



Service Innovation in Business Value Networks

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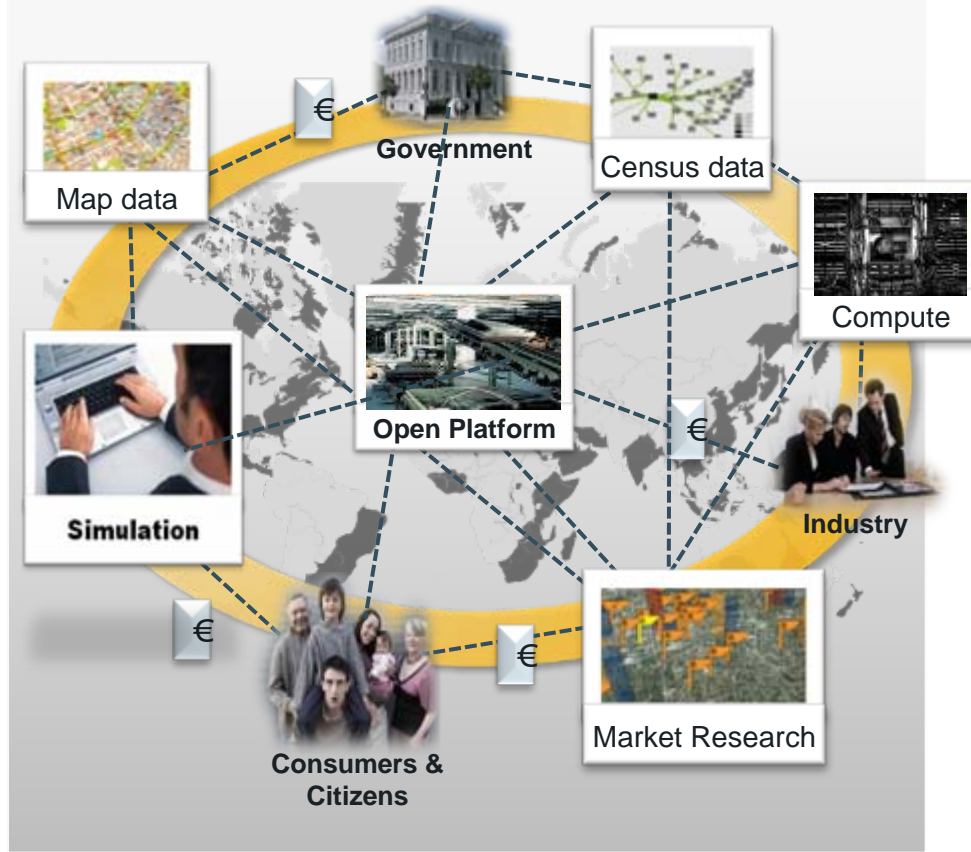


Overview

1. Motivation
2. Challenges & Opportunities
3. Framework of Innovation Process
 1. Idea Management
 2. Idea Evaluation
 3. Service Realization
 4. Service Evaluation
4. Conclusion

A New Phenomenon Emerges Internet of Services Vision

Services in a connected world



**A trusted
Service Ecosystem of
Service Providers, Consumers
and Brokers
buying, selling, repurposing and
composing services
for different needs**

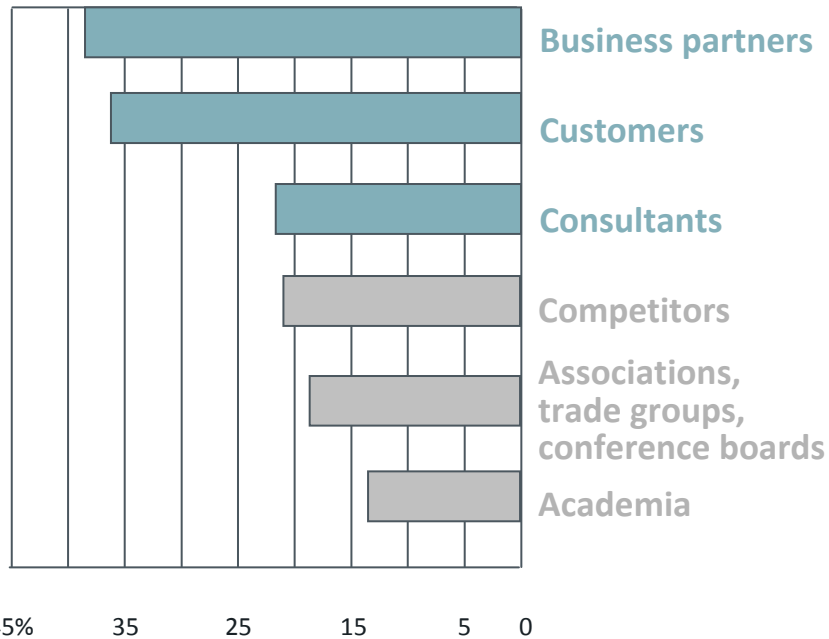
- resulting in -

**A new way of organizing the
interaction between
partner ecosystem,
the community
& service consumers**

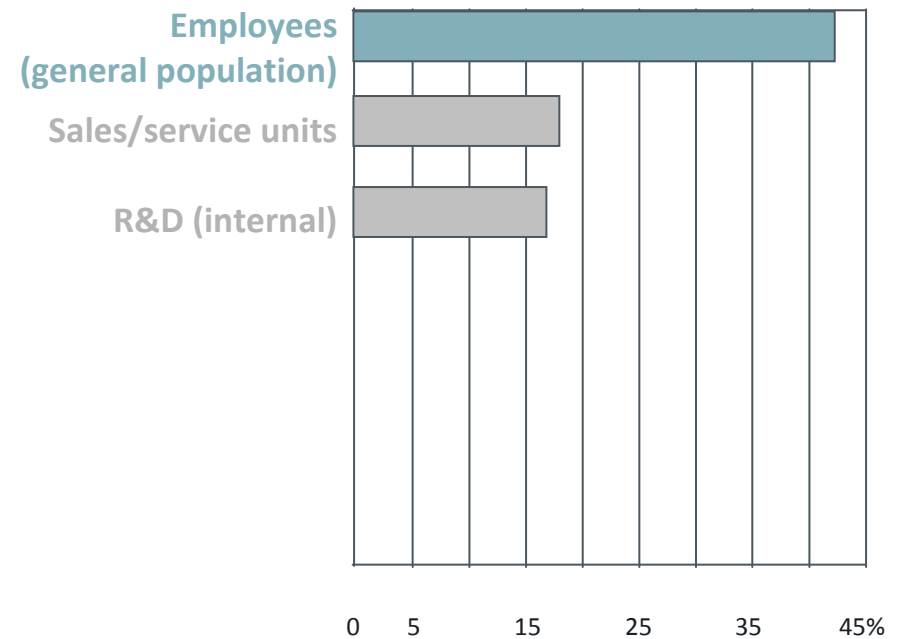


Sources of New Ideas and Innovation

External



Internal





Challenges & Opportunities or Why another Innovation Process for Services?

- » Network Management
 - » Any process in a Business Value Network (BVN) is harder to manage
 - » Processes in BVN change more often
 - » Often no single driving player
- » Intangibility of Services
 - » Function and value of services hard to explain
 - » Customer involved in both service provisioning **and** innovation
- » Intellectual Property Issues
 - » Innovations are easy to copy
 - » Innovation is hard to protect (→ intangibility)
 - » Patents often do not help to protect IP

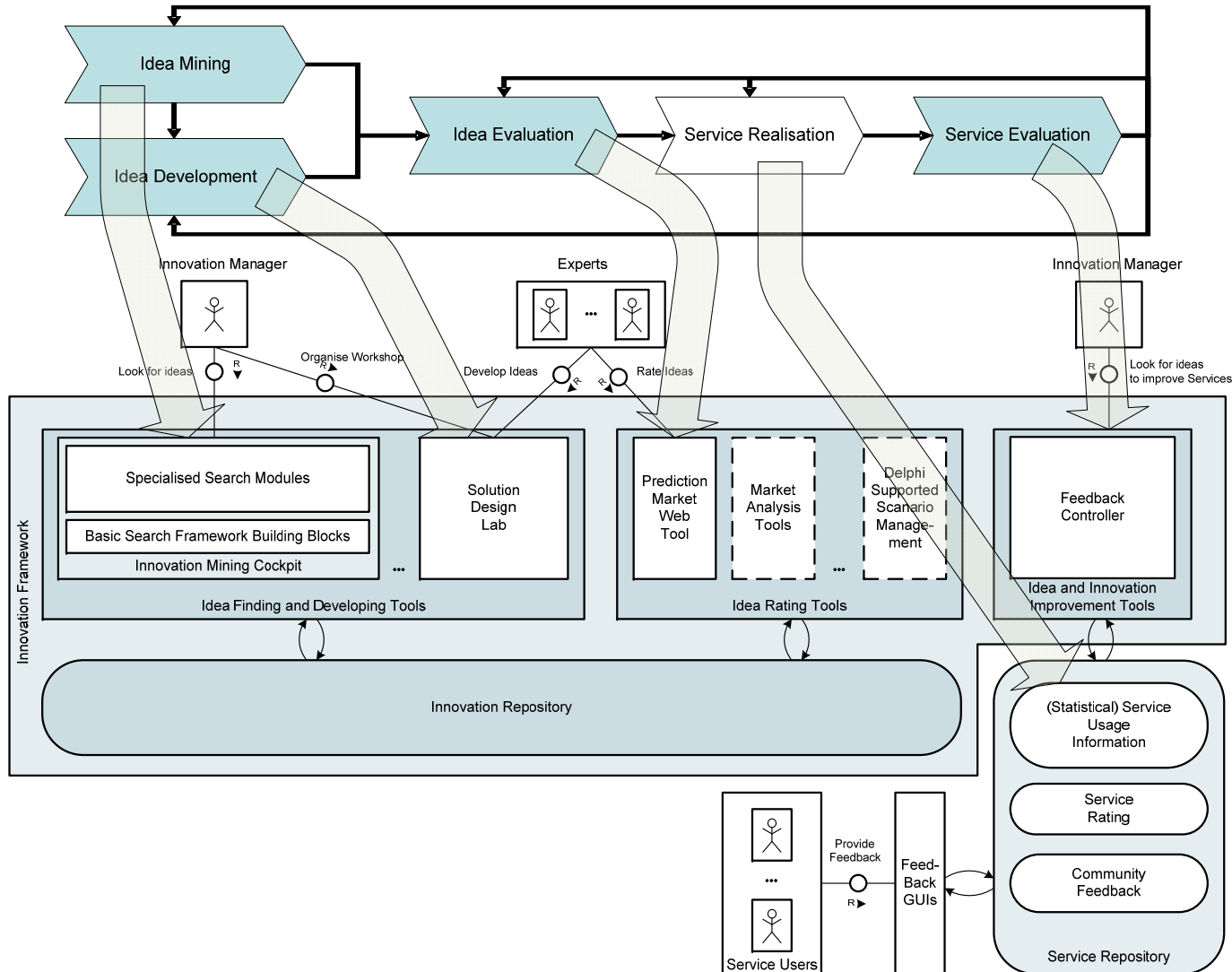
- » Service Delivery Platform as integrative element for innovation management
- » Ideas for Services are easier to share across a networks

Framework of Innovation Process



THESEUS

Forschungsprogramm für eine neue internetbasierte Wissensinfrastruktur





Idea Management in an Idea Repository

- » Motivation
 - » Focal integration point of idea management tools
 - » Enabler for IT-level realization of Open Innovation idea
- » Content
 - » Core idea, e.g. collected via idea mining and development
 - » Store results of idea evaluation, e.g. done by market prediction
 - » Link to idea realization
- » Implementation Plan
 - » Service-enablement via REST interface
 - » Web-based front end for user-friendly intuitive access
 - » Future Work: Potential exchange with existing idea marketplaces



Idea Mining

- » Motivation: Exploit external knowledge
 - » *finding topic definitions* to learn about a topic or technique,
 - » *identifying experts* to overview the important players concerning a topic,
 - » *mining relevant scientific papers* to gain background or state of the art knowledge,
 - » *browsing patent data bases* to see what has already been invented and protected,
 - » *finding and analyzing user discussions* to learn about problems and new ideas, and
 - » *evaluating press releases* of competitors and potential business partners to prevent falling behind and missing business opportunities.
- » Focusing on the following sources for ideas
 - » User discussions in blogs and message boards
 - » News items and press releases related to the user's area of interest
- » Tools/Realization
 - » New press release search engine to be integrated into larger „Innovation Mining Portal“.



Idea Evaluation Using Prediction Markets

- » Motivation
 - » What idea should be realized?
 - » Tool-based or expert-based trend prediction in general is a hard problem
 - » Surveys are difficult to set up properly (target group, statistical significance, effort)
 - » „Wisdom of the crowd“ seems to be a promising and light-weight alternative
- » Prediction markets
 - » Based on idea of stock trading
 - » Prediction markets for ideas trade virtual goods
 - » Worked well for predicting results of elections and for sports events
- » Challenges
 - » Liquidity of Prediction markets for Ideas
 - » Idea: use a market maker to create enough liquidity
- » First results for predicting European Soccer Championship 2008 in an illiquid market



Service Realization

- » Motivation:
 - » Realize the most promising ideas
 - » Idea Repository provides aggregated source for innovative during realization, i.e. new features, business value, requirements, use cases, reuse)
 - » Prepare for Service Evaluation (see below)
- » Service Usage generates relevant information for service evaluation, e.g.
 - » Service Discovery,
 - » Service Selection,
 - » Service Execution,
 - » Monitoring of the execution of a service, and
 - » Feedback provided implicitly or explicitly by a service consumer



Service Evaluation

- » Motivation
 - » Detect the need for new innovations from service usage
 - » Trigger new innovation cycles on demand
- » Challenges
 - » Explicit user feedback is often problematic (effort, systematic errors)
 - » Implicit user feedback is easy to collect but may be hard to interpret
- » Realizations
 - » Event-based framework to collect feedback
 - » Allows for loose coupling and extensibility
 - » Generate statistics as a first step



Conclusion

- » Our Goal: Develop an infrastructure for open innovation processes in business value networks
- » Tool support for each phase under development
 - » a central idea repository for storing, annotating, and retrieving ideas,
 - » a web-based interfaces for collaborative idea development
 - » an integrated web search cockpit,
 - » a new information market-based mechanism to rate and rank innovative ideas, and
 - » a feedback controller to evaluate realized ideas.



Questions?

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