
MyUI

Mainstreaming Accessibility through Synergistic User Modelling and Adaptability

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Motivation - Problems with today's accessibility of ICT consumer goods



Diversity and Universal Design?

- One "universal design" for all?

Individualization by configuration is a significant barrier

- Redundancy and multimodality as an accessibility design strategy
- → requires demanding configuration activities – repeatedly: various interfaces & situations

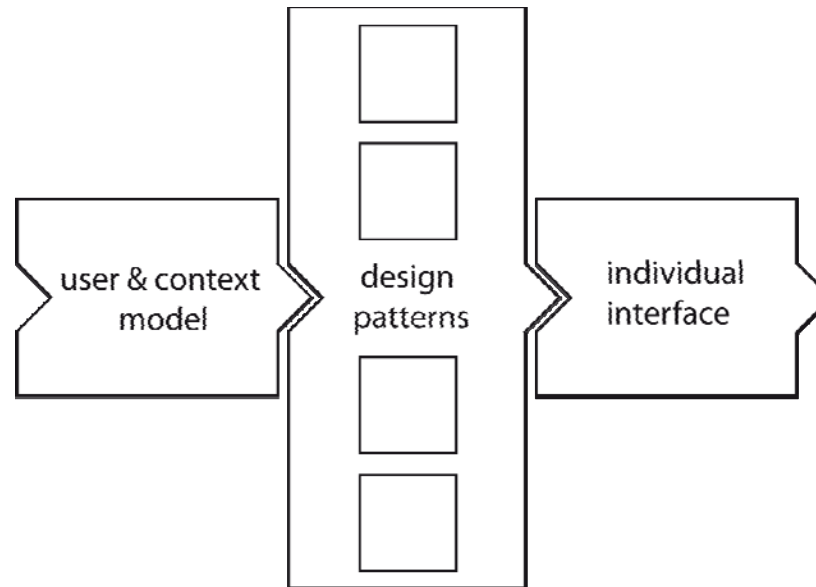
Developers lack awareness and expertise

Incorporating accessibility is cost- and time-consuming

- Cost-benefit ratios of accessibility estimated too pessimistic
→ »nice-to-have«, postponed to later development phases
- Accessibility is often neglected or poorly considered due to limitations in time and budget

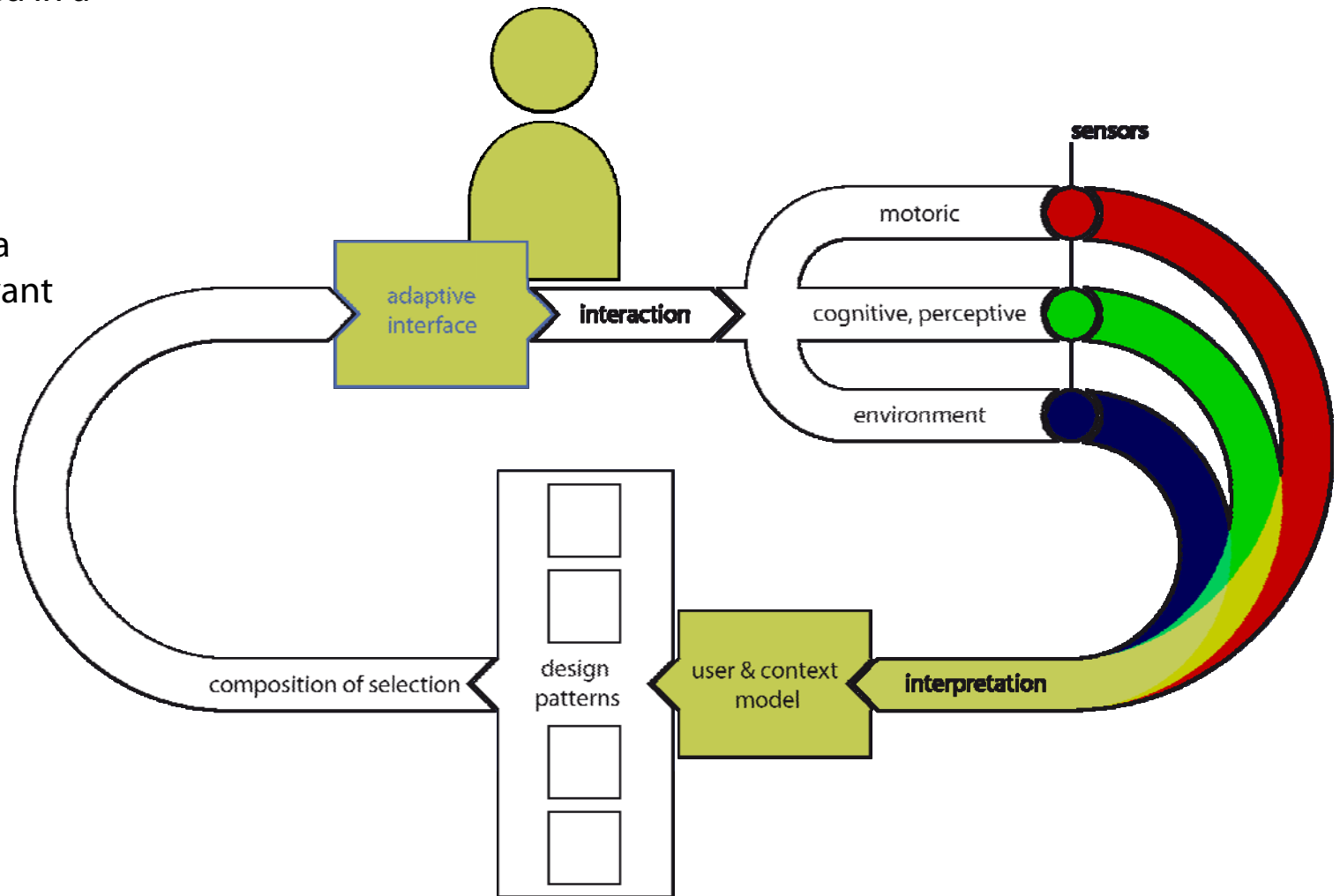
Individual user interfaces by modularity

- Composition of multimodal UI patterns
- Each pattern related to specific user and context characteristics
- Basis: individual user & context model



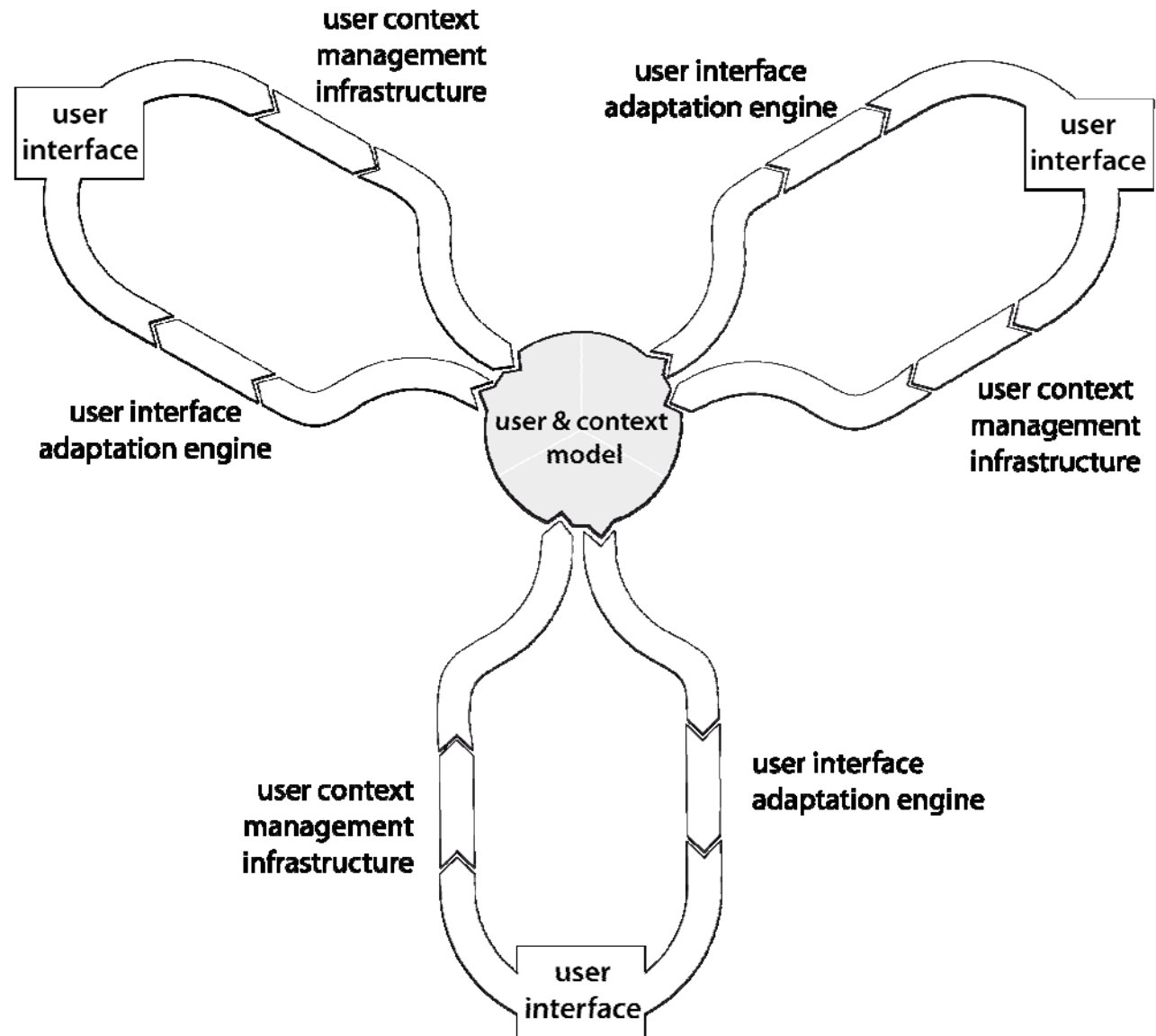
Self-learning and self-adaptive interfaces ...

- MyUI systems delivered in a “raw” state
- No or minimal initial configuration
- System is learning to increasingly adapt to a specific user and relevant contexts or situations.



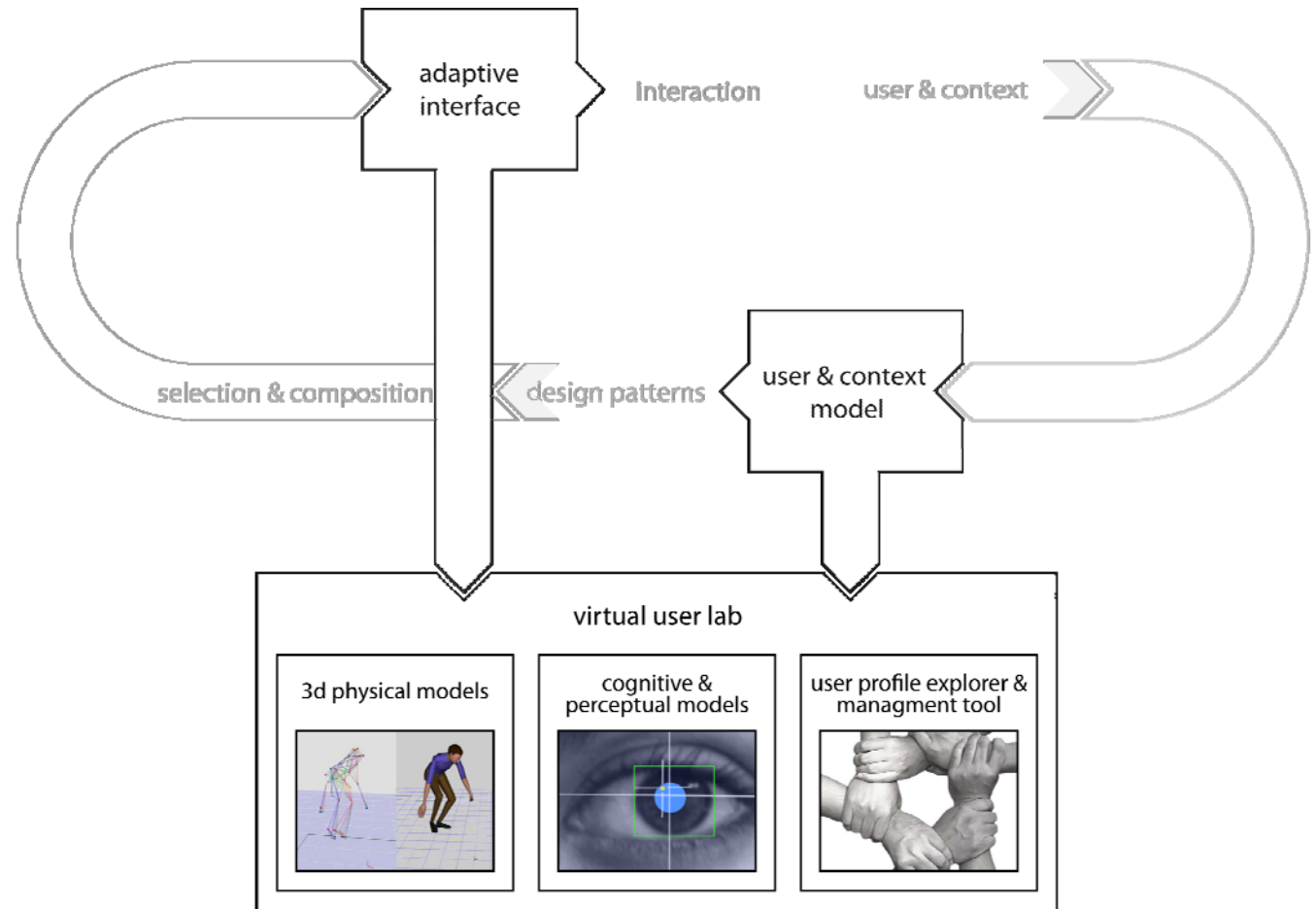
... in a synergistic network of personal devices and services

- User & context information is shared across all adaptive applications in the environment.
- Synergies: network of personal applications which can learn from each other on-the-fly and act in coordination.



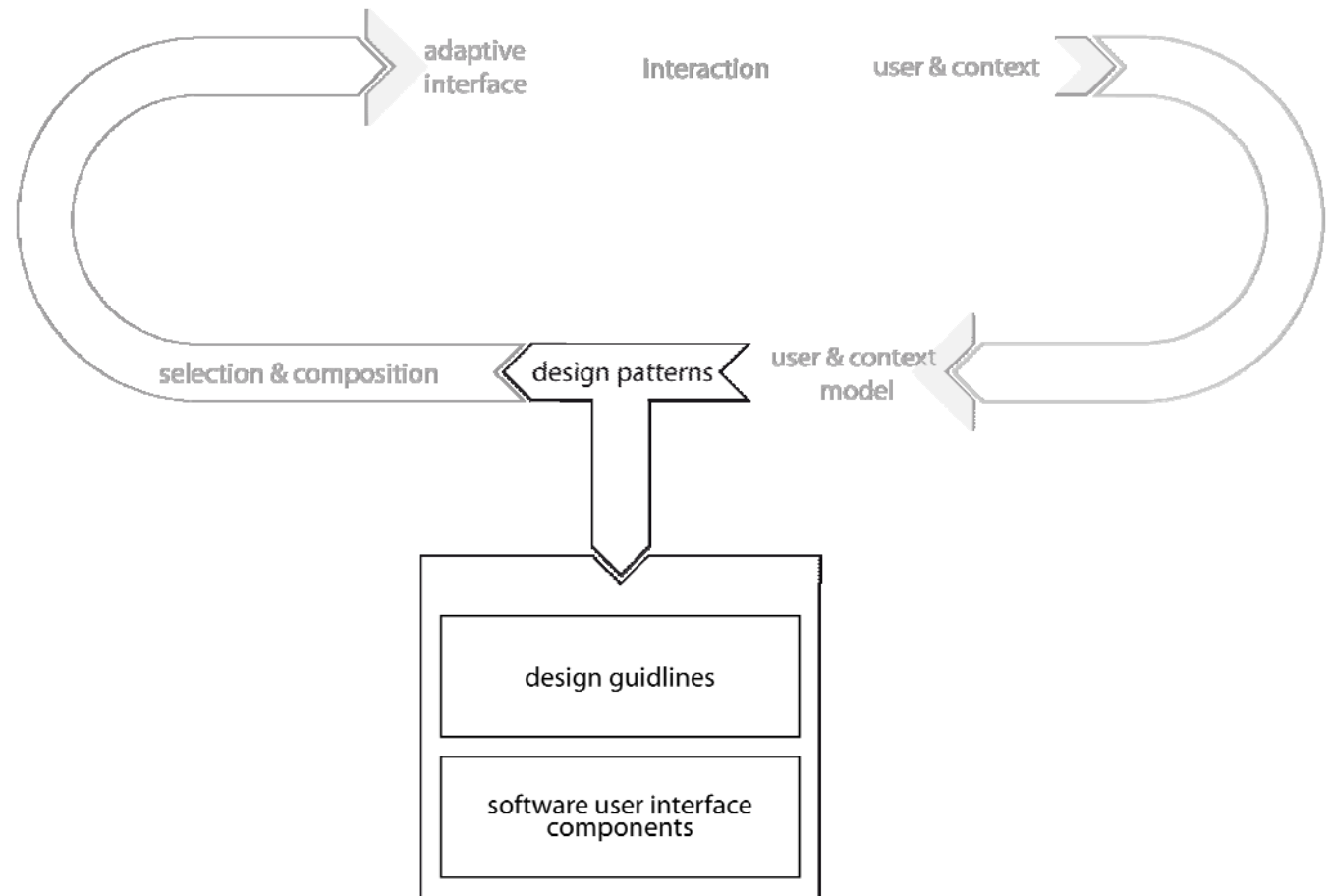
Support for developers – The Virtual User Lab

- **Illustration and simulation** of user models and user interfaces
- Physical/motor, perceptual and cognitive perspectives
- Manage and illustrate user requirements
- Assess usability and accessibility of design solutions
- Monitor real use by analyzing how individual user models and interfaces develop over time
- Support content providers in offering customized services



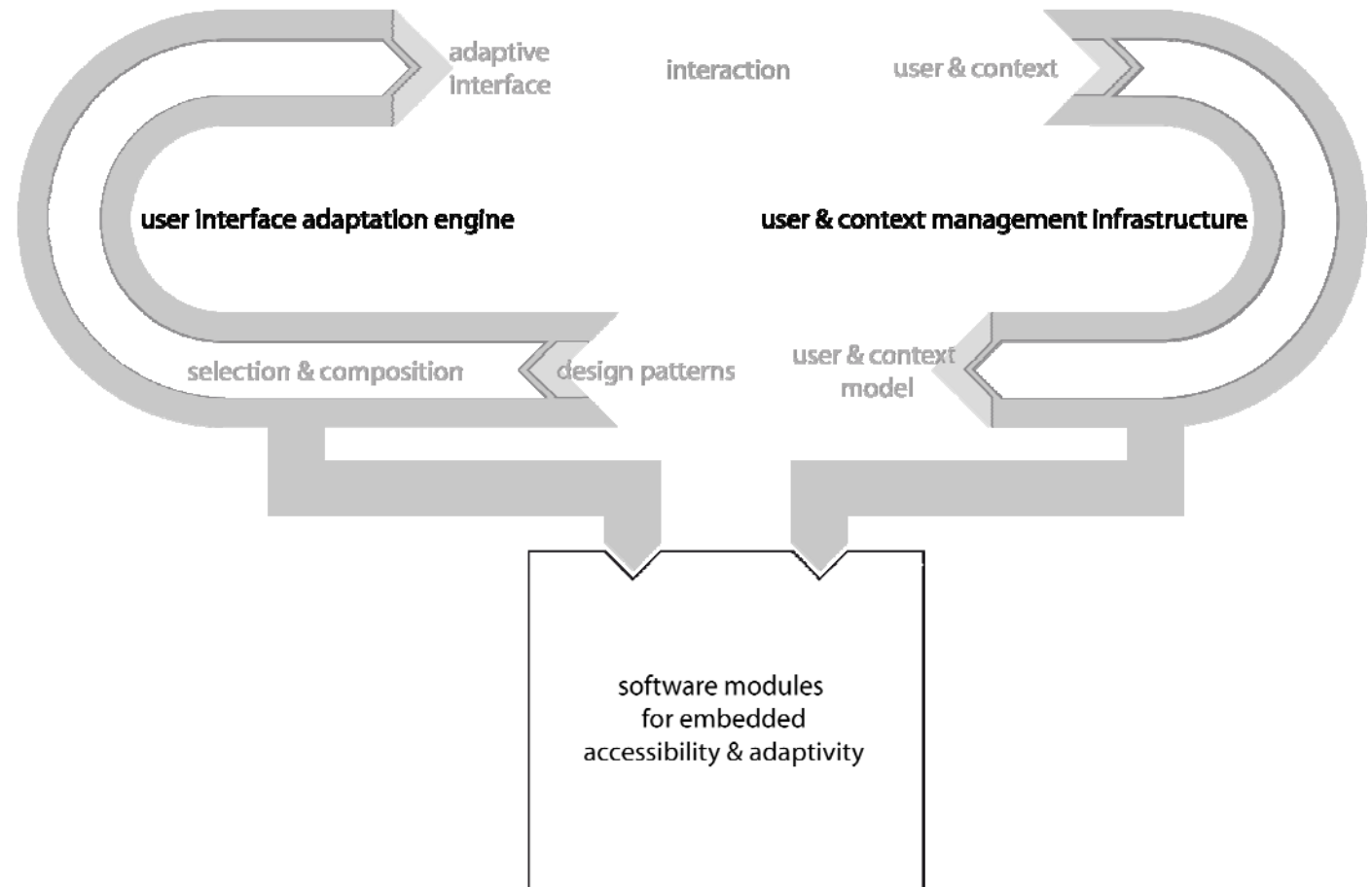
Support for developers – guidelines & re-usable software components

- **Accessibility guidelines** condensed from research within the project and from literature.
- **Design patterns repository** for efficient application in industrial development processes → compose accessible user interfaces from proven components



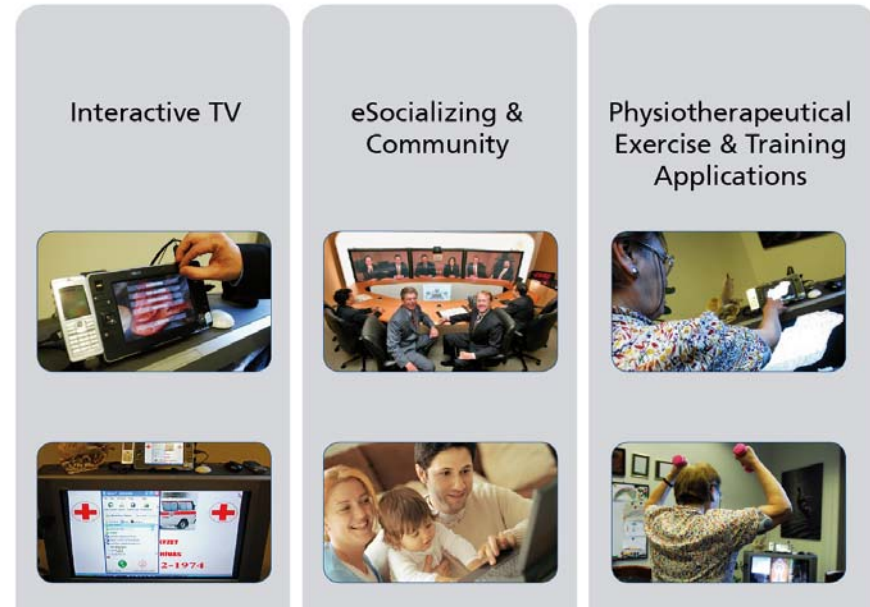
Support for developers – infrastructure for embedded accessibility

- **Automated user profiling and user interface adaptation**
 - No expert knowledge in accessibility required
 - No UI variants for heterogeneous target users to be developed
- incorporate accessibility into mainstream products at affordable costs



Demonstration and Reference Implementations

- Demonstrate and validate feasibility and benefits of MyUI technologies and results into mainstream ICT products and services.
- Important application fields ensure socio-economic impact:
 - Interactive TV Device
 - Interactive Physiotherapy Exercise Application
 - Communication Service



- Platform for all reference implementations:
Philips NetTV



MyUI – Target User Groups

Main target of Objective ICT-2009.7.2 Accessible and Assistive ICT:

- »... **supporting developers** in deeply embedding generalised accessibility support within ICT-based products and services«.

MyUI target user groups

- Industrial users
 - Designers and developers
 - Physiotherapists
 - Product managers and application providers
- End users:
MyUI targets disabilities typically associated with **aging** and **stroke**



Contact

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