



# Connected Living



## Fierce Wireless & GSMA Webinar: The Role of Mobile Operators in IoT

20 May 2015

# Agenda



Introduction to the Role of Mobile Operators in IoT	Stefano Nicoletti <b>Connected Living, GSMA</b>	15:00 – 15:05
The Connected Society IoT solution: Smarter transportation	Robert Brunbäck <b>Telenor Connexion</b>	15:05 – 15:15
Market and policy consideration for operators IoT solution: SmartSantander	Jorge Morillo Gallego <b>Telefónica</b>	15:15 – 15:25
Enhancing English learning opportunities in Palestine IoT solution for mEducation	Lynne Dorward <b>Ooredoo</b>	15:25 – 15:35
Nuvola IT Home Doctor IoT solution for mHealth	Agata Basile <b>Telecom Italia</b>	15:35 – 15:45
Q&A	All	15:45 – 16:00



# Connected Living



## Introduction: The Role of Mobile Operators in IoT

Stefano Nicoletti, Connected Living, GSMA

**OUR VISION:** TO ENABLE THE INTERNET OF THINGS, A WORLD IN WHICH CONSUMERS AND BUSINESSES ENJOY RICH NEW SERVICES, CONNECTED BY AN INTELLIGENT AND SECURE MOBILE NETWORK.

**OUR AIM:** TO HELP OPERATORS ADD VALUE AND ACCELERATE THE DELIVERY OF NEW CONNECTED DEVICES AND SERVICES IN THE M2M MARKET. ACHIEVED BY INDUSTRY COLLABORATION, APPROPRIATE REGULATION, OPTIMISING NETWORKS AS WELL AS DEVELOPING KEY ENABLERS TO SUPPORT THE GROWTH OF M2M IN THE IMMEDIATE FUTURE AND THE IOT

IoT Connection Efficiency

Future IoT Networks

Remote SIM Provisioning for M2M

IoT Business Enablers

Ecosystem Engagement

*Realising the  
benefits of mobile-  
enabled IoT  
solutions*  
March 2015



Download report at: [www.gsma.com/connectedliving](http://www.gsma.com/connectedliving)

# Quantifying the economic benefits of IoT in practical terms



## **mHealth**

could save over 1 million lives in Sub-Saharan Africa over the next five years.



## **Traffic telematics**

could help Chinese commuters reclaim nearly two hours each of their time every week and add over 20 billion USD to the Chinese GDP each year.



## **Technology-enhanced learning**

could save South Korean families between 8,000 to 12,000 US D on private tuition for their children.



## The IoT could **save 99 billion EUR**

in healthcare costs in the European Union and add 93 billion EUR to the GDP.



## In developing regions, **mEducation**

could provide 180 million children the opportunity to stay in school.



Reducing power theft and increasing usage efficiency via mobile-enabled

## **smart meters**

could save enough electricity in India to power more than 10 million homes.

Source: PwC estimates



# Connected Living



## The Connected Society IoT solution: Smarter transportation

Robert Brunbäck, Telenor Connexion

# Telenor vision: Empower societies

- *Internet of things is one key enabler*

## Telenor Group

Providing tele, data and media services in the Nordics, Europe and Asia.



Operations in 13 markets with 192 million mobile subscribers

## Telenor Connexion

**We design and operate connected business solutions.**  
**+15 years experience.**



Late 90's

2003

2005

2008

2011

2013

2015

Telenor is pioneering in M2M.

First large-scale partnerships with Volvo & Securitas.

Large-scale AMR roll-out: Fortum & E.ON.

Telenor Connexion established

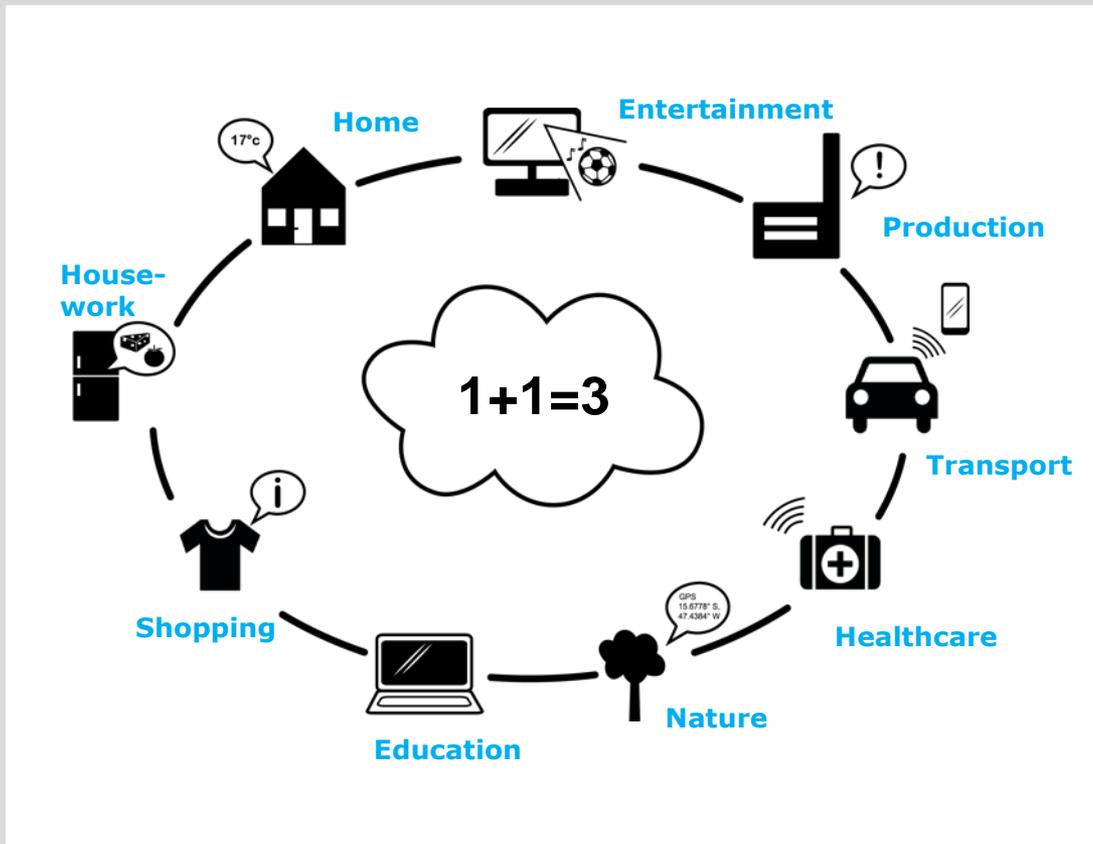
New service portal. M2M quality program.

New offering introduced - Cloud Connect

**Telenor Connexion**  
• ~90 employees  
• HQ in Stockholm  
• US, Japan, UK, Germany, France regional offices



# The connected society is already here



**"50 billion  
connected  
devices by  
2020"**

## 3 key drivers:

- Technology getting smaller & cheaper
- Data insight is creating competitive edge
- From product > smarter and more sustainable services

***...transforming businesses, societies and everyday life as we know it***

# Scania example: Smarter Transportation



## Data insights

- Vehicle
- Driver
- Traffic/Environment

## Cost savings

- Vehicle uptime
- Reduced fuel consumption
- Route optimization

## Smarter transportation

- Better customer service
- Reduced emissions
- Less congestion



# Connected Living



## Market and policy consideration for operators IoT solution: SmartSantander

Jorge Morillo Gallego, Telefónica

# Operators have the opportunity to shape the market and policy...

## Market considerations

Economic and social transformation

Innovative and nascent industry

Growing steadily and fast

IoT is not just telco

Good competitive health

Heavyweights all across value chain

Wide variety of partnering

## Policy considerations

Policy makers attraction increasing

Regulatory understanding

Pro-investment

Rely on market forces

Light and flexible regulatory approach

Case by case basis

LPF guaranteed

... but explaining potential benefits will be key.

### Market considerations

- Economic and social transformation
- Innovative and nascent industry
- Growing steadily and fast
- IoT is not just telco
- Good competitive health
- Heavyweights all across value chain
- Wide variety of partnering

### Potential benefits

- Innovation**
- Productivity**
- Growth**
- Quality of life enhanced**
- Jobs**
- Competitiveness**

### Policy considerations

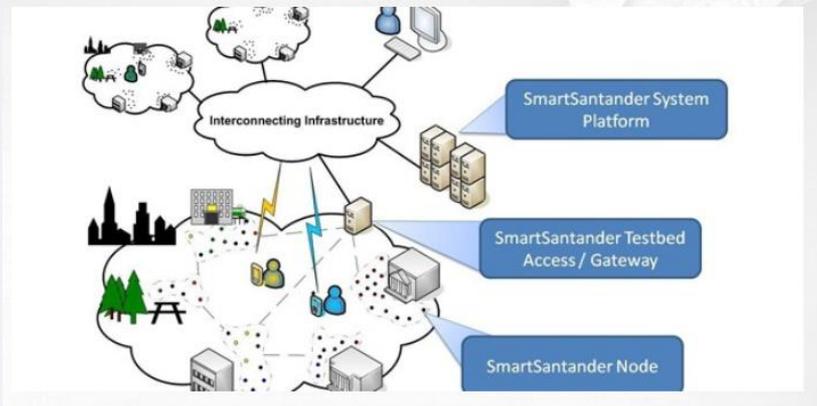
- Policy makers attraction increasing
- Regulatory understanding
- Pro-investment
- Rely on market forces
- Light and flexible regulatory approach
- Case by case basis
- LPF guaranteed

Some examples

# Smart Santander



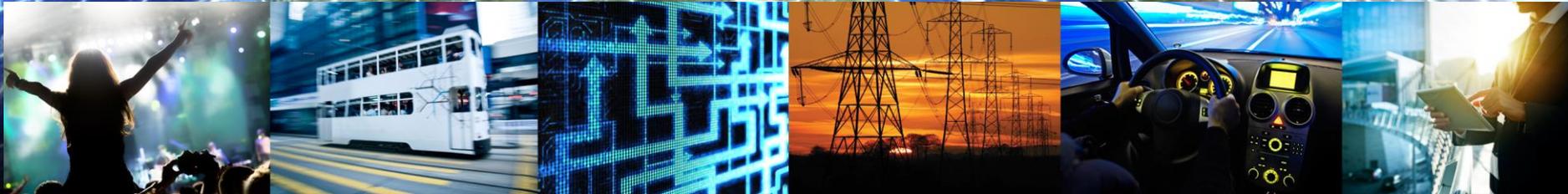
European Commission praises 'exceptional' SmartSantander project



- 7<sup>th</sup> EU Framework Programme
- Real Lab City for investigation
- Businesses development of applications and tech products
- Interactive platform with citizens
- City leadership against climate change
  - ✓ Pollution
  - ✓ CO2
  - ✓ Water management



# Connected Living



## Enhancing English learning opportunities in Palestine IoT solution for mEducation

Lynne Dorward, Ooredoo

# Enhancing English Learning Opportunities in Palestine



- Palestine is placing a strong emphasis on learning English; young men and women are signing up for conversation and writing classes in record numbers as they recognize that fluent English will boost their chances of finding a job.
- For youth who cannot afford lessons, or who want a way to practice outside the classroom, the options are limited because Arabic is the main language spoken throughout Palestine.
- In response to this, in July 2014, Wataniya Mobile Palestine (a member of the Ooredoo Group of companies) launched a “Learn English” educational service for mobile users in partnership with mobile venture Souktel and leading English language training providers.
- The service features two main offerings: **Mobile Quiz & Word of the Day.**
- By giving youth the ability to access English content on their phones, students and new graduates can now learn at any time, and wherever they want to; they do not need to be sitting in a classroom.



# How Does the Learn English Mobile Service Work?

The goal is to make the service easy to use, fun and appealing to the target audience.

## Sample Screen for Word Quiz



Text Message  
اليوم ٤:٥٦ م

Quiz

Lina works at the school.  
She is a \_\_\_\_\_. Reply  
1-teacher 2-baker 3-  
doctor(please send the  
number of your answer)



- **Mobile Quiz** sends English language questions to users via SMS
- The user has a choice of answers and texts his/her reply
- The service then sends follow-up explanations to help the participants learn more about the correct response exercises
- **Word of the Day** sends users a word or phrase in English along with its meaning
- An example of how to use the word is also included

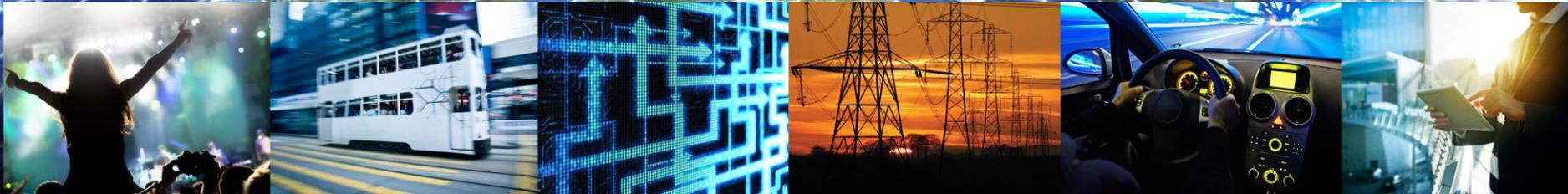


Text Message

Send



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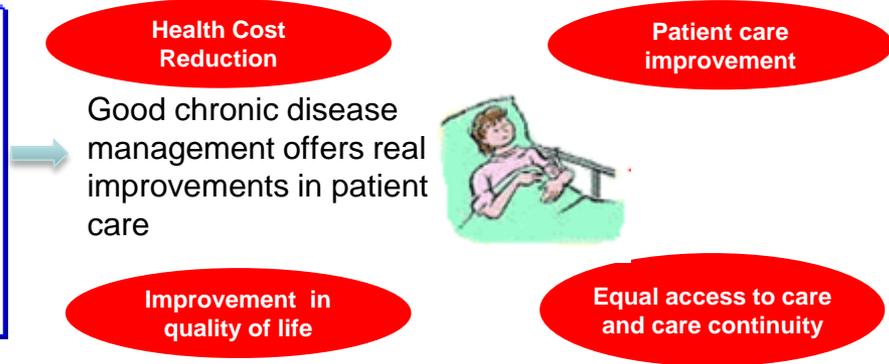
## Nuvola IT Home Doctor IoT solution for mHealth

Agata Basile, Telecom Italia

# IoT in Health

## M-Health Benefits

• Italy has the second longest life expectancy in the world  
 • Ageing affects **2% of GDP**  
 • New management and clinic processes models are needed - this represents a **challenge and an opportunity** for Telecom Italia



## M-Health Barriers

**Regulatory Issues & Rembursement**

The Italian Health Ministry has published **guidelines** for telemedicine practices and defined a reimbursement as a standard health practice with the innovative technology

M-Health

**Security and Privacy data**

**Technology : reliability, easy and cheap**

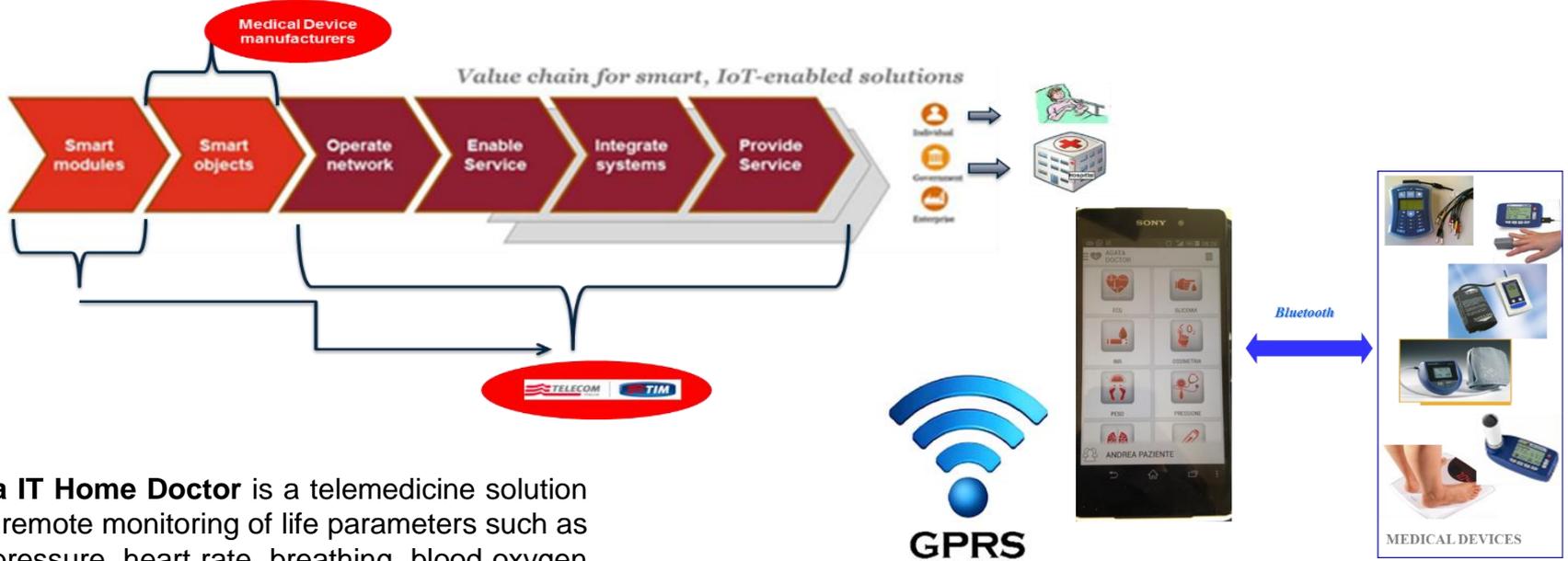
**Interoperability with the other health applications like EHR**

TELECOM ITALIA **Home Doctor solution** is an enabler of **M-health**. The usability of mobile technology, with ICT technology for the clinical data, guarantees:

- **Security and Privacy data**
- Application **reliability, business continuity** and **easy** usage
- **Interoperability** with other health applications
- Compliance with the European Directive **2007/47/EC** on Medical Device and software

# Nuvola IT Home Doctor: Functionality

Telecom Italia has delivered a M-Health Solution with software for the cloud platform and mobile app, taking care of the system integration with connectivity according to the new model of the IoT value channel.



**Nuvola IT Home Doctor** is a telemedicine solution for the remote monitoring of life parameters such as blood pressure, heart rate, breathing, blood oxygen levels, blood sugar, ECG plots, body weight, body temperature.

The human parameter is transmitted by bluetooth to the mobile app gateway, installed on the smartphone, and by GPRS (or other network) it is transmitted to the Home Doctor platform in Cloud TI. The health personnel, previously profiled, can access from any location and check the adequacy of the measures received and, on the framework of the Patient, interact with it and modify care plans.

The screenshot shows the 'Nuvola IT Home Doctor' web interface. At the top, it displays the 'TELECOM ITALIA' logo and the title 'Nuvola IT Home Doctor' with a subtitle 'Referente: Agata Basile | Home | Cambia password | Esci'. Below the navigation bar, there are tabs for 'Misure', 'Pazienti', 'Visite', 'Referti', 'Documenti', 'Dati personali', and 'Help'. The main content area is titled 'Cerca Misure' and includes a search filter for 'Data' (set to 'ultimo mese') and 'Tipo Misura' (set to 'T.D'). A 'Cerca' button is present. Below the search results, a table lists measurement records:

Data della misurazione	Cognome e Nome	Codice Fiscale	Dati Paziente	Tutor	Tipo Misura	Esito	Esito Referenziazione	Misura
2016-04-10 22:19	PAZIENTE ANDREA	IKENT_A	[Icon]	DOCTOR AGATA	OSIMETRIA	✓	[Icon]	[Icon]
2016-04-10 22:14	PAZIENTE ANDREA	IKENT_A	[Icon]	DOCTOR AGATA	PRESIONE	✓	[Icon]	[Icon]
2016-04-10 18:28	PAZIENTE ANDREA	IKENT_A	[Icon]	DOCTOR AGATA	ECG	[Icon]	[Icon]	[Icon]
2016-04-10 18:25	PAZIENTE ANDREA	IKENT_A	[Icon]	DOCTOR AGATA	ECG	[Icon]	[Icon]	[Icon]
2016-04-10 18:07	PAZIENTE ANDREA	IKENT_A	[Icon]	DOCTOR AGATA	ECG	[Icon]	[Icon]	[Icon]

Below the table, there is a 'Grafico osimometria' section with a line graph showing data trends over time.

# Case History: Molinette Hospital

## Molinette-Hospital in Turin: Geriatric Department

20 patients over 85 years in the geriatric department have been monitored by Home Doctor solution for one year and managed in the post-hospital care



## Molinette-Hospital in Turin: Results

- Cost Reduction due to :
  - Medical visits reduction of 140 with a saving of 2.000 euro
  - Hospital readmissions reduction with a saving of 18.000 Euro
- Improved humore of patients and the family life (the mobile solution is easy to use)
- Doctors have more free time to consult with the critical patients



## Q&A