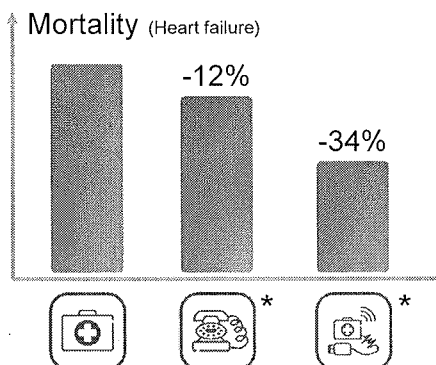
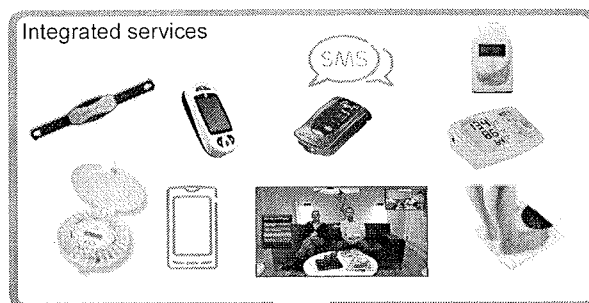
Web interface



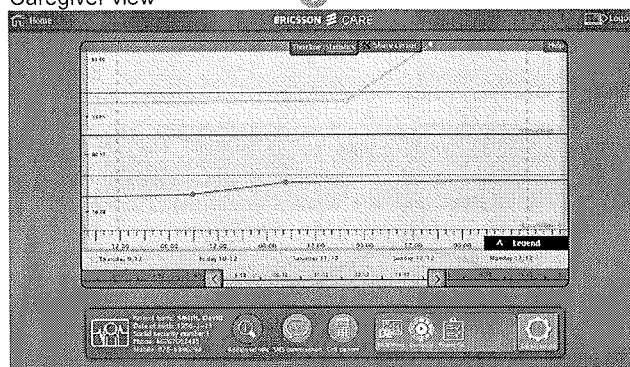
Health Service Integration

› The mHealth integration challenge:

- mHealth systems uses often proprietary communication interfaces and protocols
- This complicates for a caregiver to get a useful overview of data for a patient using multiple systems



Caregiver view



* Structured telephone support or telemonitoring programmes for patients with chronic heart failure – Cochrane Meta Study 2010

Use Case Example

High Risk Heart Failure patients

Treatment components



mHealth objective: early detection of medical complications by home monitoring and regular communication



› Measurement of weight, heart rate and blood pressure (daily)



› ECG measurement (when required)



› Subjective data gathering

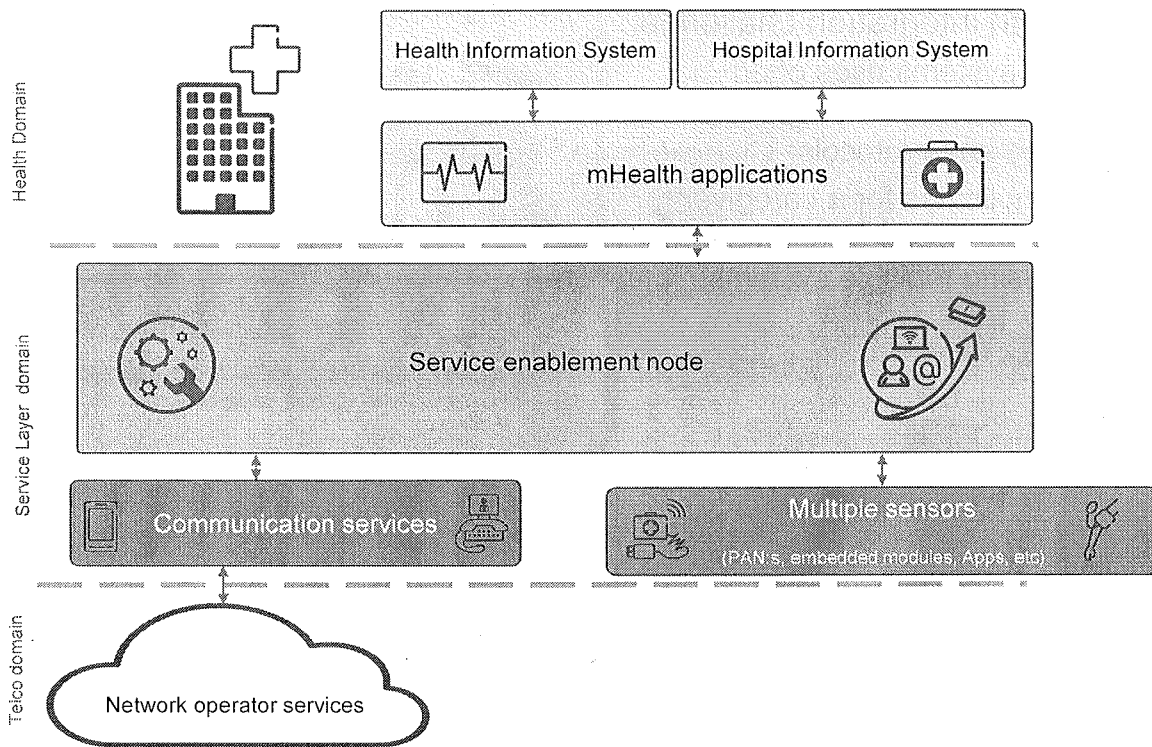


› Medication compliance monitoring + reminders



› Patient communication (phone or videoconference)

Target Architecture, Ericsson Health & Service Enablement



Ericsson Internal | 2011-11-26 | Page 31



Thank you!

peter.hakansson@ericsson.com