

# ISMB skill & competencies to PPP

ISMB is a **Private Applied Research** Institute established in 2000 by Politecnico di Torino and Compagnia San Paolo: 8 Labs. focused on **ICT research and wireless technologies**.

Since 2001 runs the industrial labs with Motorola, STMicroelectronics, and Telecom Italia; SKF joins ISMB in 2005.

Since 2003 operates in a **new 4.000 m<sup>2</sup>** via Boggio building: **excellent research facilities**.

In 2007 new Joint lab. in S.Giovanni Hospital (Molinette) is established: now CLAB is a full member of European Network of Living Labs (ENoLL).

ISMB is ETSI full member: contributes in standardization (last one is ETSI 342 standard).

ISMB is ERTICO member, bringing innovation in Intelligent Transport Systems in Europe.

Several EU projects, some of them are coordinated by ISMB. Participation in FIA, NEM, E-Mobility forum, Winmec-UCLA.



## Our skills offer to PPP:

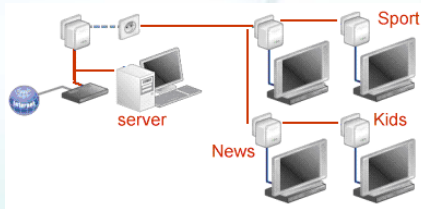
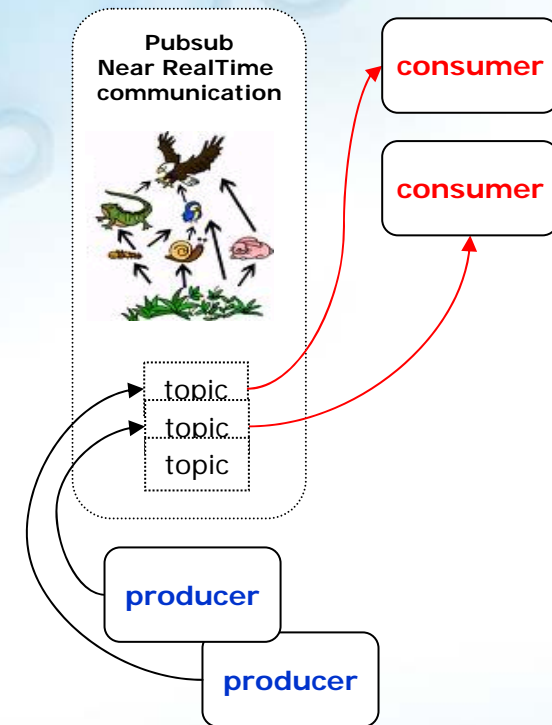
- Highly qualified Applied Research on Future Internet, Smart Health & Assistive Living, RFID & IoT, ICT for Smart Energy.
- RFID and e-Health Living Lab.
- Middleware dedicated to Internet of Things



# ISMB Middleware for IoT (RFID)

ISMB middleware is designed specifically to support IoT entities

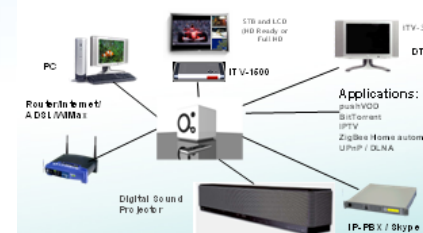
- Event based notifications
  - Producers
    - Remote nodes (things): tag observations, data from remote sensors....
    - Server side: coordinators, business elements
  - Consumers
    - Remote nodes: Tag readers, remote sensors (configuration), controllers.....
    - Server side: business elements
- Requirements
  - 1:1, 1:many, many:many communication
  - Hierarchical node addressing (single node, per class, destination, owner etc..)
  - Discovery
  - Internet wide publish/subscribe, federated servers



# ISMB for Smart Health & AAL

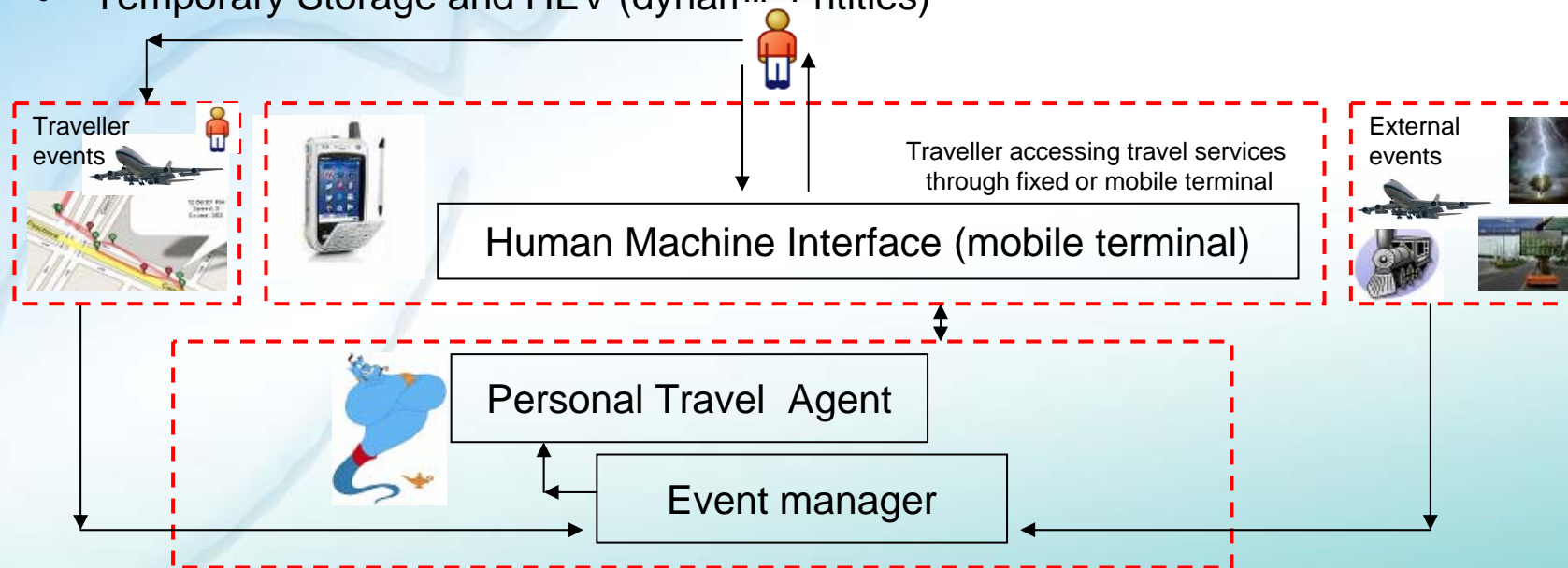
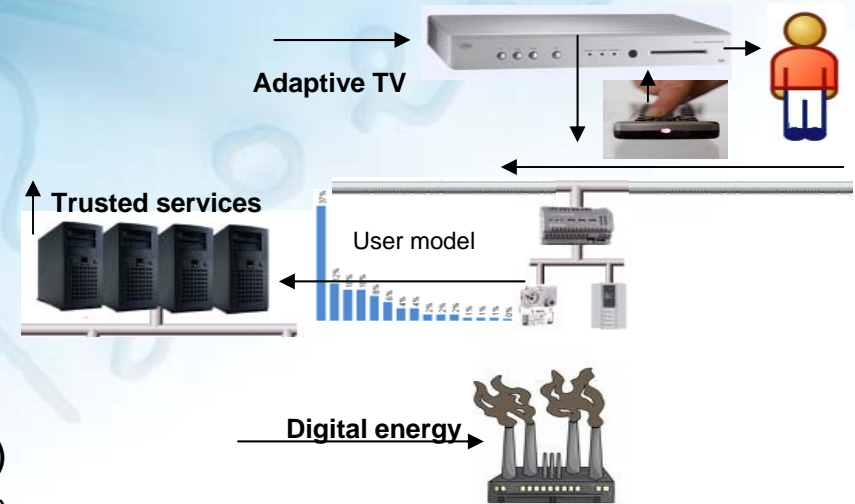
ISMB offer: research outcomes available, applied research prototypes, and the capability to create new application classes showcasing the technology use.

- Research outcomes
  - Ways to extend the care to patient homes; new communication channels and their use
  - How to extend assistive services to improve patient security
  - Use of intelligent robots in AAL
  - Remote decision support
- Prototypes
  - Multi-sensorial wearable device (wrist watch) for indoor monitoring and context awareness
  - RFID enhanced augmentative device for blind people complementing the information by new knowledge
  -
- Showcasing
  - Use of NAO robot for COPD patient assistance at home



# ISMB for Smart Energy & Mobility

- ICT for semantic understanding of events
  - User behaviour in energy terms in buildings
  - Connected traveller in mobility
- ICT for proactivity & awareness
  - Triggering of cyclic activities
  - Forecasting of vents to happen
- FI for new business classes
  - Full lifecycle management (intermittent entities)
  - Temporary Storage and HEV (dynamic entities)



# ISMB showcases, prototypes

