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Methodologies for Engaging Users into Research & Innovation:

The Living Lab way as an Open Innovation Ecosystem

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User/Citizen Centric Open Innovation

Industry, Enterprises, entrepreneurs

Ideas Knowledge

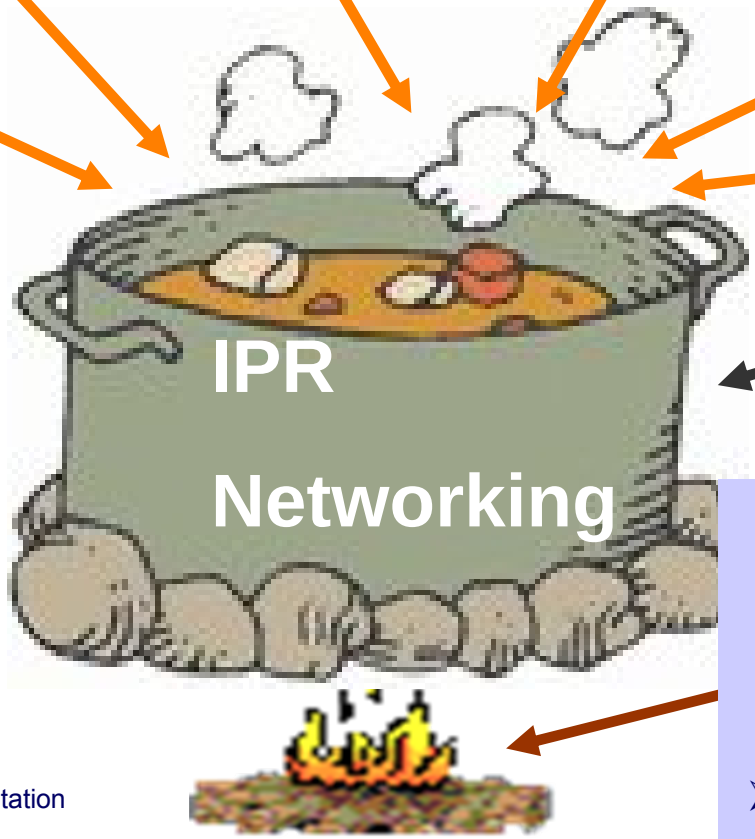
Opening in the process

Citizens, Users

Leaders

Local/Regional flavour

La marmite (Open Innovation environment)



FROM END PRODUCT CAN NOT BEEN SEEN THE COOKING PROCESS IN DETAILS:

- **BUT IT REQUIRES RIGHT INGREDIENTS, ENERGY AND COOKING**
- **LOCAL FLAVORING**

THE FIRE:

- Public – Private – People partnership
- Creative commons
- Precommercial Public Procurement

Source: Bror Salmelin, INFSO H, presentation

User Innovation: Engaging users into the Innovation process

Lead User (von Hippel, 86)

- **User-Centric Innovations in NPD (Bilgram; Brem; Voigt, 2008)**

Emotional Design: (Norman, 2004) most of object design is felt by users through the generated emotional aspects

User Centred Design:

- **Cooperative Design: (Erlbaum,1991) involving designer and user and equal foot**
- **Participatory Design: (Schuler, Namioka (1997) inspired by Cooperative Design, is focusing on users participation**
- **Contextual Design: (Beyer and Holtzblatt, 1998) aggregates collected data in the real user environment.**
  - ***above approaches are compliant with standard ISO 13407 (Human-centred design processes for interactive systems)***

User Innovation: Engaging users into the Innovation process

Experience Design: (Aarts & Marzano, 2003) is more focusing on user experience quality than on the number of functionalities.

- **User Experience Design: interaction model impacting user perception.**

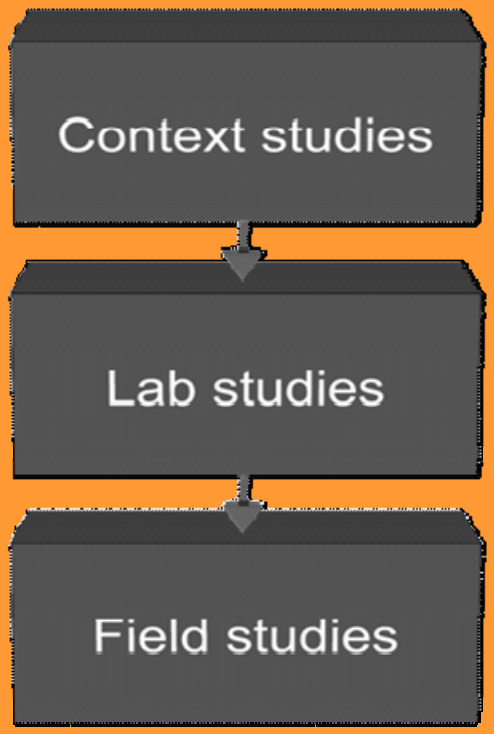
Web2.0 User Content (Co-Creation)

- **Community based Design or Crowdsourcing: opening the call for solutions to communities of individuals.**
- **Mass Collaboration: (Wikipedia) a large number of users are creating content to serve the community.**
- **The Wisdom of Crowds: (Surowiecki 2004) aggregates groups information allowing to undertake better decision.**

User Centred Design

- The UCD cycle implies a continuous engagement of users through the all research cycle (Action Research).
- Based on 3 major steps: conceptualisation, prototyping and evaluation.
- For conceptualising solutions it is important to understand the context in which they are located.
- Use study types such as “context-mapping” and “ethnographic” for collecting users’ requirements.
- During the evaluation stage, two study types are conducted: “laboratory” and “field trials”.

UCD Stages



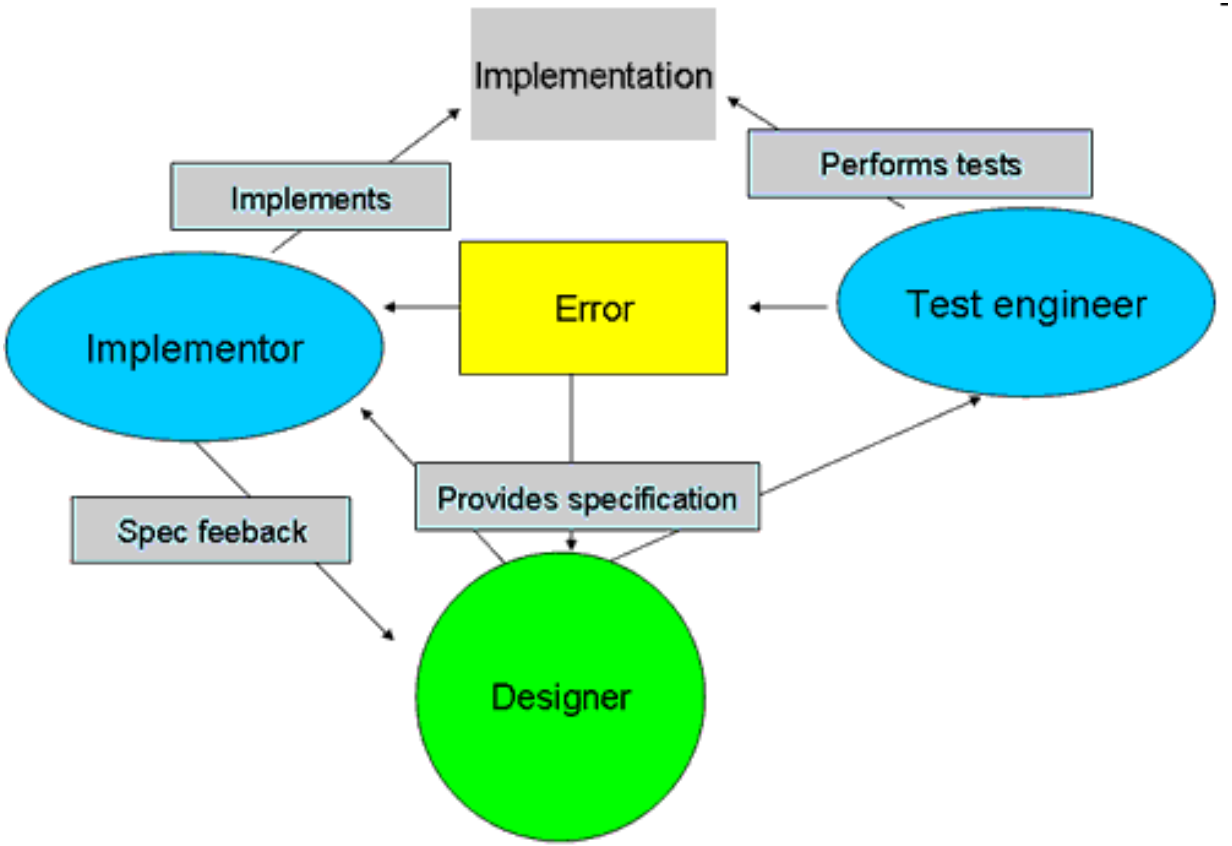
Collect user insights & requirements
- *e.g. context mapping studies*
- *e.g. ethnographic studies*

Test usability & user acceptance
- *e.g. focus groups*
- *e.g. usability tests*

Validate & study longer term effects
- e.g. longer term effects
- e.g. usage in daily life settings

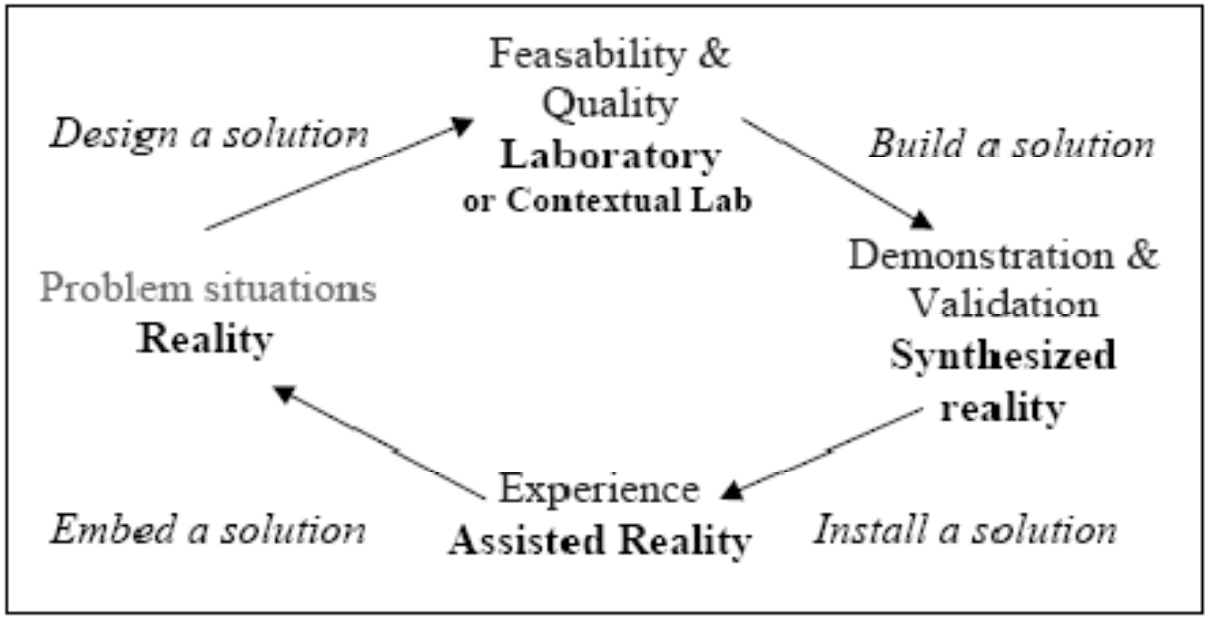
Source: INFRALLABS

Contextual Design Process



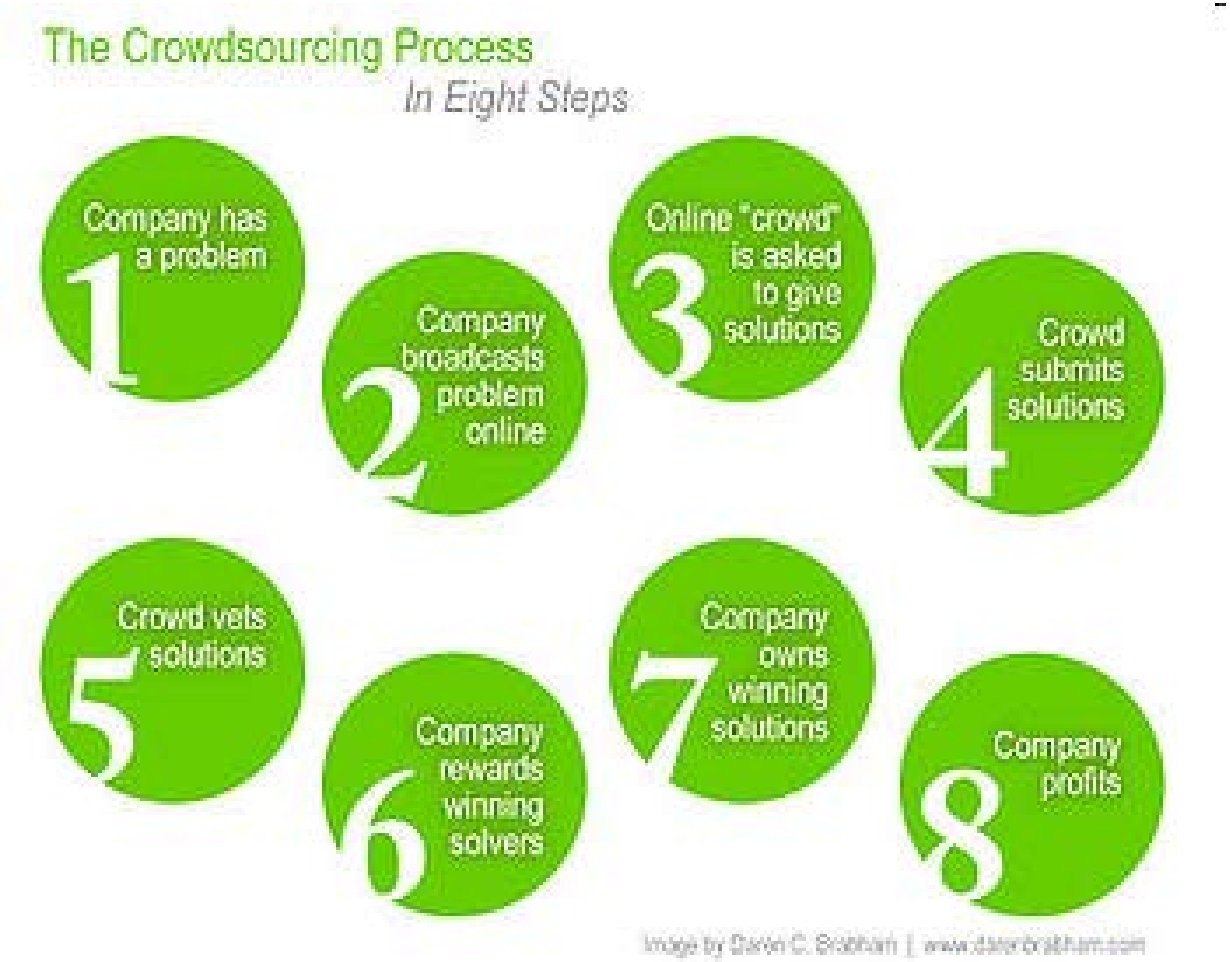
Source: Wikipedia

Experience Design



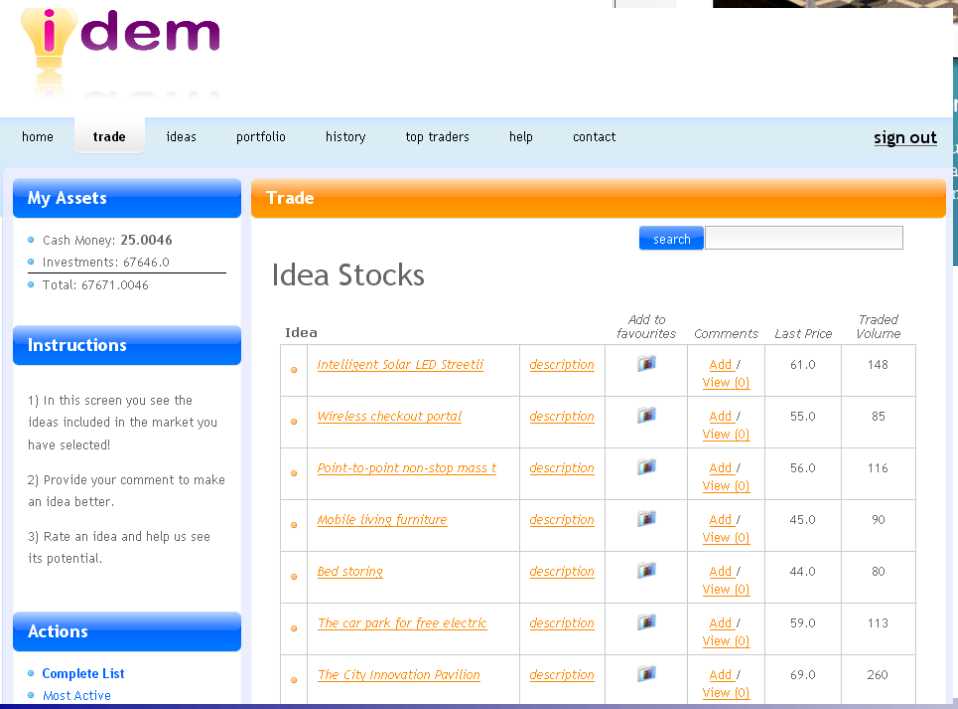
Source: ISTAG Report on EAR 2004

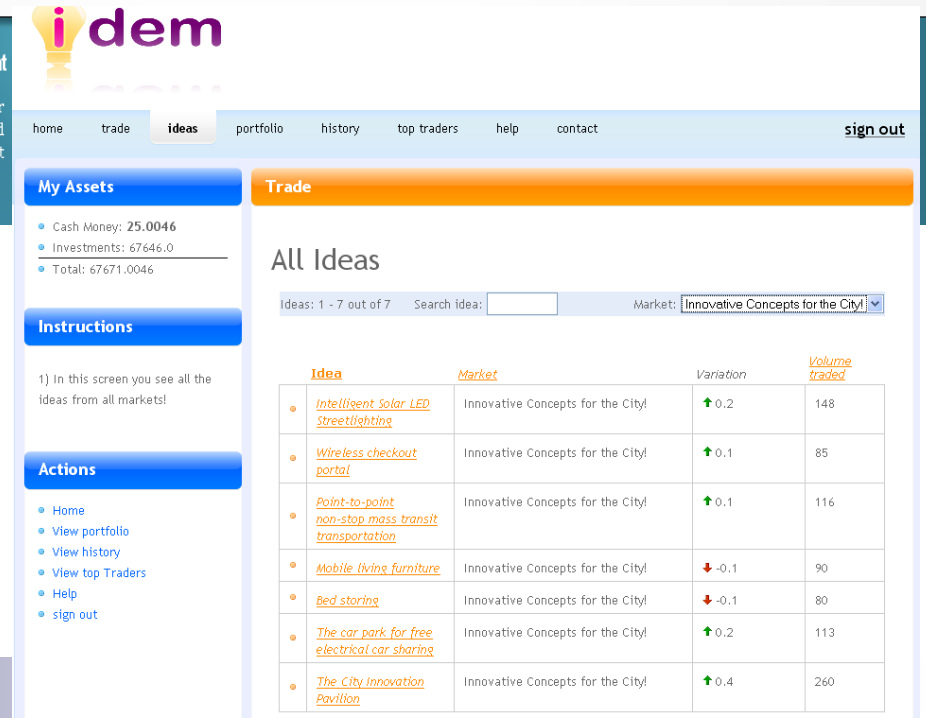
The Crowdsourcing Process (Web2.0, Mass Collaboration)



The Wisdom of Crowds

Source: www.icity3d.com





The Living Lab Approach

A definition:

A Living Lab is a user-centred open innovation ecosystem integrating concurrent research and innovation processes within a business-citizens-government partnership.

Living Lab objectives are:

- **Engage all stakeholders, especially users, at the earlier stage of the process and in their live context**
- **Merge technology push and market pull elements into a diversity of views, constraints and Knowledge Sharing**
- **Explore, experiment, and evaluate new ideas and innovative concepts as well as related artefacts in real life situation**
- **Observe the potentiality of a viral adoption through a confrontation with user's value models**

Examples of User Experience Prototyping Environment

Philips Research

ShopLab

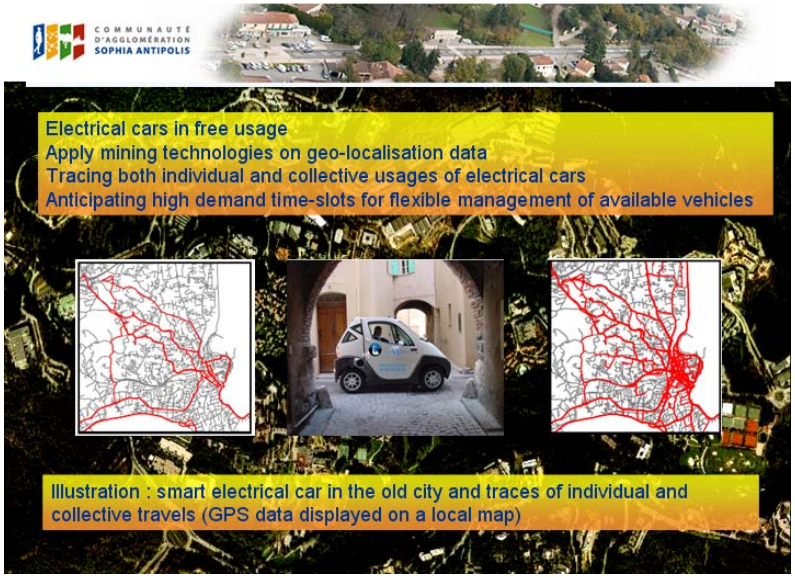
HomeLab

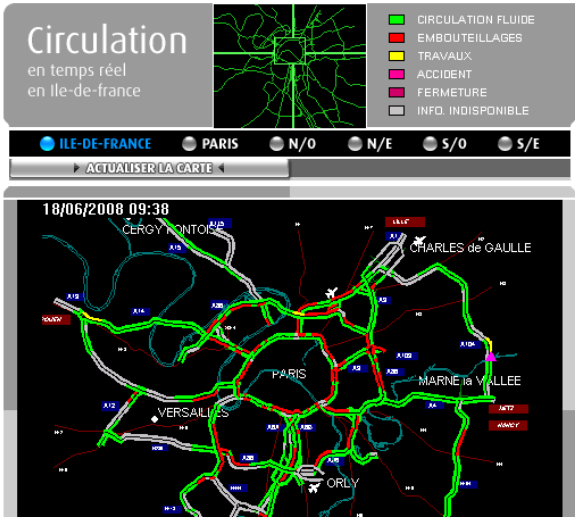
CareLab

PlaceLab at MIT

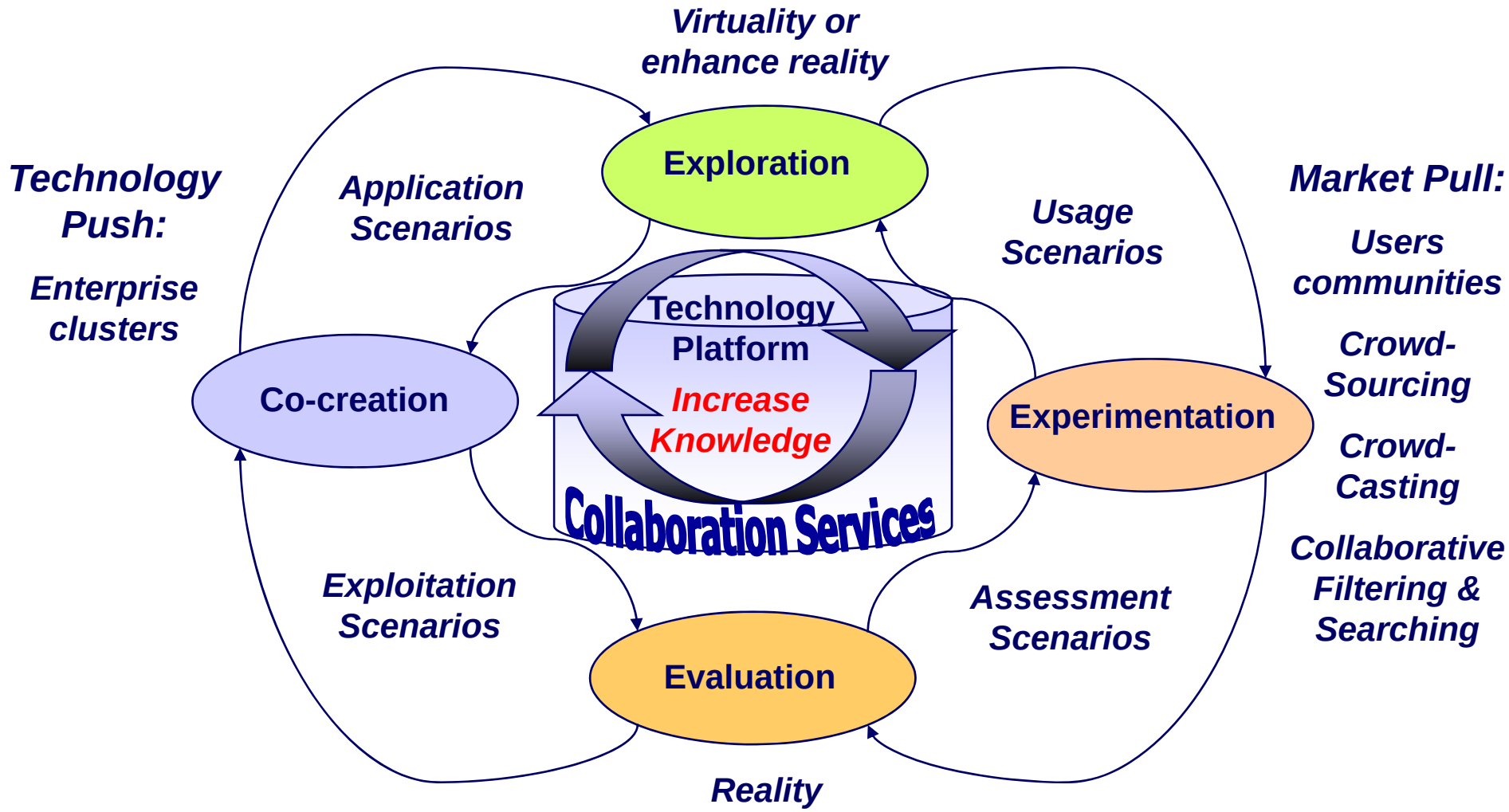
GerHome at CSTB

Examples of User Experience in their Natural Environment





Living Labs & Open Innovation: How it works?



Examples of Collaboration Services

- Ideas collection
- Ideas categorisation
- Ideas Mgmt
- Ideas contest

- Semantic Document Mgmt
- Semantic search
- Product & Service Ontology Mgmt
- Semantic based visualisation
- Semantic based classification
- Semantic annotation

- Community based 3D world
- Community based authoring (i.e. Wiki)
- Community based Group Blogging
- Community based Shared Workspace
- Community based tagging

- Context based user profiling
- Context based awareness (social translucence)
- Context based 3D design
- Context based tagging

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