



17th International Conference on Concurrent Enterprising

“Innovating products and services for collaborative networks”

Common Assets for Smart Cities’ Living Labs Innovation

Workshop

21st of June 2011, Aachen, Germany, 09.30-10.30

Chair:

Hans Schaffers, ESoCE Net

FIREBALL project (www.fireball4smartcities.eu)

Workshop Objectives

- FIREBALL project (FP7-ICT) explores models of collaborative innovation including three communities: Smart Cities, Future Internet and Living Labs. Such models are based on what is called “common assets”: the resources owned by different parties that can be shared to build the infrastructure of smart cities ecosystems: testbeds, living lab facilities, end-user communities, technologies, methodologies, IPR, open data.
- The session discusses the identification and characterisation of such common assets as well as the role they play in the collaborative innovation ecosystem of smart cities.

Agenda

1. **Hans Schaffers** (ESoCE Net): Framework of common assets management for smart cities collaborative innovation, developed in FIREBALL
2. **Annika Sällström** (CDT): Assets from TEFIS project (Testbed for Future Internet Services)
3. **Marc Pallot/Brigitte Trousse** (INRIA): Assets from ELLIOT project (Experiential Living Lab for Internet of Things).
4. **Discussion and open floor**

Framework of Common Assets Management for Smart Cities’ Collaborative Innovation

Hans Schaffers
21st June 2011, Aachen, Germany

Overview

FIREBALL CA in FP7-ICT (2010-2012):
Living Labs approach for enabling Smart
Cities to exploit the opportunities of the
Future Internet (www.fireball4smartcities.eu)



- **Common assets** are resources for smart cities innovation owned and/or managed by the Living Labs, Future Internet and Smart Cities communities
- **Resources include:** network infrastructures, experimental facilities, living labs facilities, methodologies, user communities, public data and applications, software tools, policy resources (...)
- **Key issue:** How can we **characterize** these assets and facilitate **access** for smart cities' innovation and urban development? How can we enable **collaboration and open innovation** based on access to and sharing of common assets?

Methodology

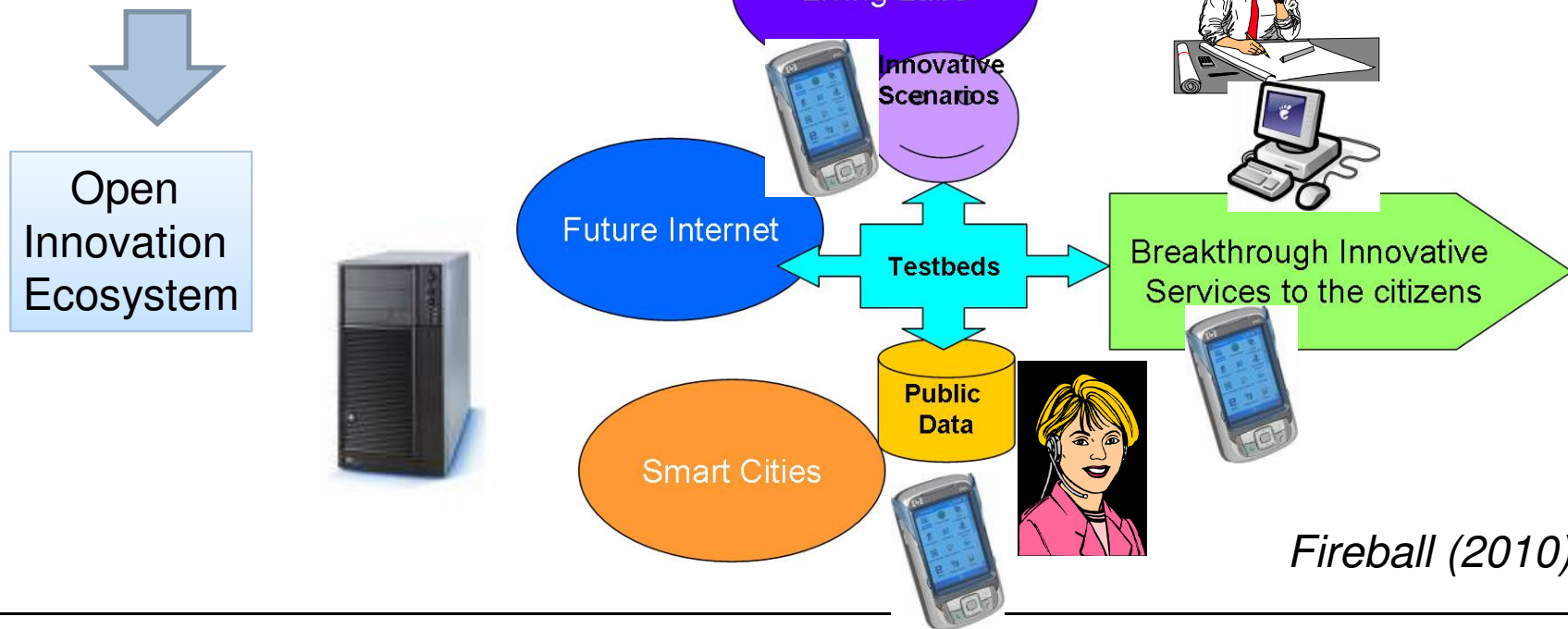
- Common assets characterization cases in urban areas (Oulu, Barcelona, Bretagne cities, Nice Côte d'Azur, ...)
- Three project cases of common assets in FP7 and CIP (ELLIOT, TEFIS, SmartSantander)
- Characterizing and analyzing the common assets
- Analysis of mechanisms and processes for making available the common assets
- Exploring frameworks for collaboration an open innovation to exploit common assets
- Validation through exchanges and workshops with FIRE and Living Labs projects

Different facilities and resources are needed for smart cities innovation

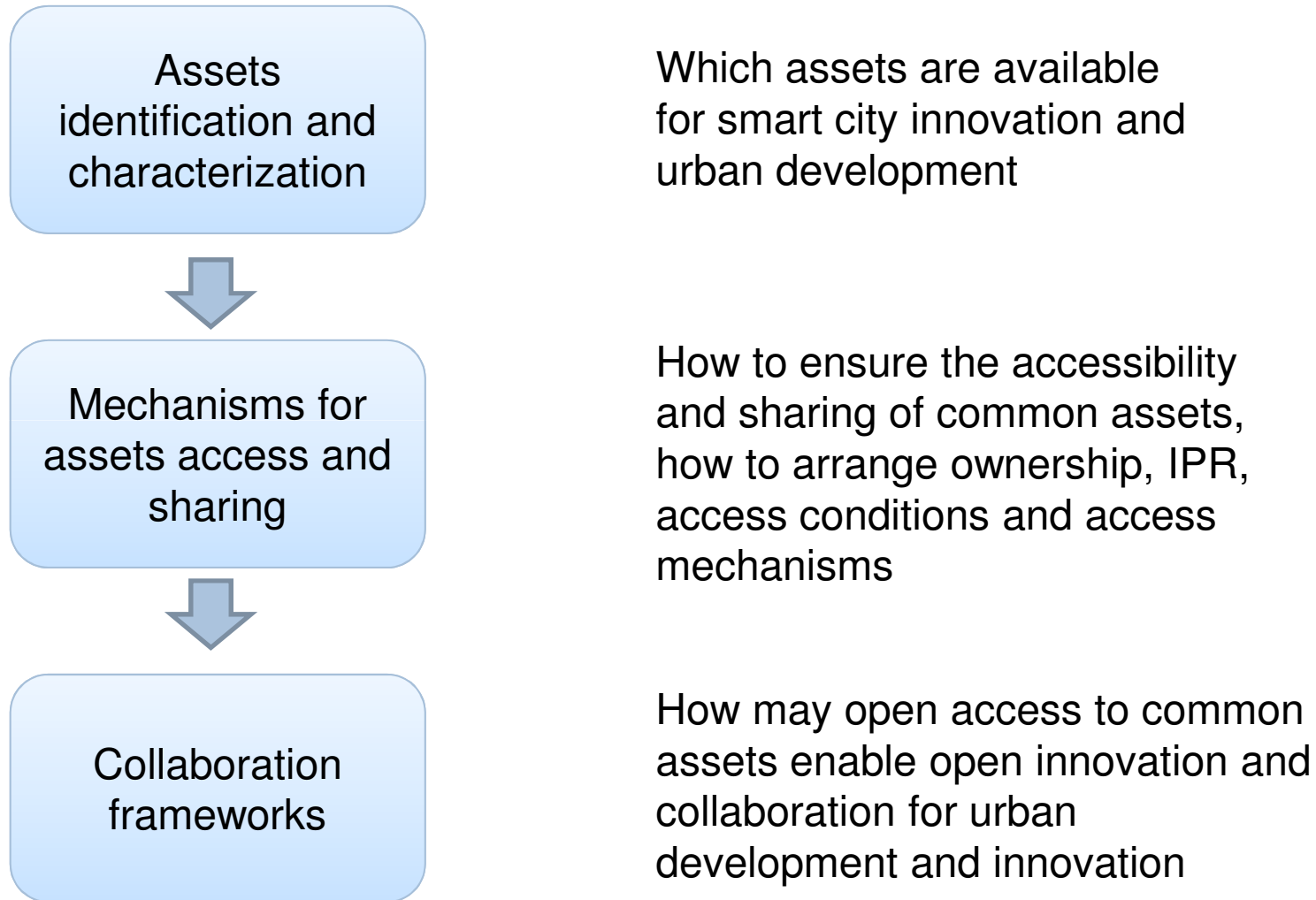
Future Internet: Technology push (Testbeds: technology platforms)

Smart cities: Application pull (public data, citizens)

Living lab: User-driven playground for co-creating and validating scenarios and services



Common assets characterization, access and sharing, and collaboration



Common Assets cases in the FIREBALL project

Cases of common assets in urban and regional areas

- Oulu
- Barcelona
- Bretagne
- Nice Côte d'Azur

Project cases

- **SmartSantander:** A city-scale experimental research facility in support of typical applications and services for a smart city. *Contributed by the SmartSantander project and Telefónica*
- **TEFIS** (Testbed for Future Internet Services). A single access point to run Future Internet experiments by combining different testbed resources. *Contributed by the TEFIS project and CDT*
- **ELLIOT** (Experiential Living Lab for the Internet of Things): An Internet of Things experiential platform where users / citizens are directly involved in the research and innovation process. *Contributed by the ELLIOT project and INRIA*

Characterisation of Common Assets

Resource type	Services offered
Network infrastructure	Broadband communication, enabling high bandwidth applications
Testbed facilities	Software /hardware platform for technology testing
Testbed methods	Testing and validation process
Living Lab facilities	User driven applications development
Living Lab methodology	User engagement, cyclic development, action research, data collection
Human capital	Expertise, know-how (Future Internet, applications, business)
User community	Availability of advanced users for experimentation and evaluation
Collaboration platform	Enabling interaction between users, developers, stakeholders
Technologies, know-how	Application opportunities
Public data / information	Information, applications
Policy resources	Access to funding opportunities, organizational capabilities, networking enablers, innovation policies and programs
Capability to develop and run pilots	Capability to initiate and develop Future Internet and Living Labs projects to support smart city objectives
Social capital	Actor networks and actor relations

How access to common assets enables open innovation: scenarios

- Living labs work together, with SMEs, and also cross-border, to test and implement technologies and applications created in one location in new situations to support SMEs developing new markets (APOLLON)
- Testbeds for experimentally driven research as developed in FIRE become federated, will be shared, and access to these facilities will be provided according to need (explored by TEFIS, BONFIRE and other projects)
- Living labs and testbed facilities can be used jointly, in collaborative innovation projects. Living labs will be used to co-develop and validate product and service concepts; technologies needed will be tested in testbed facilities. The TEFIS project offers access to both Living labs and different testbed facilities.
- Cities could be interested in proposing experimentations (pilot testing projects) to exploit and test their infrastructure or services (i.e. public wifi network, sensors, public transport network etc). Cities' benefit will be related to the increased chance to launch experimentation projects. Cities' infrastructures and services can be made accessible for other parties.

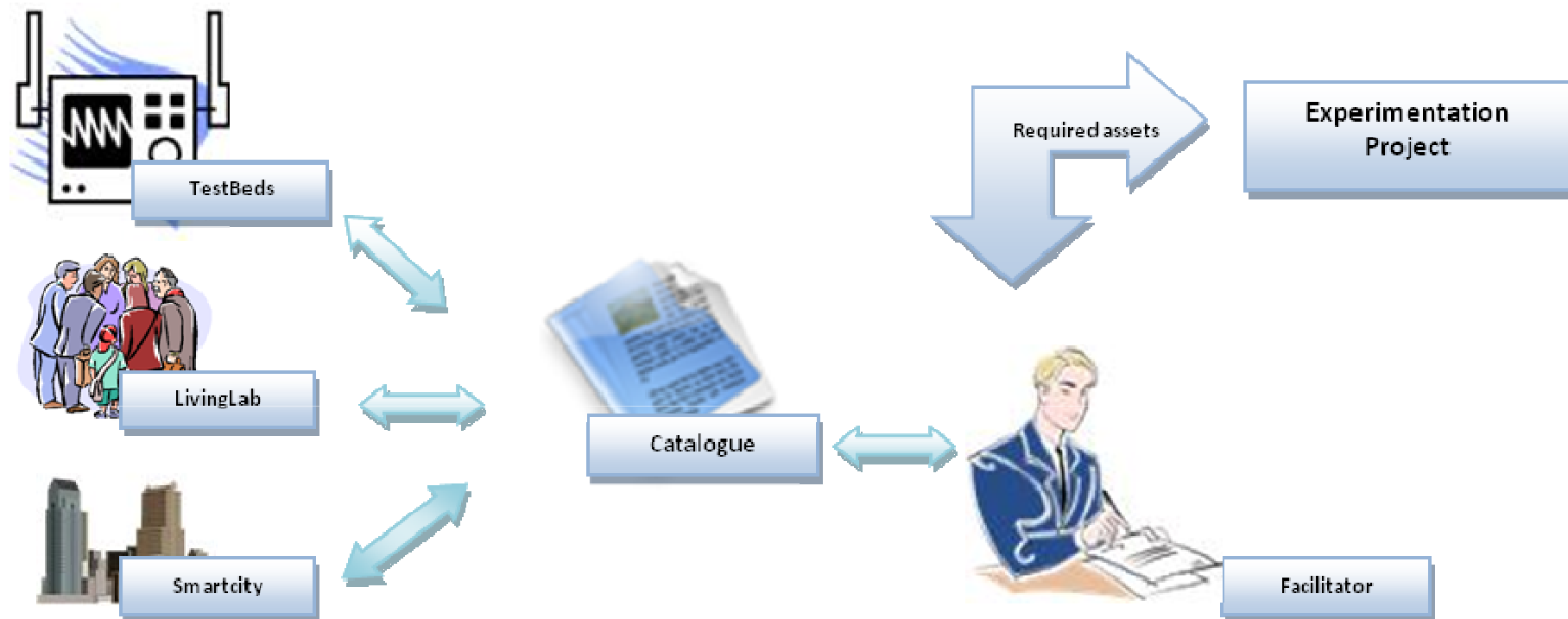
Typology of access mechanisms

Asset Types	Ownership	IPR	Access conditions	Access mechanisms
Technology infrastructure				
Software applications				
User Communities				
Innovation methodologies				

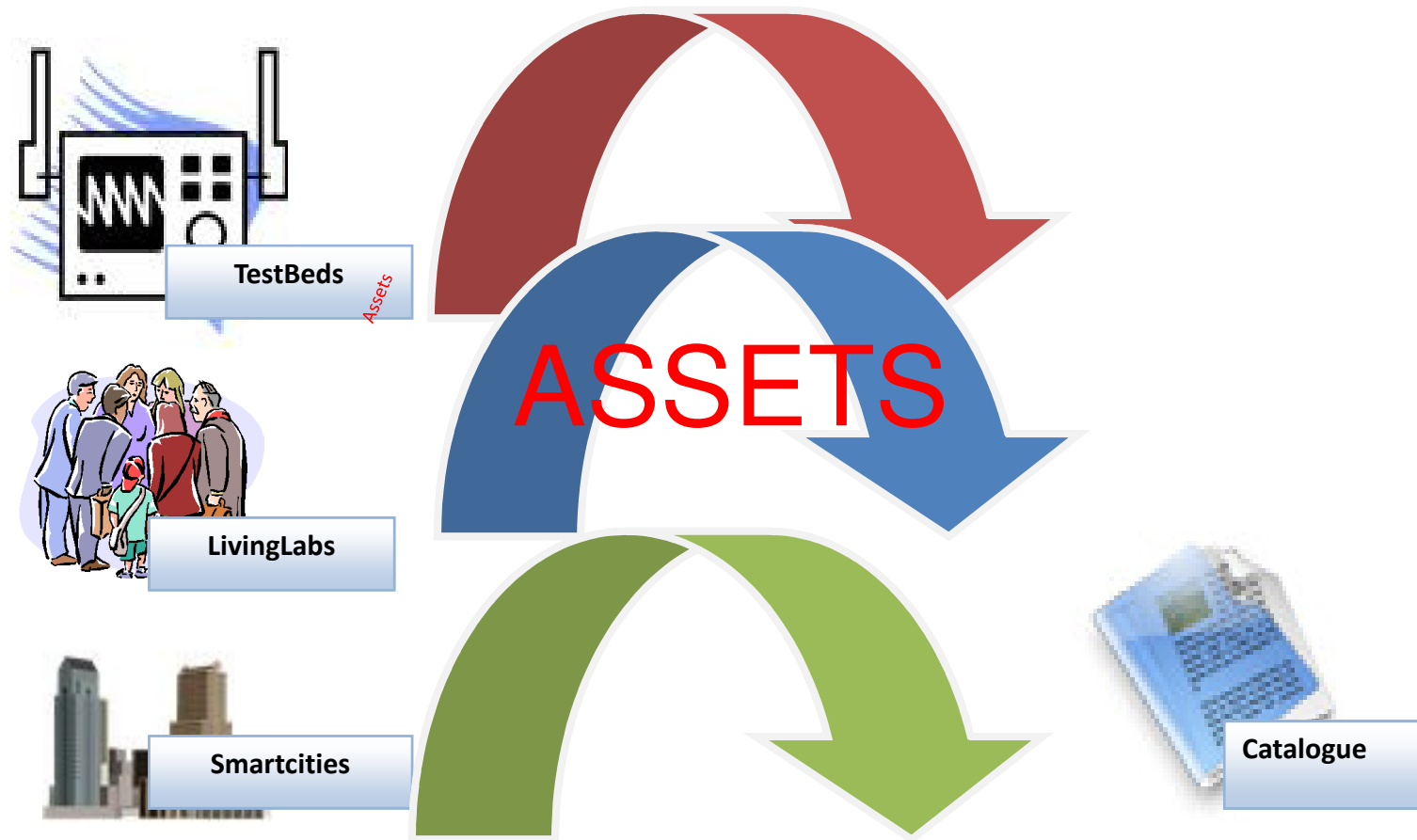
The common assets to be made available to the members of the communities are of a different nature ranging from know-how, to software or user communities and thus require different business and legal arrangements and access mechanisms :

- **Ownership:** the legal entity owning the asset can make it available to the Communities. Ownership can be jointly owned as often is the case in RTD projects. In this case special access conditions are normally granted to the project participants for the use of projects results. In research and innovation projects, this term means licences and user rights to foreground results or background Information and intellectual property.
- **Intellectual Property Rights:** intellectual Property: any patent, registered design, copyright, design right, database right, topography right, trade mark, service mark, application to register any of the aforementioned rights, trade secret, right in unpatented know-how, right of confidence and any other intellectual or industrial property right of any nature whatsoever in any part of the world; IP can be made available to others through a Licence.
- **Access Conditions:** such access conditions can be Free, Preferential or at Market value.
- **Access Mechanisms:** the actual access to the assets is granted trough a contractual arrangement (typically for accessing tangible assets) or open licence mechanisms such as Creative Commons (typically for methodologies) or General Public Licences (typical of Open Software).

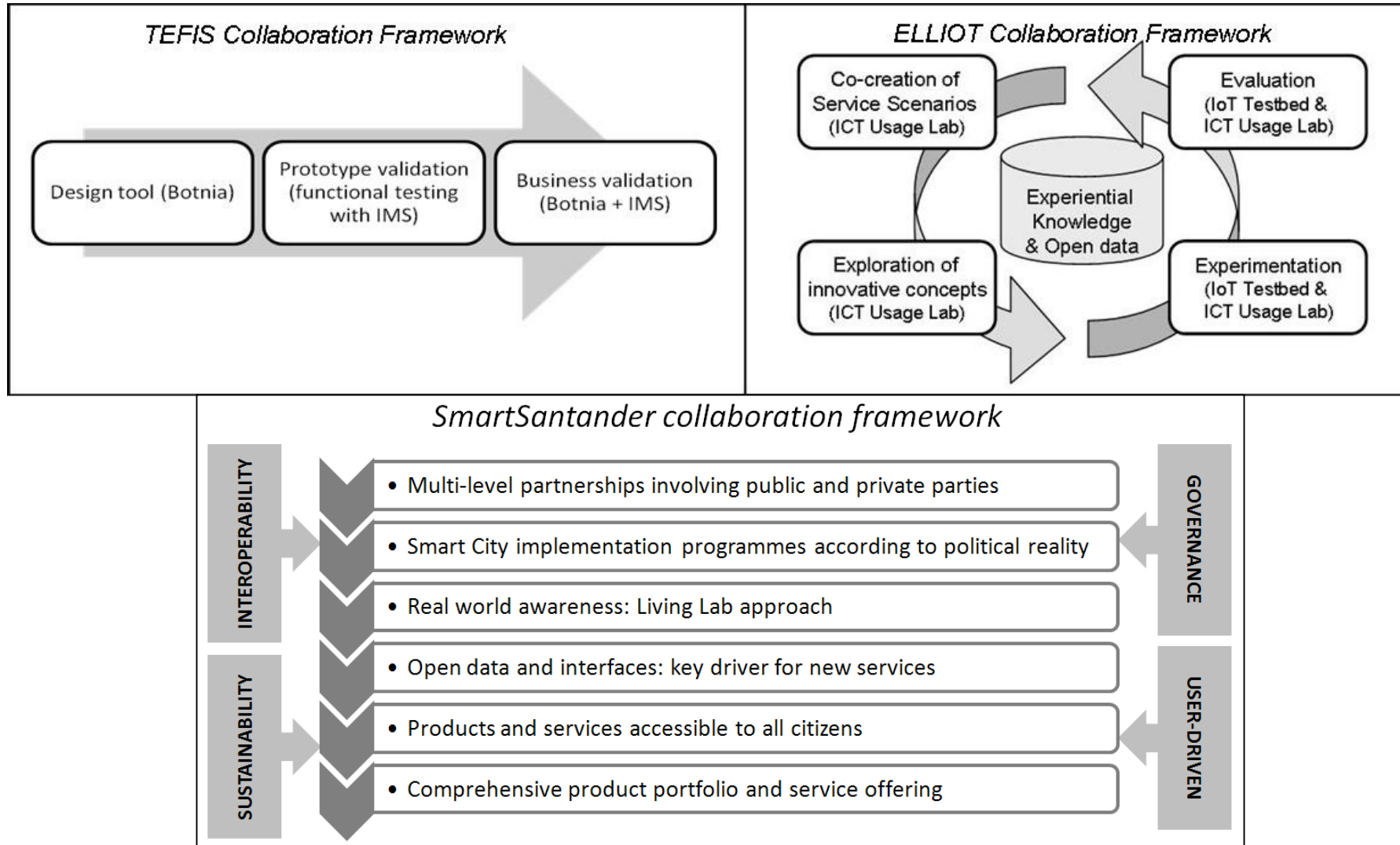
Common Assets Governance Model



Proposing a wiki-based catalogue of assets



Collaboration based on sharing assets as explored in TEFIS, ELLIOT, SmartSantander projects



Discussion topics

- What can be useful assets for smart cities' living lab innovation, given the examples presented. What is missing? What are the most useful?
- Who are the users of such assets
- What kind of collaboration models can be envisaged in sharing / using common assets?
- How can sustainable business models be constructed?
- How can cities and regions benefit?