Supportive community living service conception

Information and Communication Technologies (ICT) acceptance & change management methods for User Centred Development
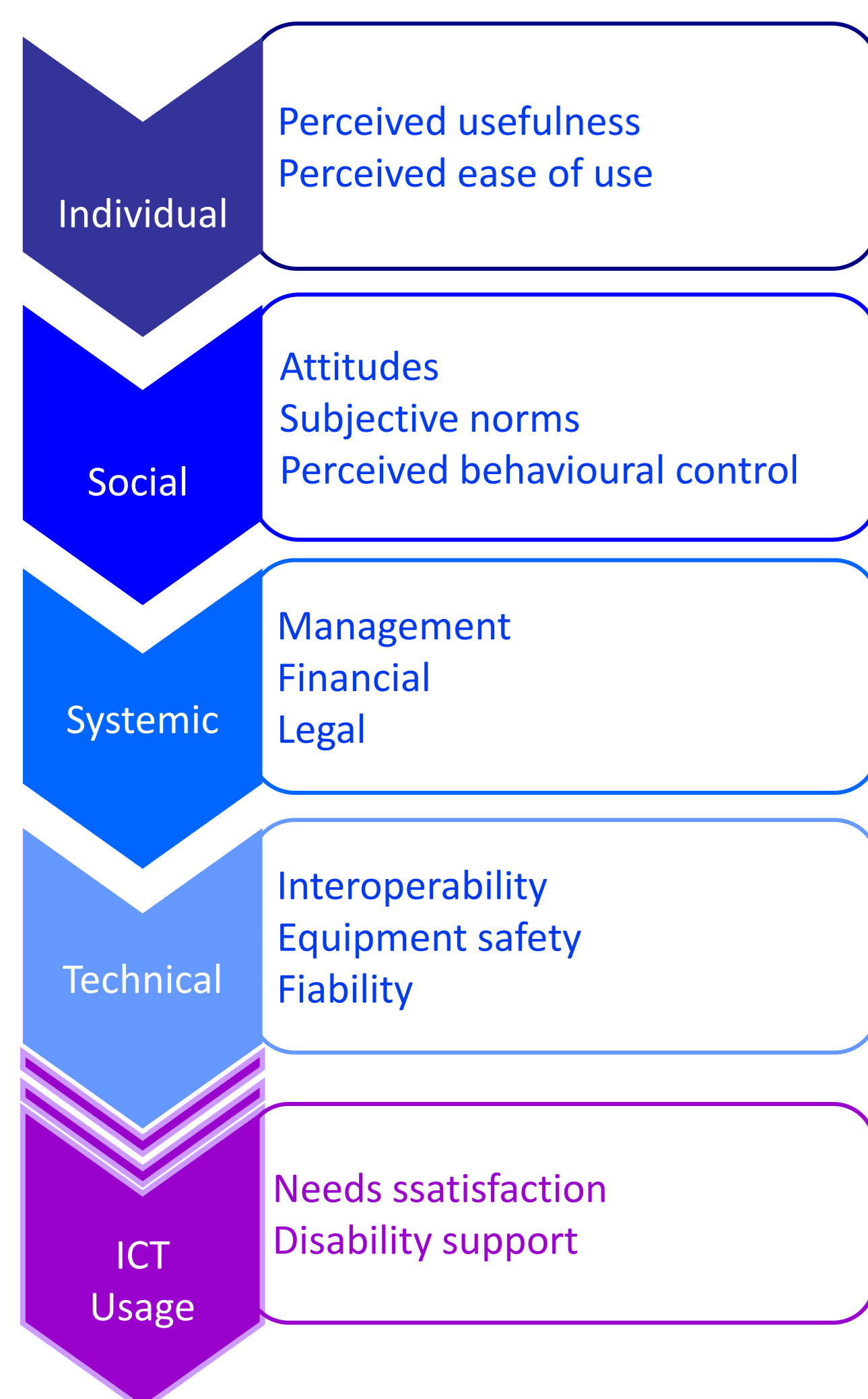
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Research overview : To Age in place means the capacity for any individual to safely, independently and comfortably live in their own home regardless of financial circumstances or physical limitations. To support Ambient Assistive Living (AAL) product and service conception, user needs requirements and activity limitations (ICFDH-2, 2001) are two crucial components to target independent living. AAL system acceptance require a micro level of system acceptability (Nielsen, 1993) combined with a macro acceptability level for innovative practices acceptance (Engeström, 2000). Both perspectives are tested in an evaluation program in which elderly people, family and professional helpers are actively engaged to participate in the design and evaluation process of user centred services.

Research framework: Our first aim in this new paradigm is to predict and explain ICT usage for elderly people in supportive community living environment. Our second goal is to validate innovative service with an organizational management process.

Micro psycho-ergonomic methodology

Individual — Perceived usefulness / Perceived ease of use

Social — Attitudes / Subjective norms / Perceived behavioural control

Systemic — Management / Financial / Legal

Technical — Interoperability / Equipment safety / Fiability

ICT Usage — Needs ssatisfaction / Disability support

ICT usage evaluation acceptance process

Hypothesis: System acceptability predict and explain ICT usage.

Population: Elderly people, family and professional helpers are invited to test ICT products.

Procedure: Each ICT is analyzed with respects to performance installation procedure (technical assessment) and real usage testing (qualitative assessment).

Material: Observations, interviews and questionnaires.

Measures: 1) Disability function through activity limitation : seeing, hearing, moving, grasping, remembering; 2) Elderly user needs (communication, comfort, security & safety) ; 3) ICT qualitative and quantitative usage acceptance testing:

Qualitative assessment

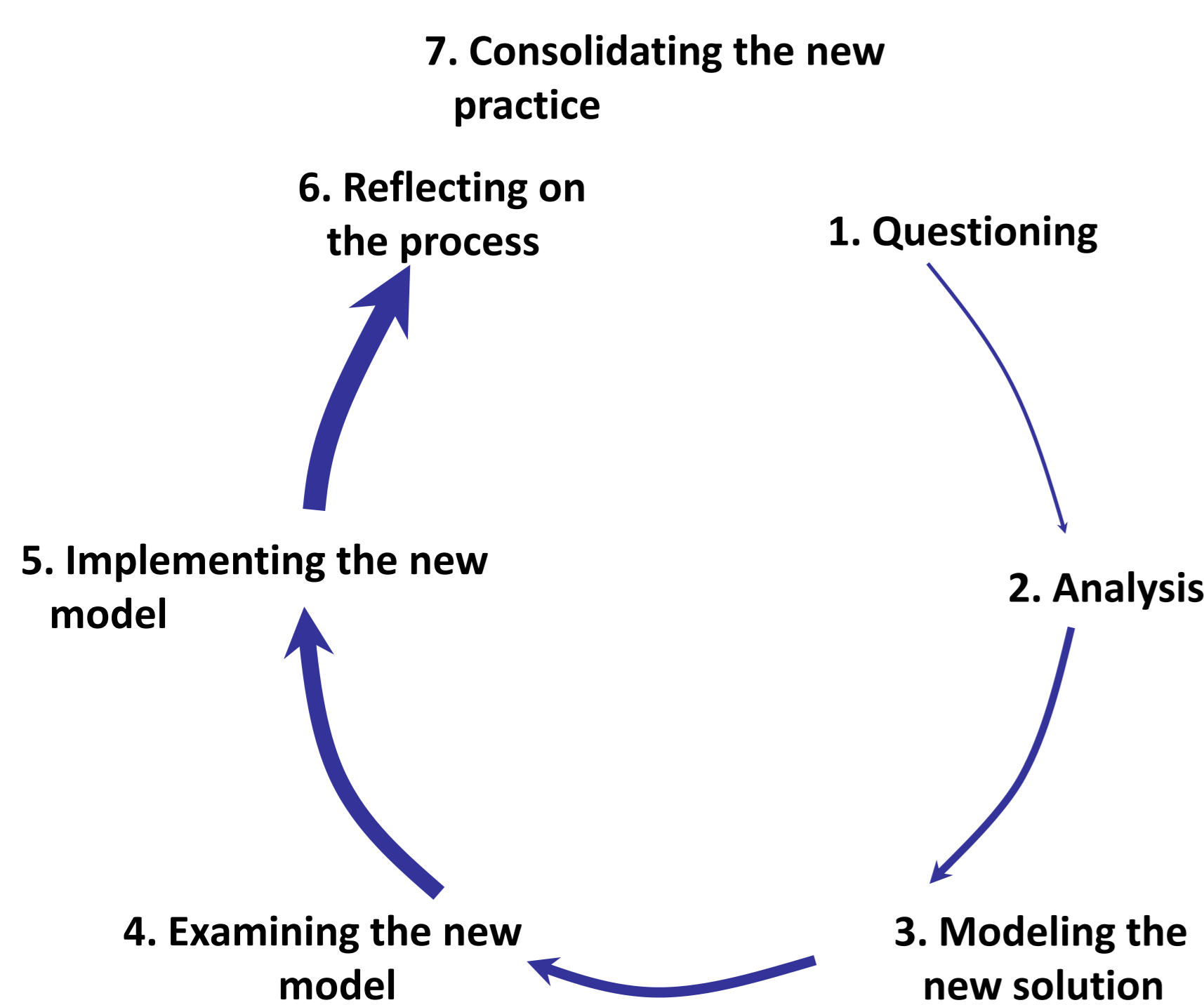Individual acceptability (Davis & al, 1989)

Social acceptability (Ajzen & Fishbein, 1980),

Quantitative assessment

Technical acceptability

Expected results: Each ICT obtains an acceptability statistical score regarding disability and needs.

Macro psycho-ergonomics methodology

7. Consolidating the new practice
6. Reflecting on the process
1. Questioning
2. Analysis
3. Modeling the new solution
4. Examining the new model
5. Implementing the new model

Organizing innovation by Engeström

Hypothesis: Practice change implementation is processed through human system activity contradiction analyses and ICT perturbation impacts management.

Population: Community living stakeholders are engaged to validate ICT products and co-define services.

Procedure : Functionality service propositions are collected during ICT focus groups.

Material: Focus groups and surveys.

Measures: qualitative assessment :

1) Functional services propositions 2) system activity contradictions identification; 3) ICT organizational risks evaluation.

Expected results: Innovative service co-conception and practice change management applied to supportive community living.

The IDA Project

Objectives: an urban home program is currently being managed by ASSAD du Pays de Rennes. It has been set up thanks to the collaboration of local partners (*) that have the wish and ambition to target independent living for elderly people and management change in supportive community living work organizations. The research team described above is actively engaged in this project.

Material and settings:

Step 1: A prototype adapted dwelling to evaluate ICT products

Step 2: Focus group for best work practice change implementation

Step 3: 6 real adapted dwellings to validate innovative service conception

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