UNIVERSAAL

universAAL -<u>UNIVER</u>sal open platform and reference Specification for <u>A</u>mbient <u>A</u>ssisted Living

Large-scale Integrated Project in EU 7th Framework Programme
(Priority 7.1b: ICT & Aging)

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SEVENTH FRAMEWORK
PROGRAMME

AAL Forum

Odense, September 2010

Presentation Overview

1. **Project Objectives**

2. Users & results: What will be produced for whom?

3. Organizations and Projects Involved

4. Achievements so far

5. Community building: life outside and beyond universAAL

Main Objective

To make it technically possible and economically feasible to design and deploy innovative AAL services

❑ Providing an **open and scalable technological platform** that facilitates the development and deployment of a broad range of AAL services

❑ Carrying out support activities promoting **widespread acceptance and adoption** of the platform.

Approach: Consolidate & extend work of earlier projects

* Duration: 48 months   * Start: February 2010
* Budget: 13.9 M€   * EU Funding: 10.5 M€

The unifying "ring": our project slogan

One ring to rule them all,
One ring to find them;
One ring to bring them all,
And in the darkness bind them

(J.R.R. Tolkein "Lord of the Rings")

One way to build them all,
One way to bind them;
One Store to save them all,
And help the users find them

"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
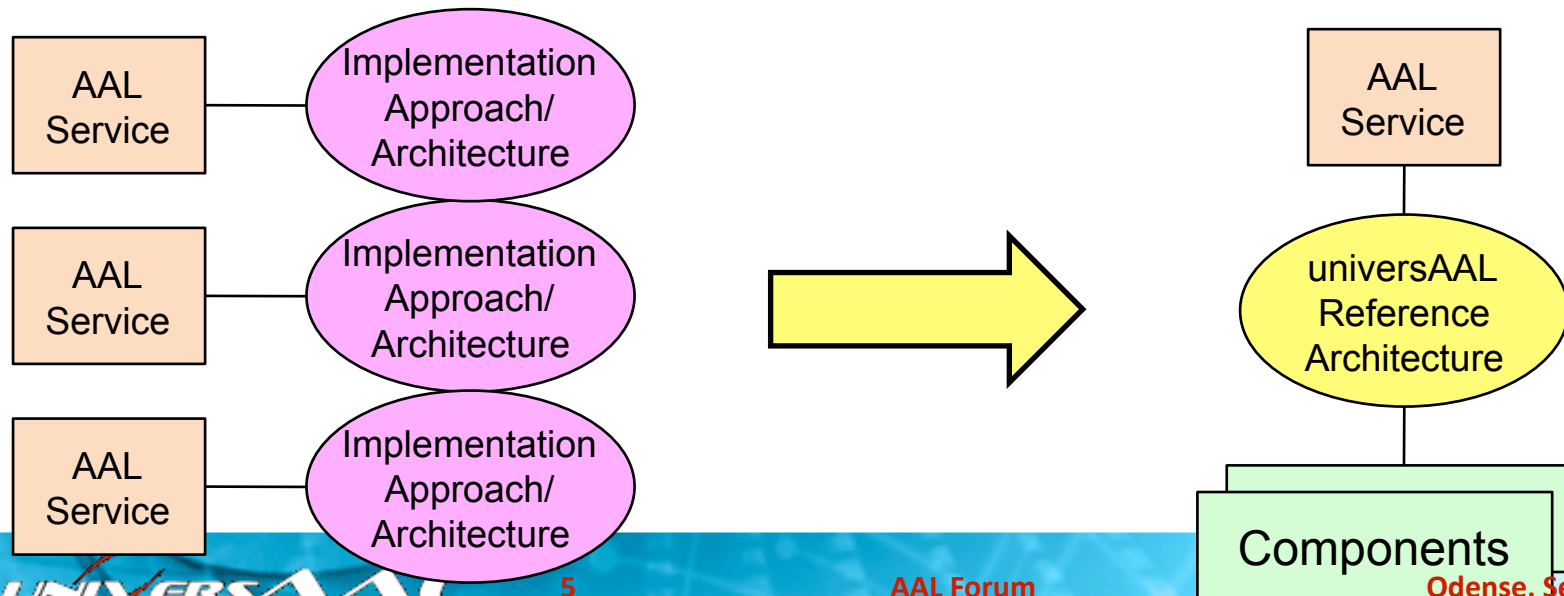
"One Store to save them all, and help the users find them";

- ❑ We will create the "universAAL store" (uStore) – akin to Apple's "App Store"
- ❑ A single place where users can easily find, download and (maybe) pay for applications matching their needs
- ❑ More than just "find": also easily download and deploy

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Types of users

Primary Users
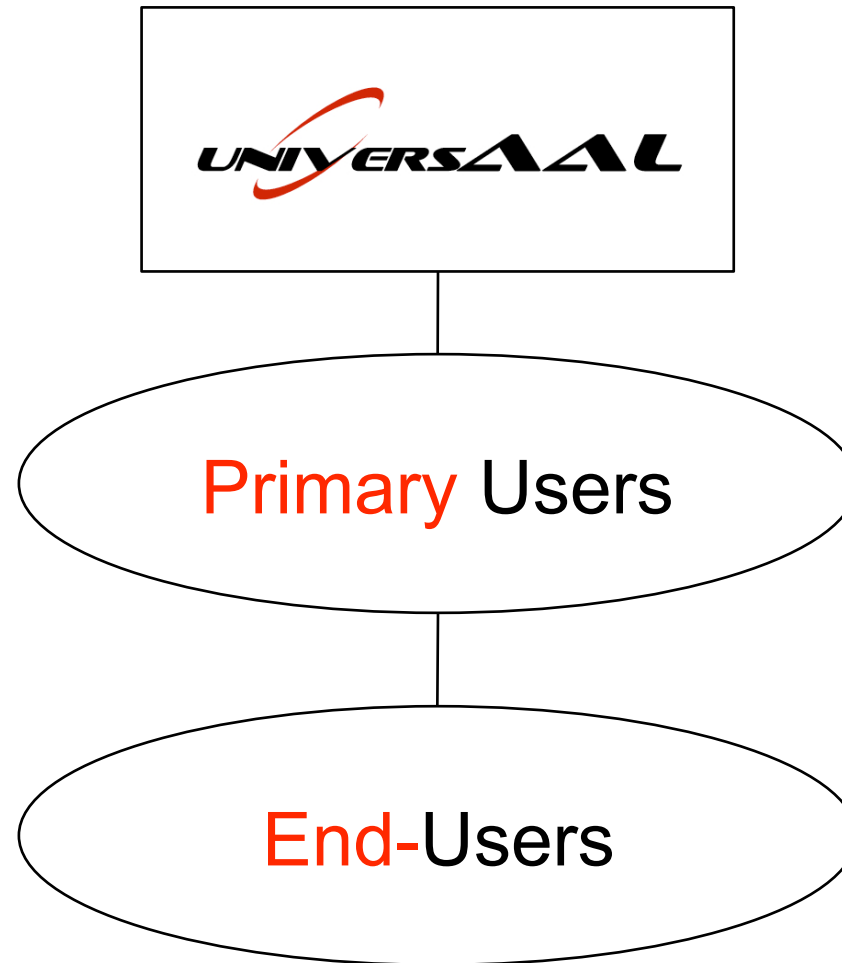
End-Users

End-users: examples of services

Media Interaction

Intuitive handling of devices

Monitoring of sleep

Emergency

Sport and Social Interaction

End-users: sub-groups

❑ Elderly

❑ Family members

❑ Carers

❑ Medical staff

❑ Local authorities responsible for care

❑ Companies providing care

Primary Users

Software architects/ developers

Working for companies producing **complete** AAL solutions
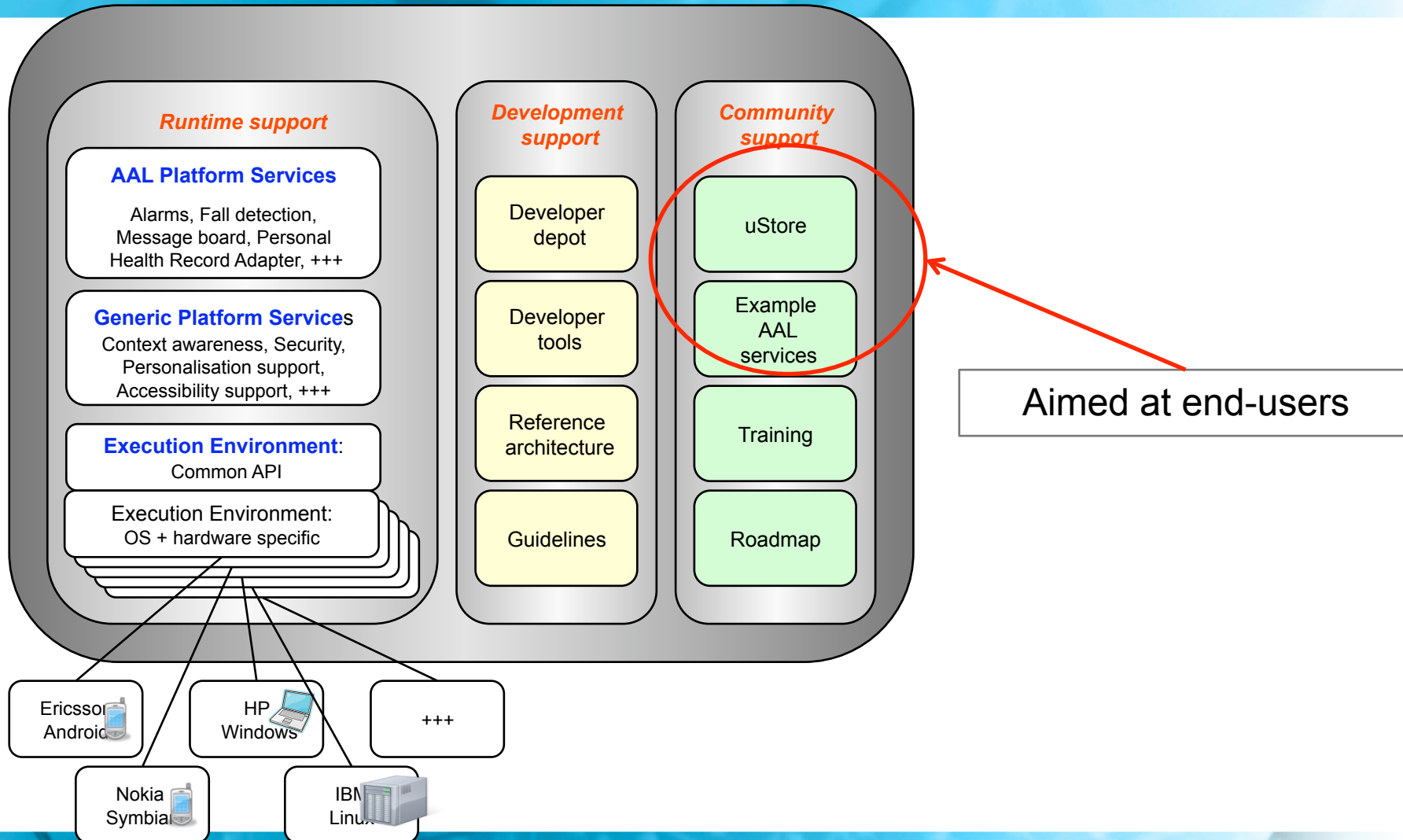
Working for companies producing AAL **components**
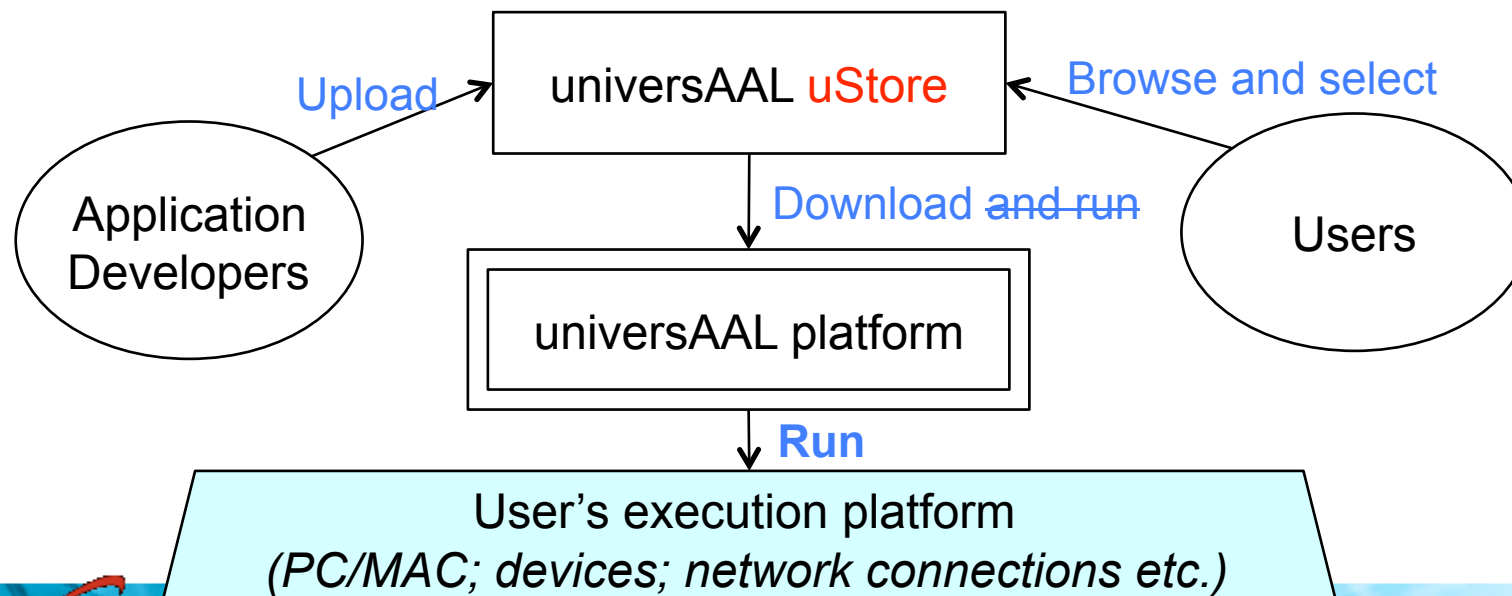
Working alone, open source community

Device Manufacturers

Our work is aimed mostly – but not exclusively – at these primary users

Main technical result: universAAL platform

Runtime support

AAL Platform Services
Alarms, Fall detection,
Message board, Personal
Health Record Adapter, +++

Generic Platform Services
Context awareness, Security,
Personalisation support,
Accessibility support, +++

Execution Environment:
Common API

Execution Environment:
OS + hardware specific

Development support

Developer depot

Developer tools

Reference architecture

Guidelines

Community support

uStore

Example AAL services

Training

Roadmap

Aimed at end-users

Ericsson Android

Nokia Symbian

HP Windows

IBM Linux

+++

The uStore concept

Upload → Apple's "App Store" ← Browse and select

Application Developers

Download and run

Users

iPhone

Upload → universAAL uStore ← Browse and select

Application Developers

Download and run

Users

universAAL platform

Run

User's execution platform
(PC/MAC; devices; network connections etc.)

Benefits

- **General:** Cost reduction through resource sharing and wider market.

- **End users:** Easier to obtain customised solutions; greater uniformity in interaction styles.

- **Developers:** Easier for small organisations, small set of programming interfaces.

- **Deployers:** Simple, easy to configure and adapt.

- **Market:** More competition; easier for SMEs and niche service providers / device manufacturers
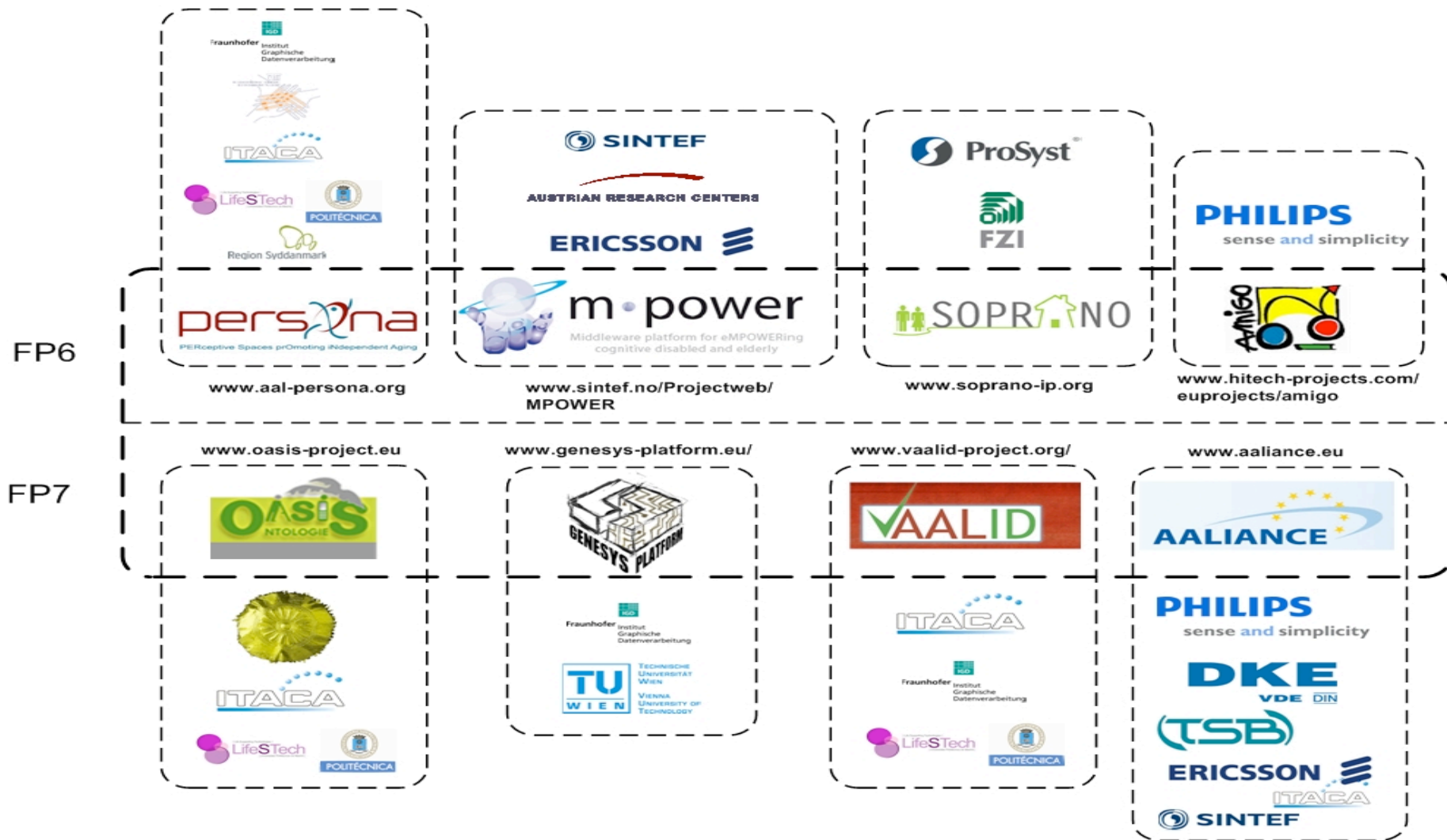
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Consortium: *17 Organizations:* mixture of industry, public authorities, Universities and Research labs

No	Name	Short name	Country
1	STIFTELSEN SINTEF	SINTEF	Norway
2	AIT Austrian Institute of Technology GmbH	AIT	Austria
3	CENTRE FOR RESEARCH AND TECHNOLOGY HELLAS	CERTH	Greece
4	CONSIGLIO NAZIONALE DELLE RICERCHE	CNR-ISTI	Italy
5	ERICSSON NIKOLA TESLA D.D.	ENT	Croatia
6	FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V	Fh-IGD	Germany
7	FORSCHUNGSZENTRUM INFORMATIK AN DER UNIVERSITAET KARLSRUHE	FZI	Germany
8	IBM ISRAEL - SCIENCE AND TECHNOLOGY LTD	IBM	Israel
9	IMPLEMENTAL SYSTEMS SL	IS	Spain
10	UNIVERSIDAD POLITECNICA DE VALENCIA	ITACA-UPV	Spain
11	PHILIPS ELECTRONICS NEDERLAND B.V.	Philips	Netherlands
12	PROSYST SOFTWARE GmbH	ProSyst	Germany
13	REGION SYDDANMARK	RSD	Denmark
14	SOLUCIONES TECNOLÓGICAS PARA LA SALUD Y EL BIENESTAR SA	TSB	Spain
15	TECHNISCHE UNIVERSITAET WIEN	TUW	Austria
16	UNIVERSIDAD POLITECNICA DE MADRID	UPM	Spain
17	VDE VERBAND DER ELEKTROTECHNIK ELEKTRONIK INFORMATIONSTECHNIK EV	VDE	Germany

Consortium: Building on existing work

FP6

FP7

www.aal-persona.org

www.sintef.no/Projectweb/ MPOWER

www.soprano-ip.org

www.hitech-projects.com/ euprojects/amigo

www.oasis-project.eu

www.genesys-platform.eu/

www.vaalid-project.org/

www.aaliance.eu

Inputs from earlier/related projects/organizations (1)

❑ Architecture Guidelines / Design Principles to achieve interoperability

> AMIGO   - Focus on home networks
> Genesys - Focus on embedded systems
> *Also:* MPOWER, OASIS, PERSONA, SOPRANO

❑ Middleware with components offering specific services

> MPOWER - Focus on end-users with dementia
> *Also:* PERSONA, GENESYS

Inputs from earlier/related projects/organizations (2)

❑ Facilitate Deployment

PERSONA   + User Interface Framework

MonAmi   + promotes service-platform interface

(at this conference: Session 55 Saturday 1300-1430)

❑ Re-use / interoperability of information across domains

OASIS – Provides Ontology

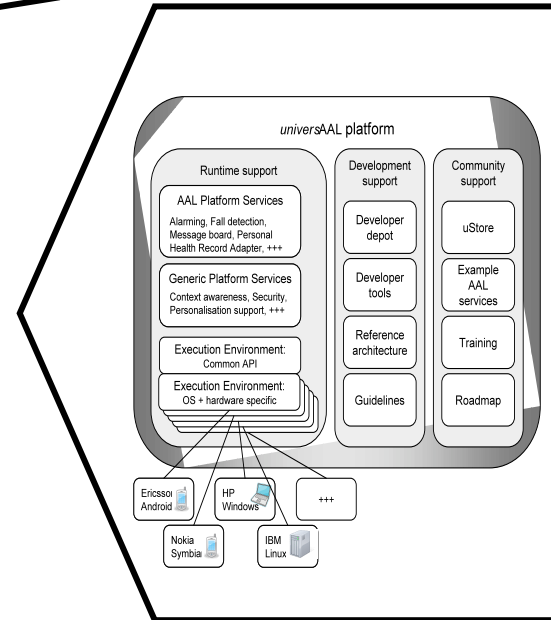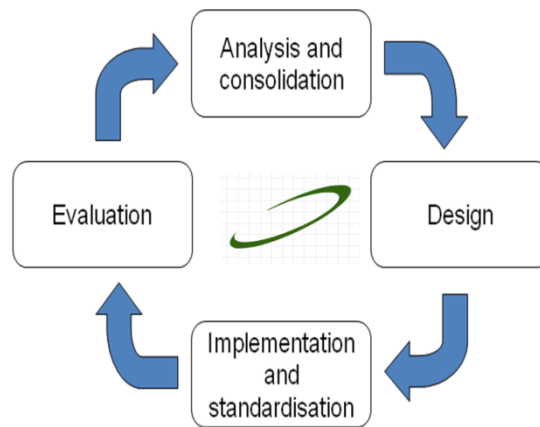# Inputs from earlier/related projects/organizations (3)

❑ Semantic Enrichment of Sensor Data / Context Data
  SOPRANO

❑ Achieve agreement between industrial and other stakeholders
  on how to establish an eco-system for interoperable personal
  health systems
  CONTINUA industry alliance

Consolidating State-of-the-Art in one platfom

Amigo   Mpower   Persona   Oasis   Any

AAL developer community

End users

Analysis and consolidation

Evaluation

Design

Implementation and standardisation

*univers*AAL platform

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Example AAL services

Training

Roadmap

Ericsson Android

HP Windows

+++

Nokia Symbian

IBM Linux

Continua
HEALTH ALLIANCE

OMG
OBJECT MANAGEMENT GROUP

cen
European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

OPEN HEALTH TOOLS

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Achievements so far

❑ "Team" established: people + organizations know each other, and understand each others roles and motivations

❑ Internal training on the goals and technical details of the input projects

❑ Gathered and consolidated "use cases" from the input projects

❑ Draft reference architecture almost ready

❑ Contacting other projects / other organizations with a view to establishing a community

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# Community Building process
Three-Pillar-Model

- **Manifesto** – encourage industry and academic world to participate in forming an association to developing and exploit AAL platforms

- **Association** – Will support and coordinate AAL research and development as part of an open community of stakeholders

- **Competition** – Promote active participation. First competition will involves analysing, comparing and evaluating solutions proposed by researchers

Manifesto

Association

Competition

http://www.aaloa.org
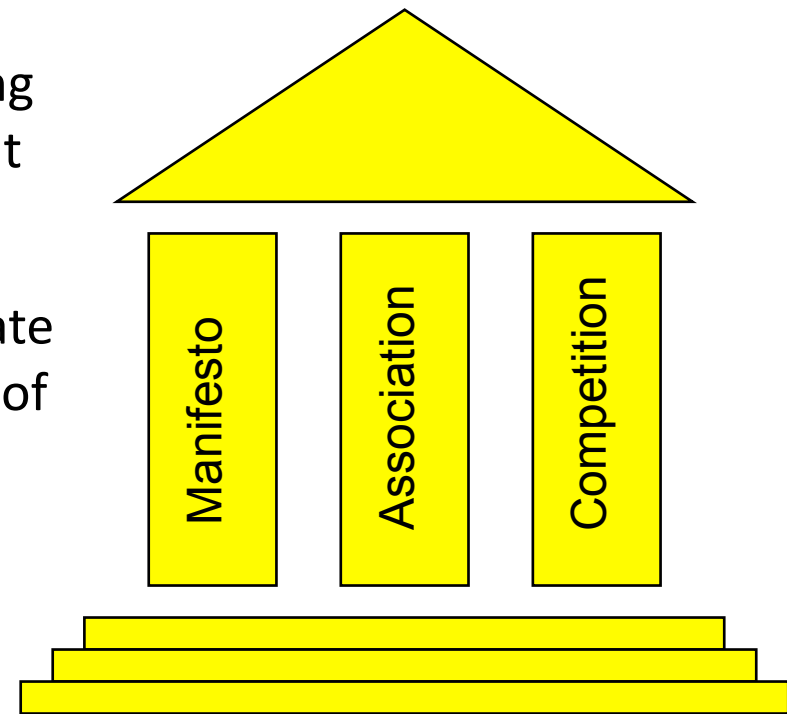
Scope of Proposed Open Association
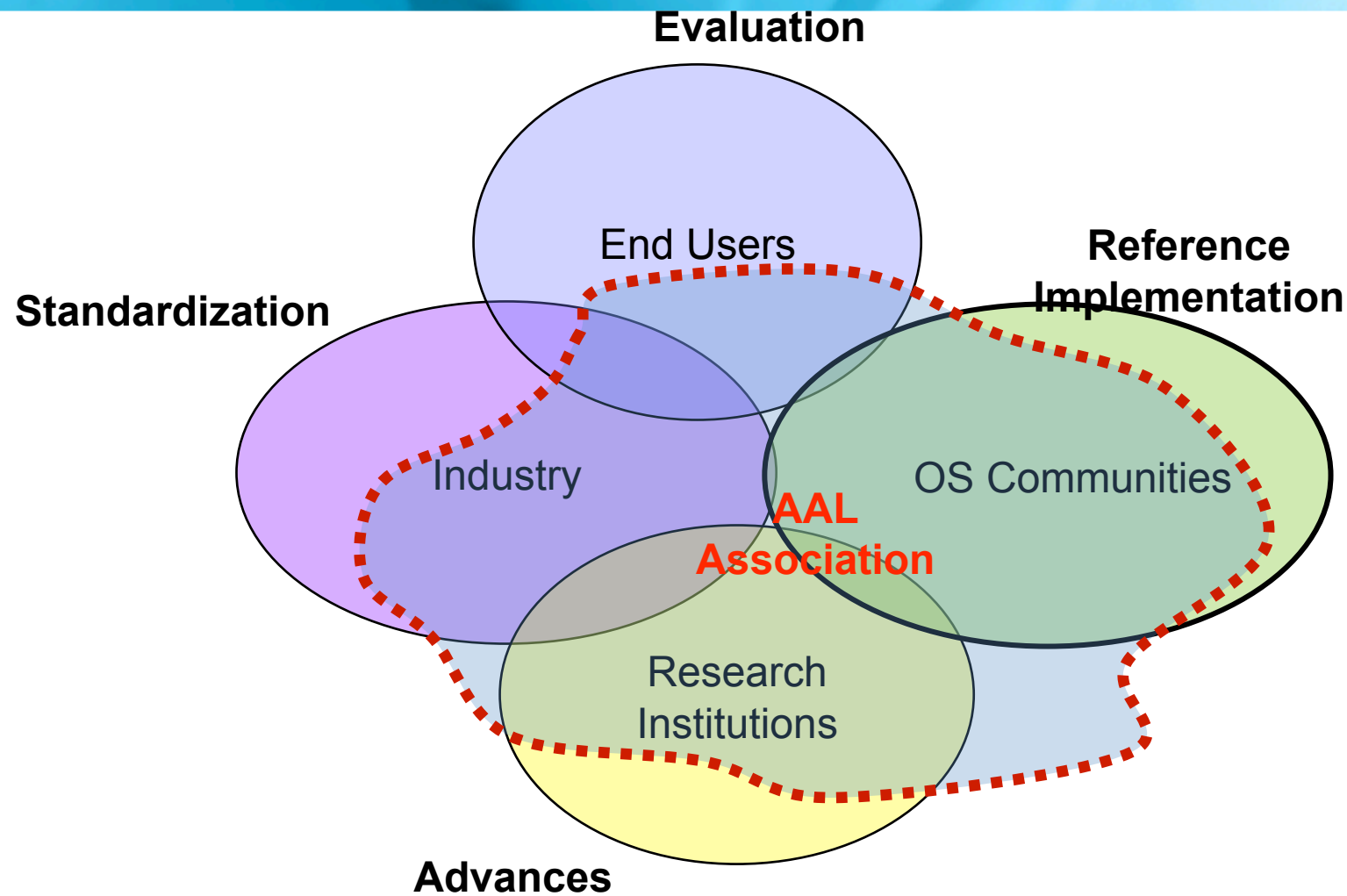
Become involved!

- ❑ **... in the EUs initiative for one universal open, available and standardised platform for Ambient Assisted Living**

- ❑ Support us with your expertise

- ❑ Use the platform to build services

- ❑ Inform us about open and available platforms

- ❑ Inform us about your needs

- ❑ Contribute to the platform as an open source developer

- ❑ Contribute to standardisation

- ❑ Create projects together!

Contact

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