

Interoperable Platform solutions for eHealth and Quality of Life services and applications

Sten Hanke 20th November, 2013



Outline





- What is a platform and why we might need one?
- European Platform attempts
- Complete ecosystem of devices and applications



What is a platform?





a flat raised area or structure!

- Something stable on top of which other things can reside
- In ICT: HW versus SW platform
- SW platform: usually your operating system
- SW platform: usually in contrast to applications that run on top of it







Why a platform?





- Specific applications for distinct use cases
- But most elderly needs more than one single AAL solution, and in the worst case :
 - Sensors have to be installed twice, thrice or even more often (same holds for other kinds of AAL components)
 - Software and Hardware is not interoperable
- provide more general solutions for enabling an ecosystem of interoperable hardware and software products
- the time to market of vertical solutions is lower
- the benefits of the ecosystem generated by a platform is higher



Why a platform?





- Learn from the development of the PC market since early 80s
 - enabling technologies
 - standard interfaces at HW level
 - few popular operating systems
 - adopted widely
 - lead to mass markets and a full ecosystem of artefacts
- Can we consider a platform as an infrastructure ?

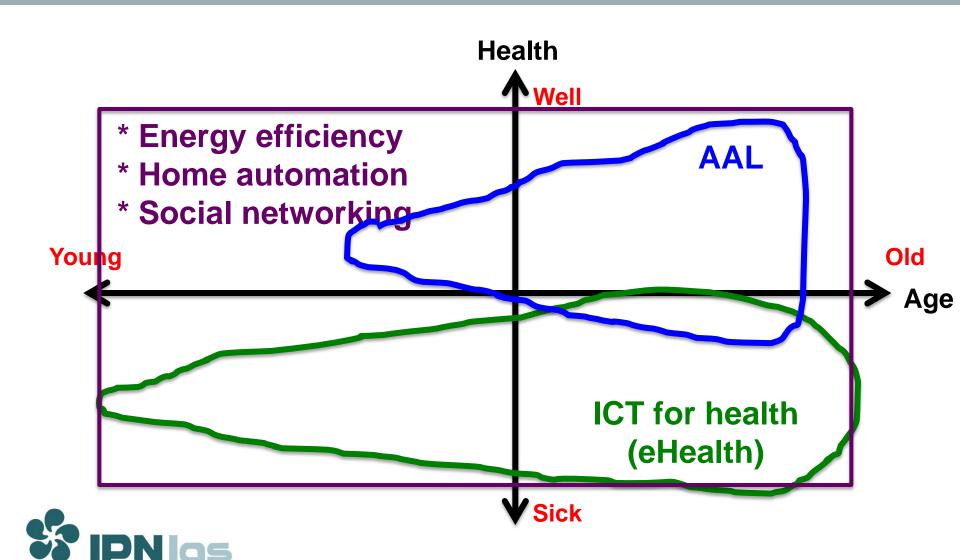
As an infrastructure whose costs are spread over a multiplicity of stakeholders (and domains)?!



The self-served society: not been viewed in isolation







Continua Health Alliance







Interfaces & Standards

Personal Device

Thermometer



Pulse Oximeter



Pulse / **Blood Pressure**



Weight Scale



Glucose Meter



Cardio / Strength



Independent **Living Activity**



Peak Flow



Adherence Monitor





Insulin Pump







Aggregation Manager







Personal Area Network (PAN) Interface













W3C

Wide

Area

Network

(WAN)

Interface





Health

Record

Network

(HRN)

Interface



Health

Records









universAAL





SEVENTH FRAMEWORK PROGRAMME



* Start: February 2010

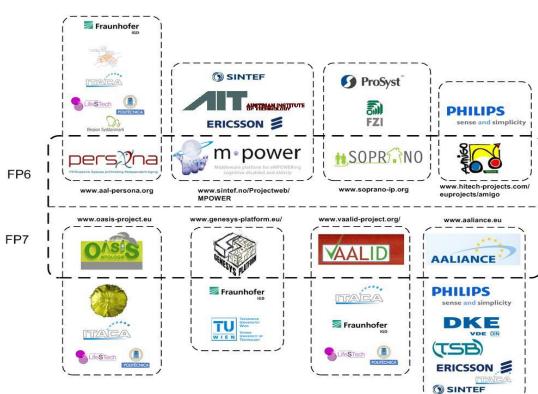
* EU Funding: 10.5 M€

universAAL - UNIVER sal open platform and reference Specification for

Ambient Assisted Living

* Duration: 48 months

* Budget: 13.9 M€



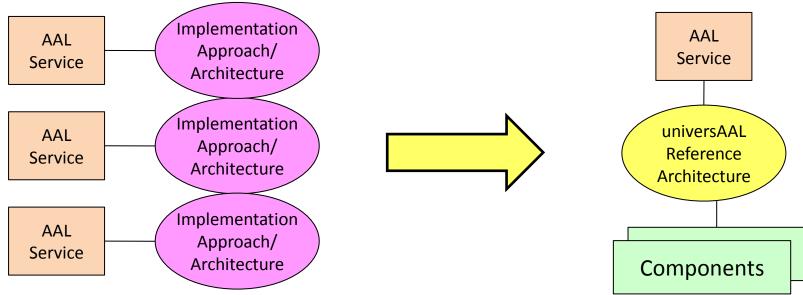


"One way to build them all, One way to bind them"





- Instead of each AAL service being built from scratch for specific needs establish a single "standard" way to build AAL applications
- Make it easy for different vendors to create & sell different components: through a process of binding they can be incorporated in multiple AAL services

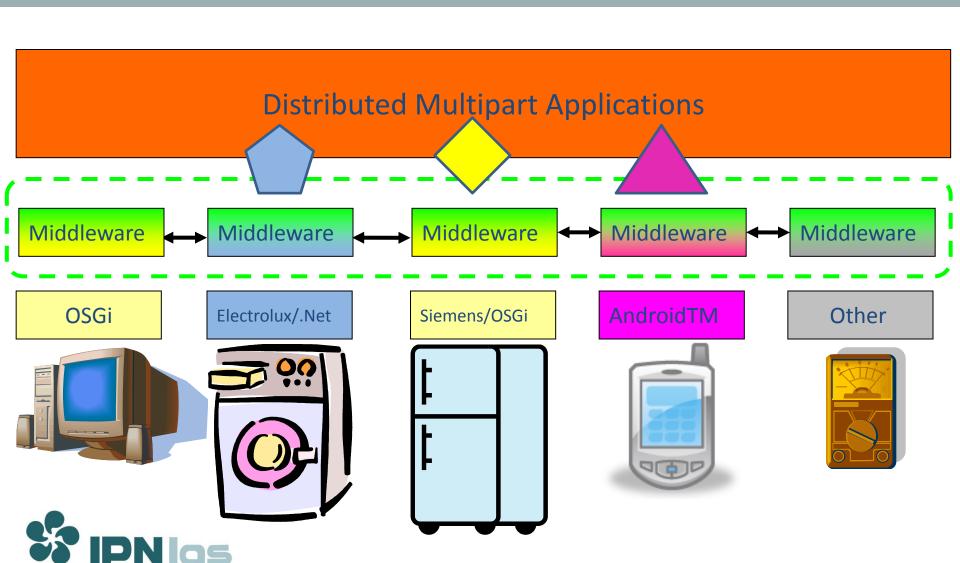




Distributed Architecture



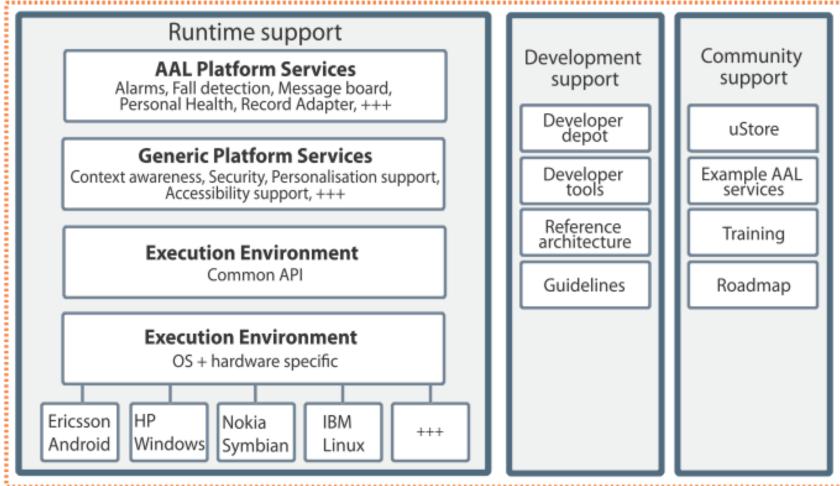




Main technical result: universAAL platform









ReAAL





ReAAL The EU CIP ICT PSP Project...

piloting in the domain of active and Independent living with 7000 users in real life



Project full name: make it ReAAL

Funded under: CIP-ICT-PSP.2012.3.2 – Towards open and personalised solutions for active and independent living

Contract type: Pilot Type B Grant Agreement no: 325189

Start date: 16-Jan-2013 Duration: 36 Months

Total budget: 10,976,954 € EC contribution: 4,994,000 €



ReAAL promise





"Promote standards, guidelines and open platforms for interoperable solutions in the domain of active and independent living"

"...demonstrate by 2015 and ICT ecosystem that uses them in pilot sites involving at least 5000 users in the least five countries"

→ "critical mass" approach



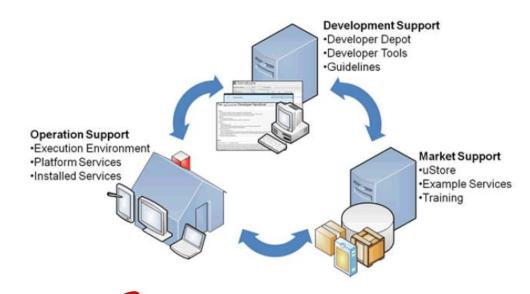
ReAAL Way





- Deploy within 36 months several applications in the field of active and independent living on top of the universAAL platform in several pilot sites involving ca. 7000 users in 8 countries
 - → As result of the FP7 project universAAL (www.universaal.org), in this field the universAAL platform is **the most prominent candidate platform**

 Within ReAAL, partners of the universAAL project will set up a full exploitation environment that consists of uStore, Development Depot and runtime platform components





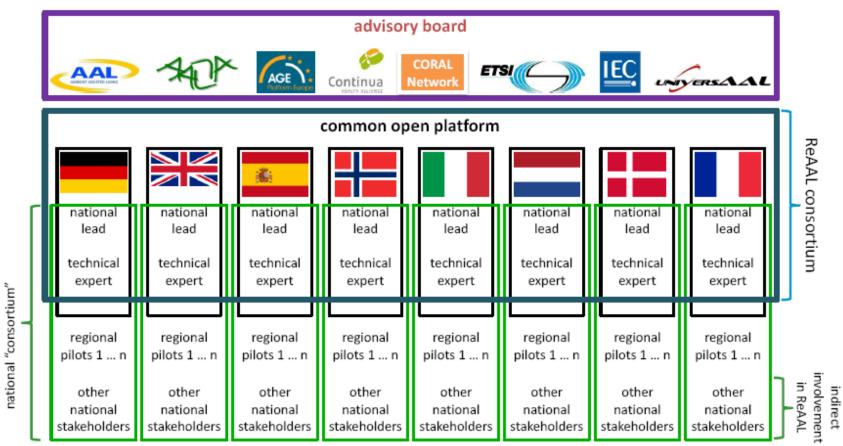


ReAAL



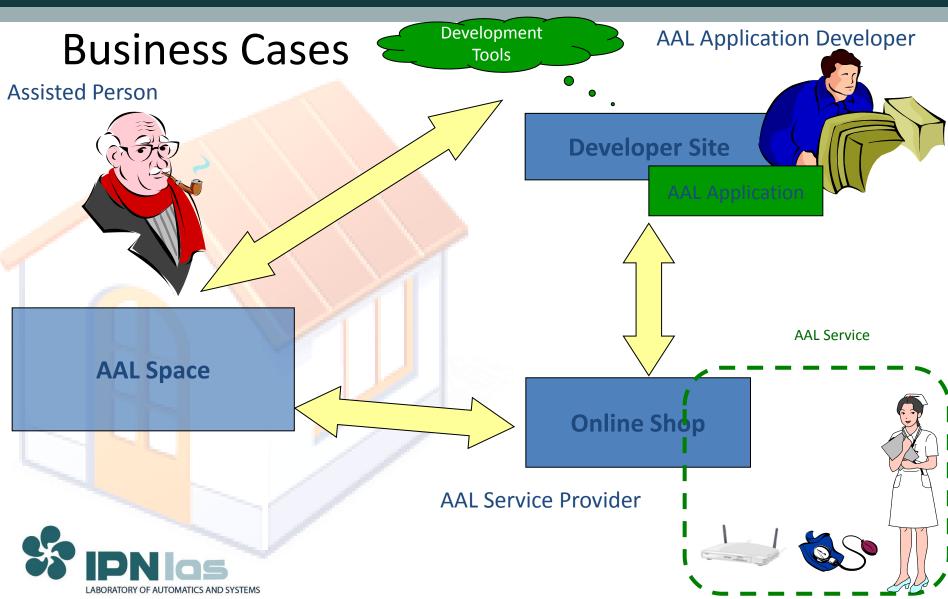


The Hierarchical Approach





Lifecycle



tice.healthy





Objective

TICE. Healthy activities will be realized through implementation of a central platform focused in the creation of an ecossystem of health oriented applications.



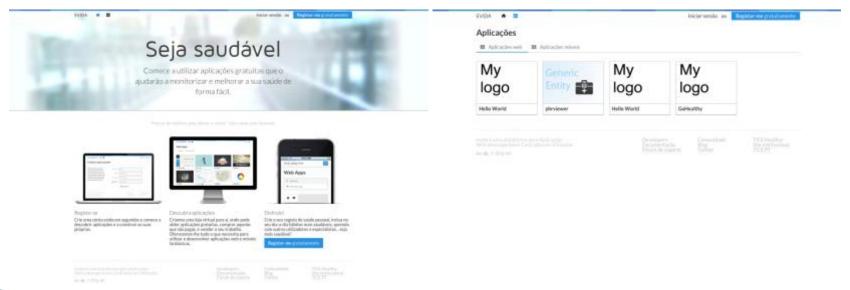


tice.healthy





The main result of the project is an innovative ICT platform that will enable rapid development and integration of a wide range of new ICT systems for Health and Quality of Life.

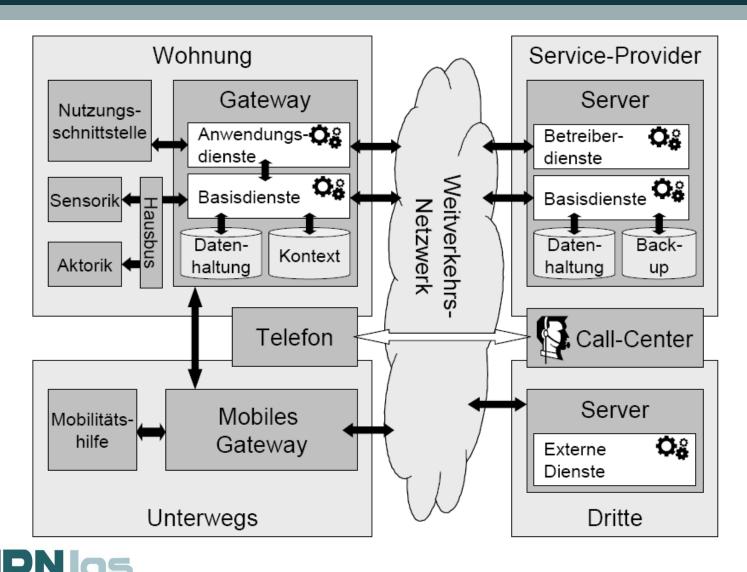




System Architecture







ReAAL + eVida





External systems Mirth Connect (HL7 and DICOM) Backend Frontend Web Web Hosted Information & Authentication & Portal App Authorization Interoperability 9 Database Φ Personal Remote Social Web Packaged Health Control Network Record & Sensors App Middleware universAAL Middleware Middleware Middleware Middleware OSGi **OSGi** OSGi OSGi OS OS OS OS Hardware Hardware Hardware Hardware





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