

**CARDIAC SEMINAR**

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## The APSIS4all implementations of EN 1332



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## SoA. Accessibility and usability

- Accessibility and usability of the **interfaces** have been widely studied (e.g. WCAG)
- Much literature is available regarding accessibility and usability of **PDTs** (e.g. INREDIS 2010, Gill, 2009; ONCE Foundation, 2007; Barcelona Digital, 2006; Gill, 2003)
- A wide range of **tailor-made solutions** has been deployed in the banking and transport sectors.

## SoA. Personalisation

- Personalisation of interfaces is a relatively recently design practice
- Personalisation of **webpages** is already a solid trend to adapt the presentation to: Users' needs and user devices.
- Automatically adapted **interfaces** has been deployed in the banking sector.
- Adaption of interfaces based on the specification **EN 1332-4** successfully tested in libraries to reconfigure PC interfaces

## SoA. Usage of mobiles

- Almost all banks provide **online banking** by mobile devices.
- The use of mobile devices for interacting with PDTs is a recent trend:
  - **La Caixa** has deployed a pilot of mobile payment through NFC enabled mobiles.
  - “**Wincor Convenience Cash**” is a service which enables users to withdraw money from an ATM using a mobile phone and without the usage of a card.

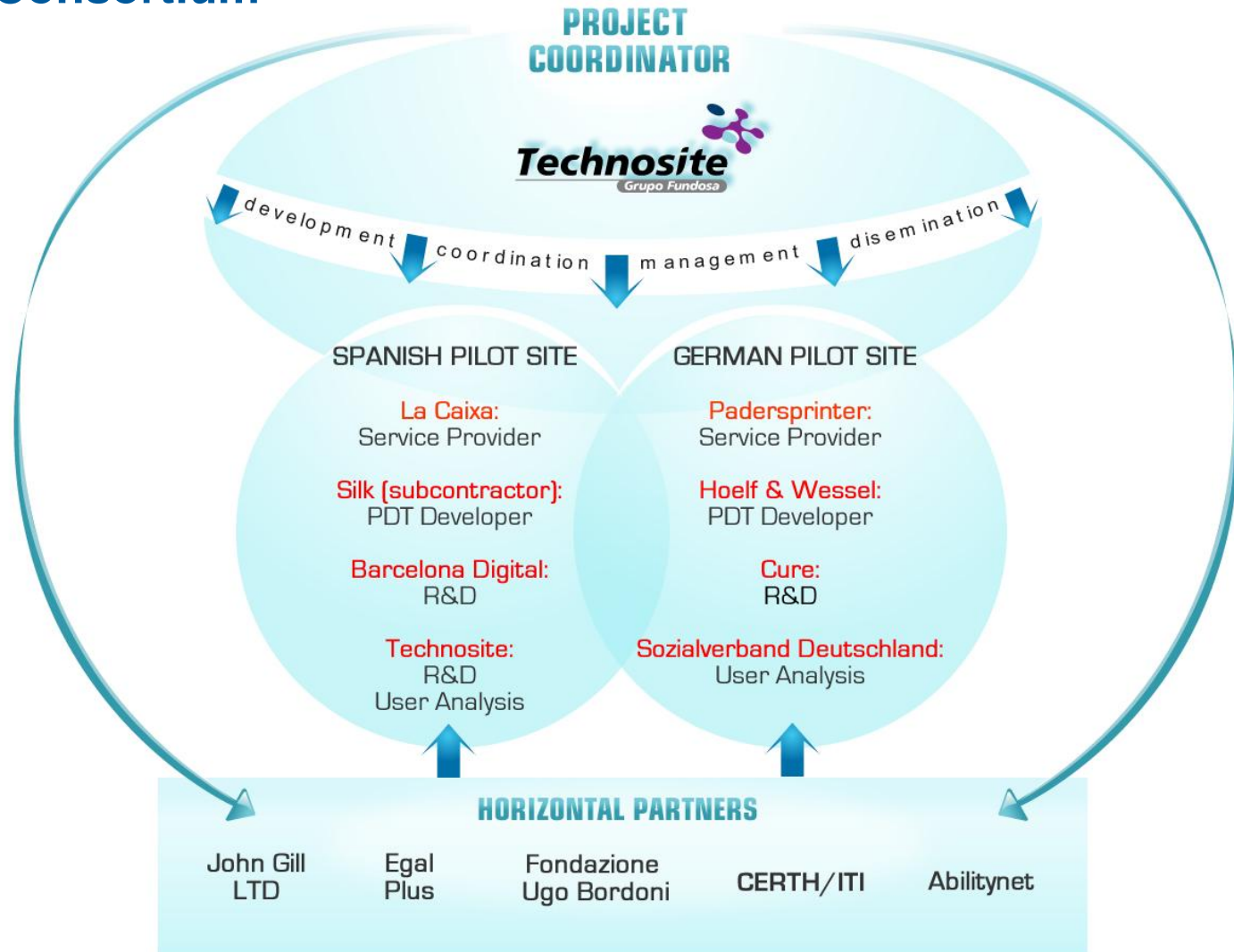
## Objectives of APSIS4all

- **Validate and assess the impact** of different approaches in the banking and transport sectors.
- **Provide a set of solutions** which allow all users access to a truly personalised service according to their needs and preferences.
- **Facilitate the replication** of APSIS4all outcomes by third parties through technical specifications.
- **Encourage the adoption** of standardised accessible, usable and personalised solutions for PDTs.

## Results of APSiS4all

- **Development and Validation** in real-life settings by a representative group of citizens.
- **Knowledge** basis for producing accessibility improvements in PDTs.
- **Technical specifications**, guidelines and reference material to facilitate replication of the APSiS4all approach.
- Support in the development of relevant draft **standards** and development of proposals for new standards.

## Consortium



## AP SIS4all approach.



## **New benefits in comparison to existing solutions**

- Users only need to indicate their needs and preferences once.
- The activation protocol is common for all users.
- The activation protocol does not require any additional action by the user or a minimal gesture (e.g. touching the RF reader).
- Users will obtain the most suitable interface.
- Usage of the users' device for requesting the service.
- Augments the range of interaction modes available.
- People without any disability also benefit from a truly personalised service according to their needs and preferences.

## Examples of potential contributions to EN 1332-4

The standard **EN 1332-4** *Identification Card Systems - Man-Machine Interface - Part 4: Coding of user requirements for people with special needs* (European Committee for Standardization, 2011)

- **defines a list of Data Objects**
- **describes** how **users' needs and preferences** can be stored.

The **user profile** will be defined firstly through the User's Needs and Preferences Questionnaire, or later by a modification of the profile done by the user.

The collection of all the values assigned to the Data Objects will, in fact, define the user's profile.

## Examples of potential contributions to EN 1332-4

The purpose of these examples is to point out some improvements that the standard EN 1332-4 could incorporate.

Data Object Tag (Hex)	Data Object's Meaning	Issue	Proposed solution
DF51	Character size	“preferred size of <b>any</b> text”	“preferred size of the <b>smallest</b> text” (usually the interfaces include different text sizes, i.e. for headings)
		“The height of characters in millimetres”	“The height of <b>lower-case</b> characters in millimetres. The height of capital letters shall be in proportion to the specified height for the particular font being displayed.”

## Examples of potential contributions to EN 1332-4

Data Object Tag (Hex)	Data Object's Meaning	Issue	Proposed solution
DF56	<b>Sound amplification</b>	dBA is a not very used unit	better to adopt dB even if it doesn't really measure the same things, the machine's usually work with it.
		"Offset amount in dBA from the terminal's normal sound level"	better to define it "from the background sound level", or to keep this definition adding another Data Object stating the "terminal's normal sound level"

## Examples of potential contributions to EN 1332-4

Data Object Tag (Hex)	Data Object's Meaning	Issue	Proposed solution
DF69	On-screen keyboard	No data object defines if the user wants to use an on-screen keyboard	A generic Data Object should provide this information (i.e. DF50?)
		Some applications change the on-screen keyboard to show only the keys the user may need (i.e. they only show the @ if the user needs to write an e-mail address), this could be confusing to some users	Add a bit stating if the on-screen keyboard should be adapted depending on the application or not.

Thanks for your attention



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