

- » BOOST PERFORMANCE
- » REDUCE COST
- » INCREASE AGILITY
- » ENHANCE CRM
- » SHORTEN TIME TO MARKET
- » DRIVE INNOVATION
- » IMPROVE EFFICIENCY
- » INCREASE ADAPTIVITY
- » ENABLE BUSINESS TRANSPARENCY
- » ENSURE REGULATORY COMPLIANCE



CONSULTING > SOLUTIONS > OUTSOURCING

## Atos Research & Innovation

“Future Networked IT for Buildings” Workshop

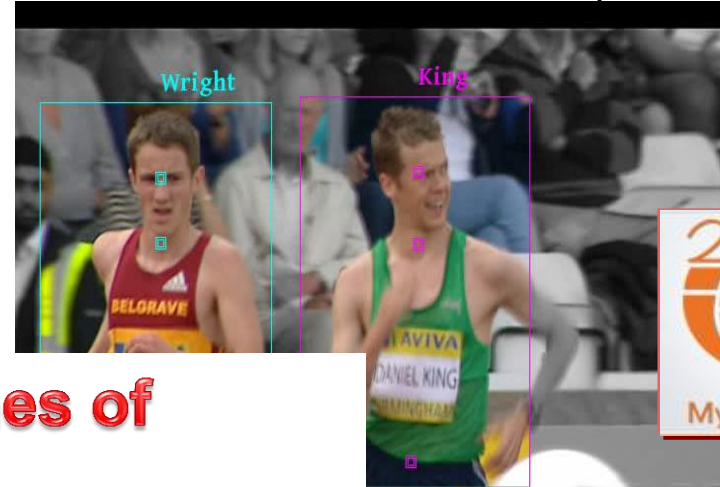
Lydia Montandon & Irene Schmidt

May 2011

# What is the commonality of all these solutions?



Tsunami Warning!  
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## Outcomes of Atos Origin's European & National R&D&I projects

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Come with us to the  
future of technologies

## Atos Research & Innovation

[www.atosresearch.eu](http://www.atosresearch.eu) / [atosinnovation.eu](http://atosinnovation.eu)

- » Atos Origin R&D hub located in Spain
- » Performing projects usually within an international scope, that combine advanced technological developments with economic exploitation
- » Plays the role of source of innovative ideas to be used by Atos sales and technical staff.

**“R&D&I division of the ATOS Origin Group  
and a key reference R&D for the whole  
Atos Origin group”**

## Main Activities

### Research »

- » Management
- » Technical Consultancy
- » Technical Developments
- » Financial Consultancy (exploitation)



### Innovation »

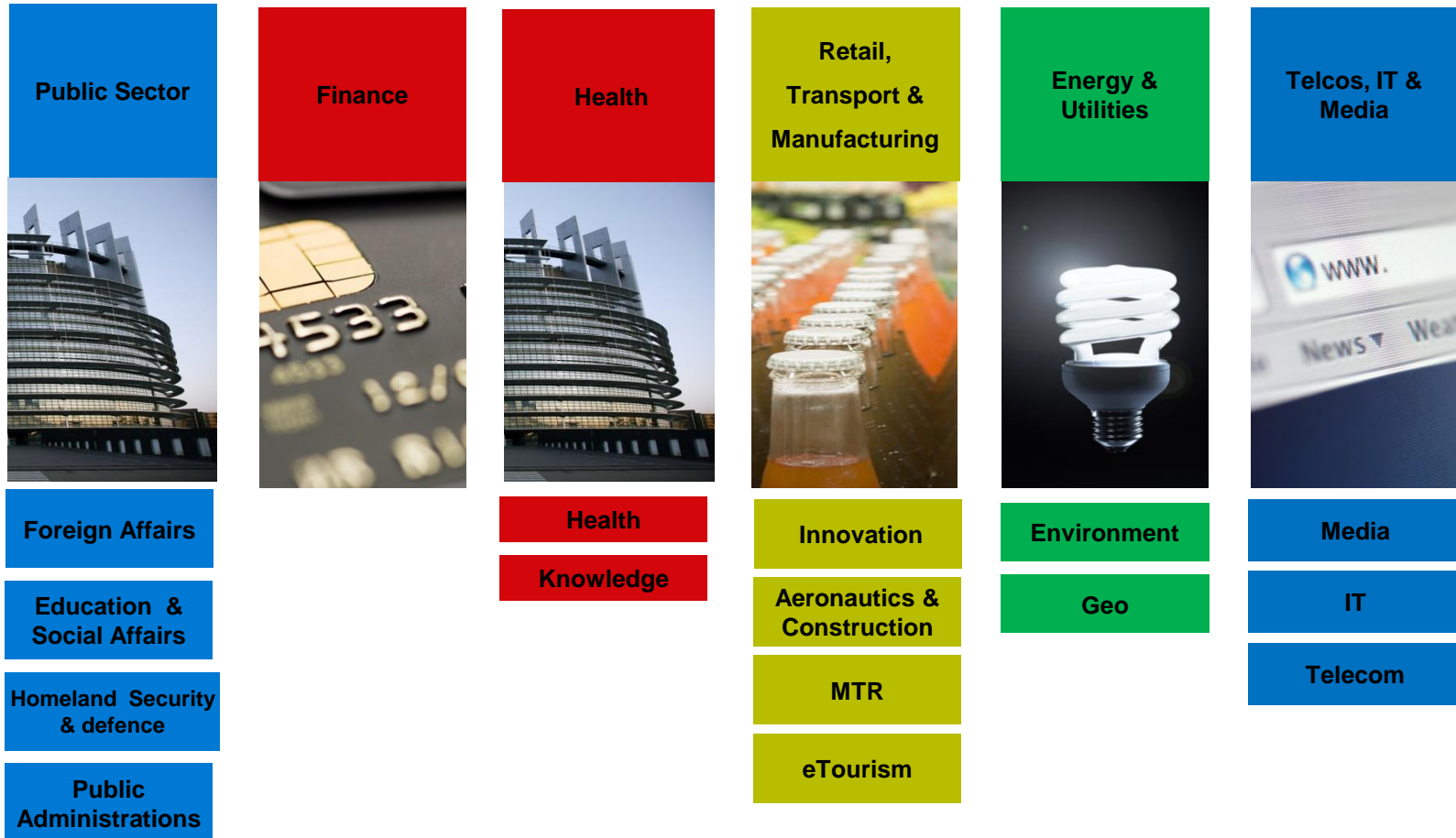
- » Applying the knowledge acquired in research on Atos' customers
- » Support the sales force as "technical backstage":
  - Via commercial operations (seldom)
  - Via participation in projects

### Consulting »

- » Strategic R&D&I consulting for Atos' customers
- » Support to internal R&D&I activities tackling either IT or other technologies (energy, food, etc.)



# An integrated market approach



# Atos Research & Innovation Structure

Atos Research & Innovation structure is a matrix that allows to combine activities to take into account the clients' needs, but with a clear technological focus in order to be at the upfront of RTD in ICT.

Therefore, ARI is organised in 14 Sectors and 8 Technological Labs

## ARI Sectors

Foreign Affairs	Innovation
Education & Social Affairs	Transport & Manufacturing
Public Administrations	eTourism
Homeland Security & Defense	Construction & Aeronautics
Media	Energy & Utilities
IT	Environment
Telecom	Finance

## ARI Labs

Personalisation & Social Networks
Knowledge
GEO
Media
Service Engineering & IT Platforms
Mobility & Communications
Smart Objects
Security

# 10 Ongoing Projects in the *Smart Objects* Lab



**Future Internet**  
**Public Private Partnership (PPP)**

**FI-WARE**

**Usage Areas**

**OutSmart**

**Energy Efficient Buildings (E2B)**  
**Public Private Partnership (PPP)**

**IREEN**



**FP7 – ICT**  
**Factories of the future**




**Artemis JTI**  
**ITEA2**

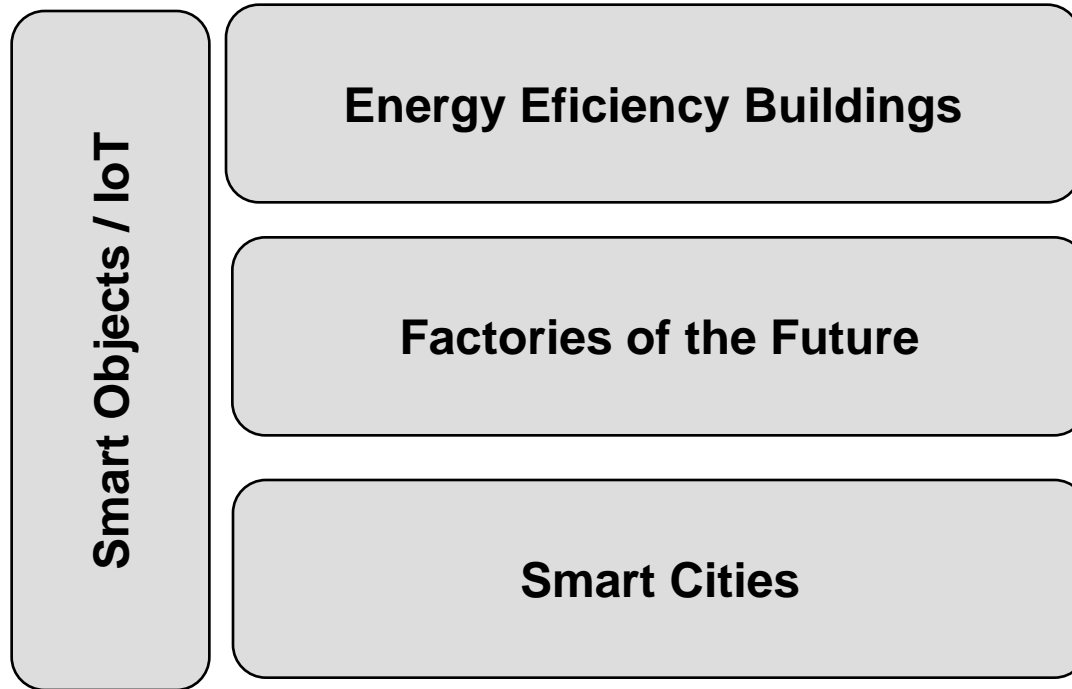




**iCore**

**Encourage**

# Thematics Smart Objects Laboratory





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# eDIANA Embedded Systems for Energy Efficient Buildings

[ignacio.solerjubert@atosorigin.com](mailto:ignacio.solerjubert@atosorigin.com)  
Head of Smart Objects Laboratory

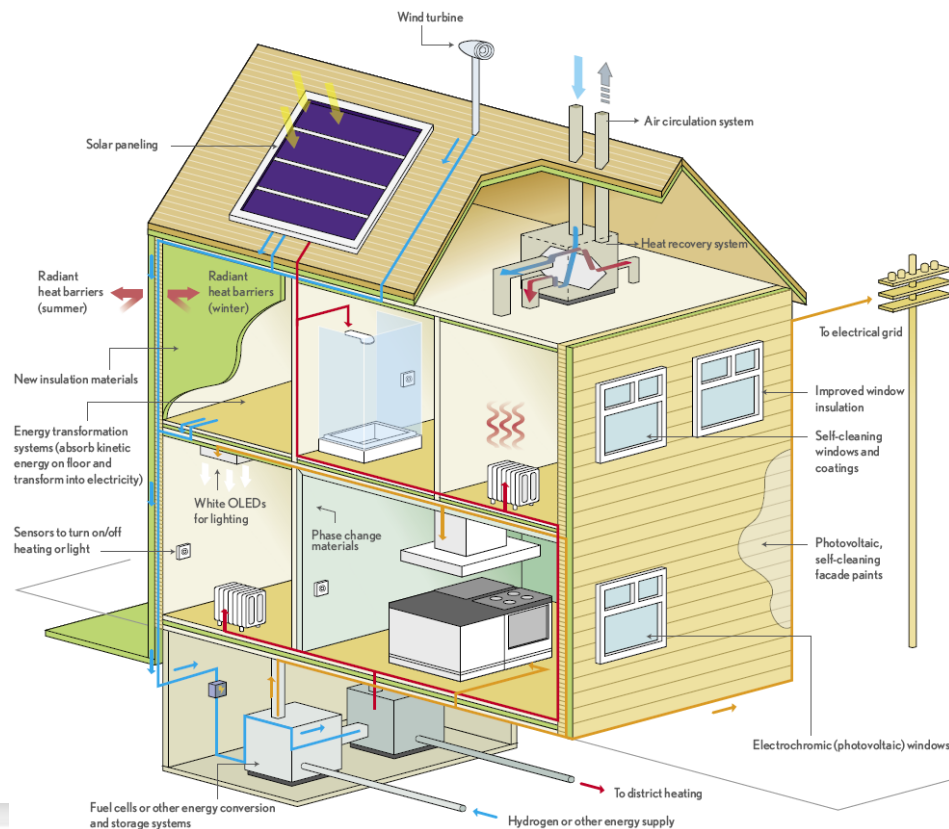


# eDIANA Objectives



## Objective:

- To enable sustainable urban life through rationalization in the use of resources while increasing comfort in urban environments by means of embedded technology and integration technologies within residential and commercial buildings.
- To achieve greater efficiency in use of resources, prioritizing energy, more flexibility in the provision of resources and better situation awareness for the citizen and for service and infrastructure owners



**Project Start:** January 2009, **Duration:** 3 Years

**Source:** SUSCHEM SRA



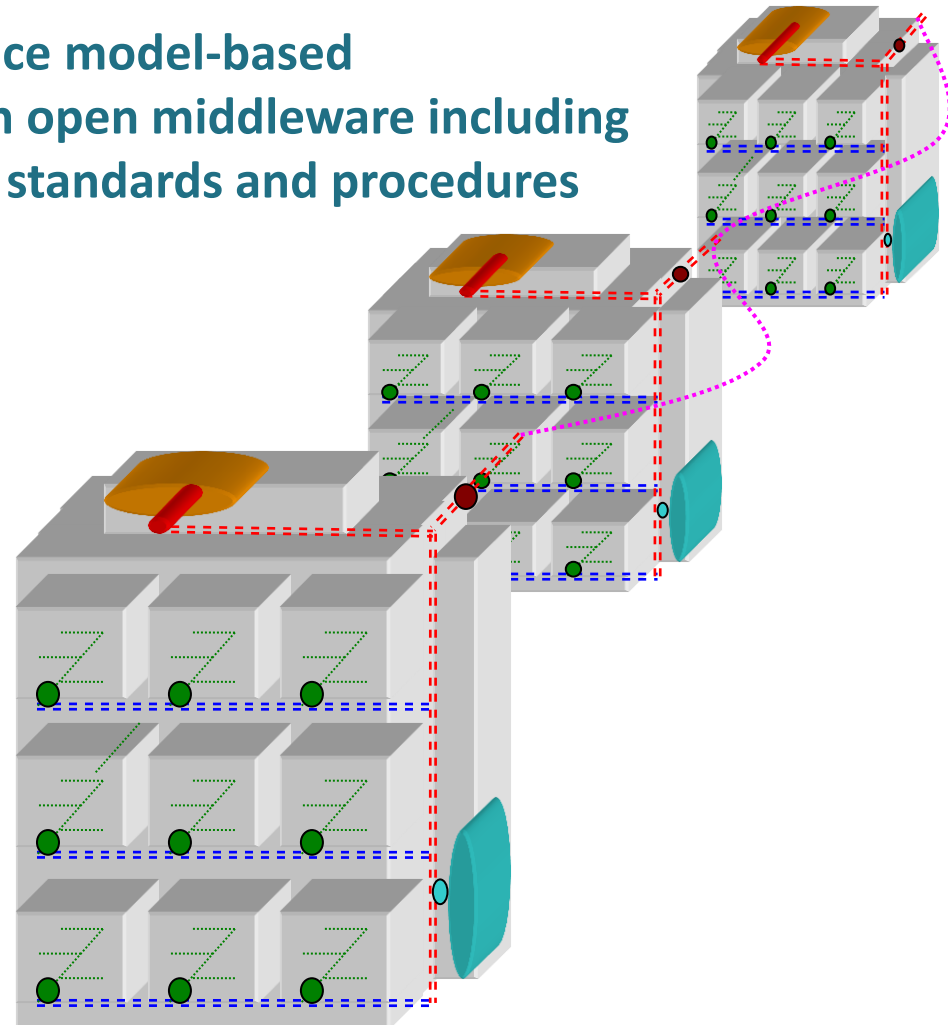
A project part of ARTEMIS CALLs ARTEMIS 2008-1



# eDIANA architectural model



- eDIANA platform aims to be a reference model-based architecture, implemented through an open middleware including specifications, design methods, tools, standards and procedures for validation and verification.
- » eDIANA platform enables interoperability between heterogeneous devices at two levels:
  - » Cell (living/working unit such as one house or one office)
  - » and MacroCell (residential and non-residential buildings)



# Integration of Network Nodes

- Integration of appliances
- Integrating display devices
- Integration of sensors and actuators
- Network layer Macrocell integration



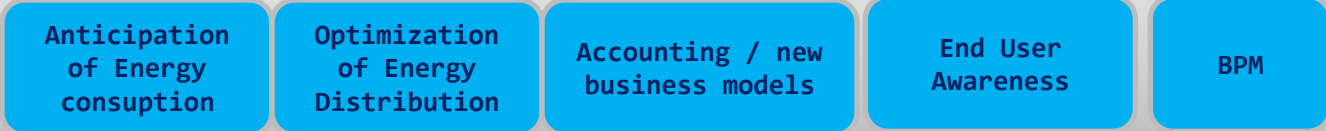
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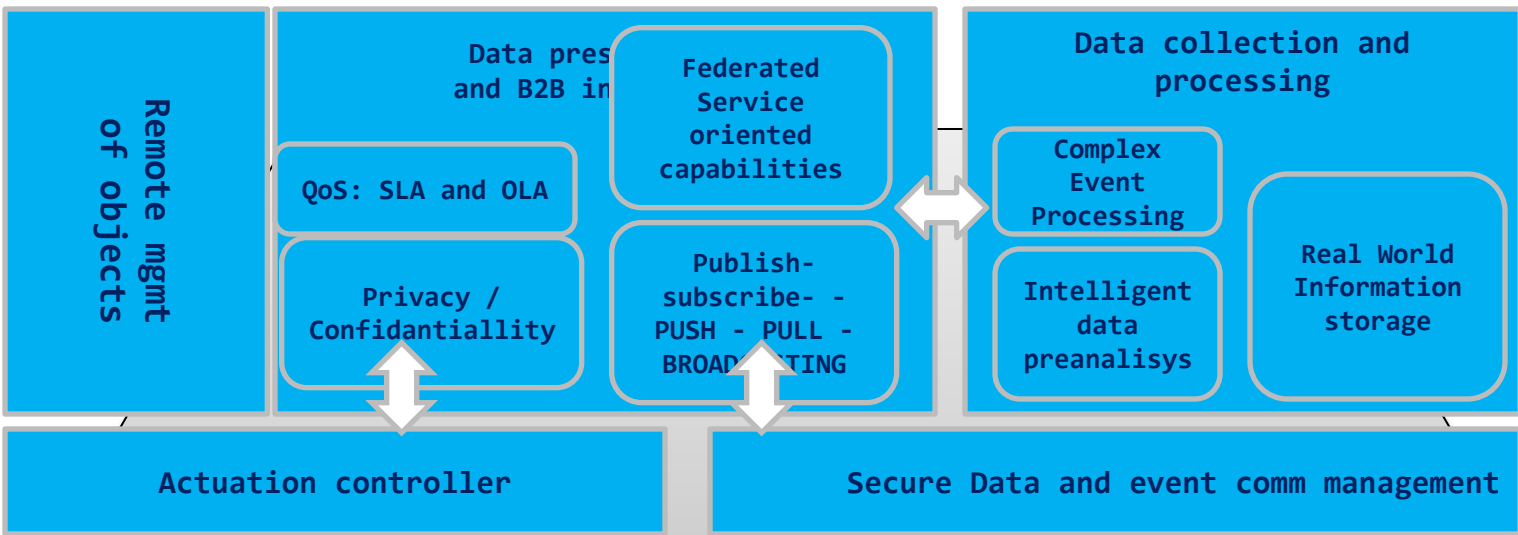
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# E2D Energy Efficient Districts (Artemis IP)

# E2D Cloud Architecture



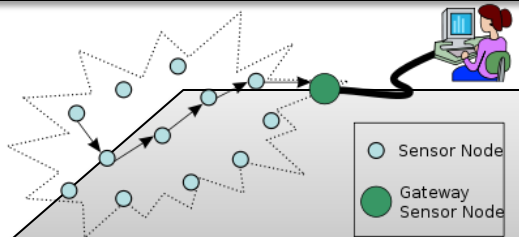
/ biz Layer



Hardware Abstraction Layer



User / Stakeholders / use cases / Pilots



Interact / capture data & events



Things

- » BOOST PERFORMANCE
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# Participation in *Smart Cities* projects

# SMARTCITY

## Urban Mobility and Traffic Management

### Cooperative Cities project:

- » Based on *In-Time* solution (public data)
- » Use of sensors, mobile user data and other inputs for dynamic rerouting and traffic maintenance support
- » Already used in Vienna, Munich, Florence
- » New deployment in Bilbao, Prague, Reading



# SMARTCITY and Open Innovation

- » Platform for aggregation of ideas, public competitions, challenges, etc.,
- » To support open innovation in a SMARTCITY
- » Users: Barcelona, Paris, Berlin and Amsterdam

# Thank you



**For more information please contact:**

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**[www.atosresearch.eu](http://www.atosresearch.eu)**

**Atos Research & Innovation Screensaver can be  
downloaded at [www.atosresearch.eu](http://www.atosresearch.eu)**

**(icon on the right hand side)**