M2M Network Infrastructures for Massively Distributed Smart City Applications

Copenhagen 30 Sep 2015

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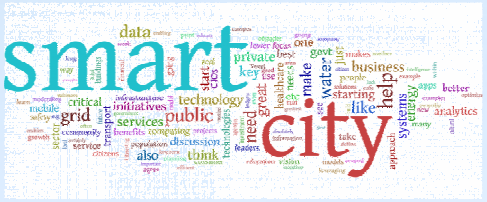
In-JeT ApS

ALMANAC
RELIABLE SMART SECURE
INTERNET OF THINGS FOR SMART CITIES

Organisers: IN-JET APS TDC TIM

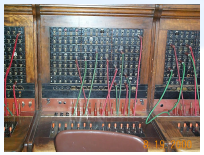
Workshop objectives

- Understand why Smart City solutions are viable solutions in a systemic approach to Societal Challenges
- Get updated on the global contenders for a low cost, wide area network for the Internet of Things
- Learn about innovative middleware tools for developing and managing M2M and IoT applications in Smart Cities
- Get insight into the progress deployment of M2M communications systems and the Internet of Things
- Be introduced to existing and new M2M and IoT solutions from a number of the large European telecommunication companies
- Share vision about the future of smart cities and their needs for widespread connectivity.

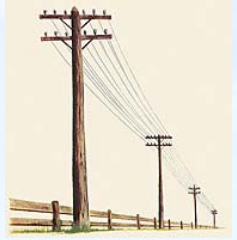


From technology to people solutions

- Communities



- Solutions



- Infrastructure

- Building blocks

- Societal challenges are real
- Smart City opportunities are plentiful
- M2M networks create the opportunity
- IoT technologies are emerging

Workshop target groups

- Technology managers and practitioners from all parts of the telecommunication industry including, but not limited to network operators, connectivity providers, manufacturers of telecommunication equipment, system integrators, and resellers.
- Software architects, developers and planners of Smart City applications, general IoT applications, end-to-end service providers and asset providers.
- The owners and planners of Smart City applications, including managed services providers, and cloud operators.
- Policy makers and observers of Smart City developments

Today's Programme

09:15	Key Note Speakers
10:45	Coffee break
11:00	Session 1: Technology Components for IoT Networks
12:30	Lunch
13:15	Session 2: Network Topologies and Management Plane Requirements for Smart City Infrastructures
14:15	Session 3: Business Aspects of Smart City Infrastructures
15:15	Coffee break
15:30	Session 4: Massively Deployed Smart City Applications – Views from Users
16:30	Summary - Discussion

The ALMANAC research project

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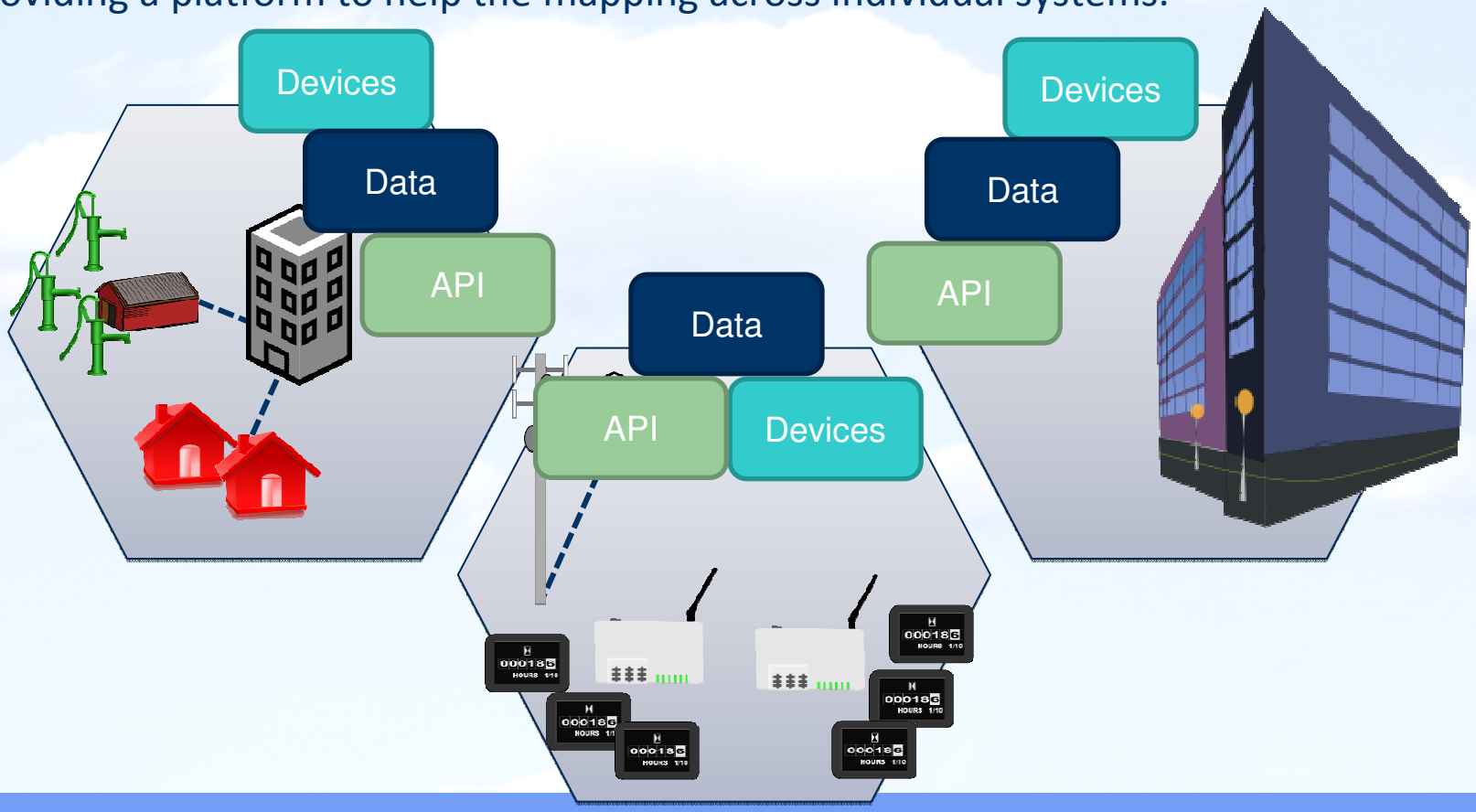
SEVENTH FRAMEWORK PROGRAMME

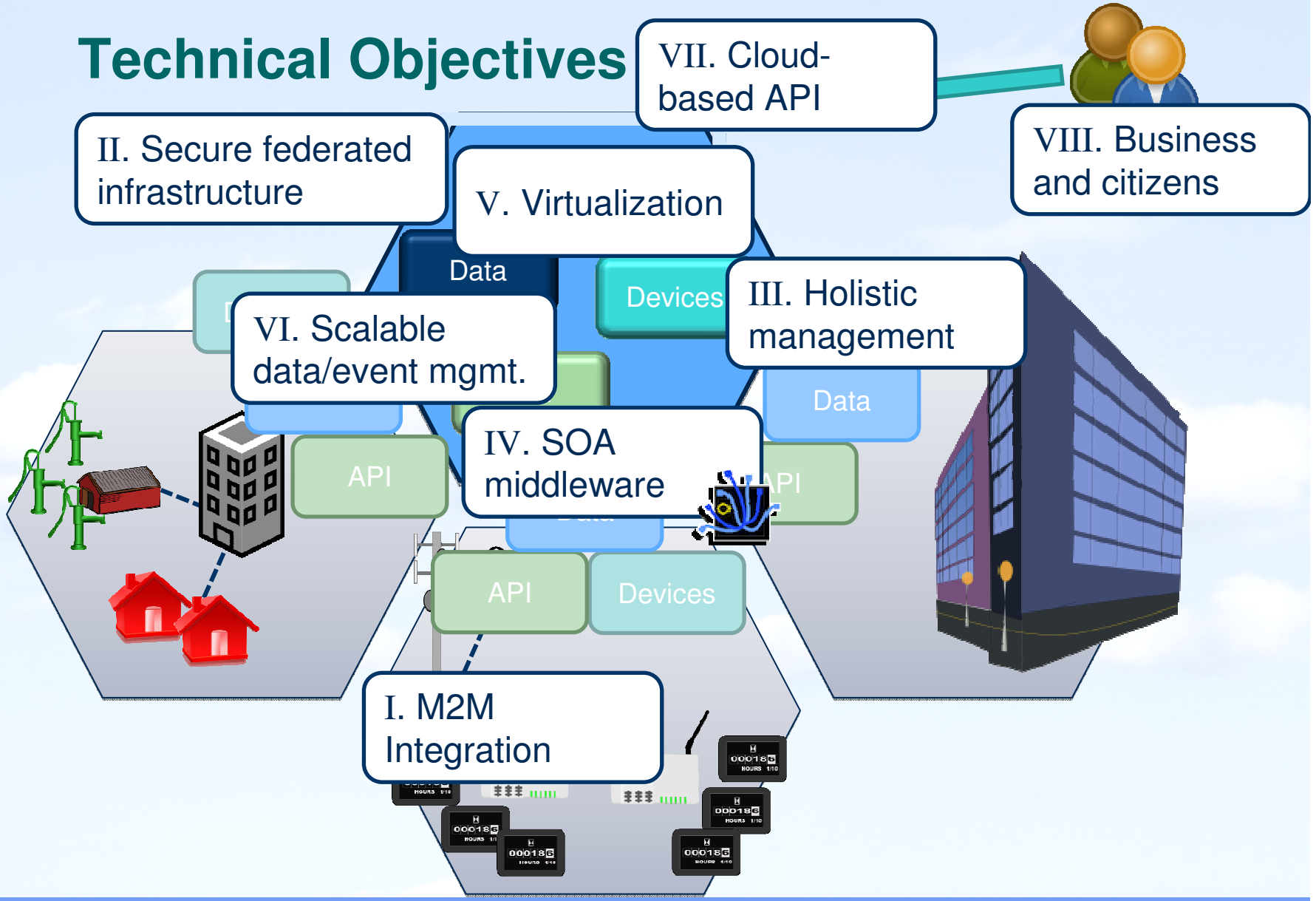
Technical Vision: Smart City Platform

ALMANAC provides a connection across individual systems, thus creating a system of systems.

The connection is achieved by creating federation across data/devices/API and also providing a platform to help the mapping across individual systems.



Technical Objectives



Consortium Overview

- 7 partners
- 2.995 M€ budget / 36 months

Fraunhofer FIT

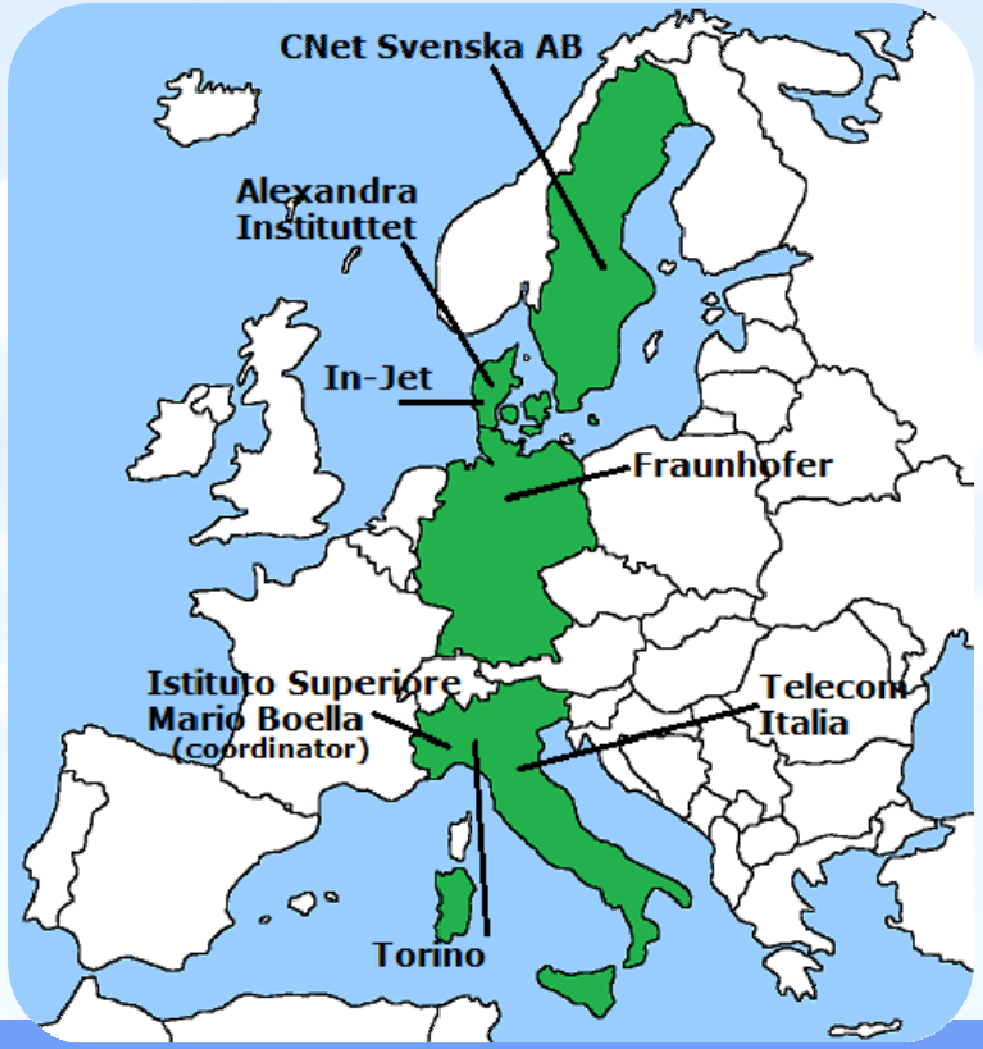
ISMB Istituto Superiore Mario Boella

TIM

IN-JET APS

CNet SVENSKA AB

CITTA' DI TORINO



Key Note Speakers

Societal Challenges: A Systemic View on Sustainable Smart Cities

Birgit de Boissezon
Head of Unit
European Commission
DG Research & Innovation

Key Note Speakers

Networking Smart Cities: A Guide to the New Digital Urban Warfare

Rick Merritt
Silicon Valley Bureau Chief
EETimes

Session 1: Technology Components for IoT Networks

- ETSI standard release 2 integrates with higher functional layers such as semantic discovery and delivery capabilities thus providing Smart City developers with added value enablers
- Capillary Network refers to an infrastructure that connects a large number of Smart City and IoT objects
- The ALMANAC open federated IoT Storage Cloud provides elasticity in the data storage services with gateways enabling access to different logical parts of the Smart City structures
- Technical IoT progress is moving to context based communication.

1.1: Technology Components for IoT Networks

Standards enabling the IoT service layer: ETSI and oneM2M standards for the IoT services layer

Enrico Scarrone
Vice Chair SC oneM2M
ETSI

1.2: Technology Components for IoT Networks

ALMANAC Capillary Network Gateway Technologies

Roberto Gavazzi
Program Manager
Telecom Italia

1.3: Technology Components for IoT Networks

Federated and Scalable Data Management in the ALMANAC Clouds

Peter Rosengren
CEO
CNet Svenska AB

1.4: Technology Components for IoT Networks

reTHINK: A new Communication Infrastructure Supporting Smart Cities

Telekom
Innovation Laboratories

Joachim Schonowski
Senior Project Manager
T-Labs
Deutsche Telekom AG

Session 2: Network Topologies and Management Plane Requirements for Smart City Infrastructures

- The Internet will have to change from a communication infrastructure with services attached to an infrastructure with integrated services.

- The ITU World Radio Conference 2015 sets the stage for M2M spectrum opportunities.

2.1: Network Topologies and Management Plane Requirements for Smart City Infrastructures

The network behind the Internet-of-Things

Lars Dittmann
Professor PhD
DTU

2.2: Network Topologies and Management Plane Requirements for Smart City Infrastructures

Mobile access architecture at TDC A/S

Christian Kloch
Technology Manager
TDC

2.3: Network Topologies and Management Plane Requirements for Smart City Infrastructures

M2M spectrum opportunities in the 700 MHz range. The ITU World Radio Conference 2015 sets the stage

Steffen Ring
CEO
Ring Advocacy

Session 3: Business Aspects of Smart City Infrastructures

- Frost & Sullivan research estimates a combined market potential of €1.3 trillion globally for the Smart City market.
- Improved network architecture will better support the multitude of sensors that will be deployed and lower the thresholds for creating new services .
- Mobile networks provides a solid platform for new services based on realisation of Internet of Things
- Smart City application developers utilise network platforms and tools to develop valued-added Smart City applications.

3.1: Business Aspects of Smart City Infrastructures

Business opportunities in Network Technologies

Nils-Henrik Faber
Engagement Manager
Ericsson

ERICSSON

3.2: Business Aspects of Smart City Infrastructures

Building Digital Societies at Vodafone

Adam Armer
Innovation Manager
Vodafone, UK

3.3: Business Aspects of Smart City Infrastructures

From the Modern City to the Smarter City - from Optimization to Innovation and Transformation of Service Delivery

Peter Lange
Executive IT Architect
IBM

Session 4: Massively Deployed Smart City Applications – Views from Users

- Sustainable urban development is recognised as a key challenge at a global level.
- The 'Smart Cities' model provides opportunities and challenges for cooperation on issues related to areas including energy, water, environment, information and communication technologies and transport.
- How smart is it actually to live in a Smart City?
- How can the telecommunication industry embraced the challenges of smart cities needs and connectivity; how the telecom operators?

4.1: Massively Deployed Smart City Applications – Views from Users

Building the World's First Open Programmable City

Paul Wilson
Managing Director
Bristol Is Open

4.2: Massively Deployed Smart City Applications – Views from Users

KØBENHAVNS KOMMUNE

How smart is it to live in a Smart City? – Insightful Perspectives on Data Privacy

Mia Nyegaard
Member of CPH Municipal Council

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