



Innovation Futures: How Emerging Innovation Patterns Change the European Innovation Landscape

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Research Question of the INFU Project:

How will innovation be organised in the future?

- We are interested in the question on how the process of the creation, development and introduction of innovation is changing, i.e. we are dealing with “innovation patterns” or new forms of innovation ...
- Little systematic exploration of new innovation models and visions and their implications for the innovation landscape, economy and society.
- With “new innovation patterns” we mean novel emerging concepts, ideas and strategies how innovation is organised but also well-known trends, which are of importance so far only in specific industries or areas but may have a larger impact on or potential for other areas in the future.
- Project approach: INFU is a foresight process combining the elements weak signal scanning, development of visions, scenario construction and scenario assessment ;
- Bottom-up approach with a strong commitment to ‘visual inspirations’ and an extended openness for diversity (prolonged divergence)

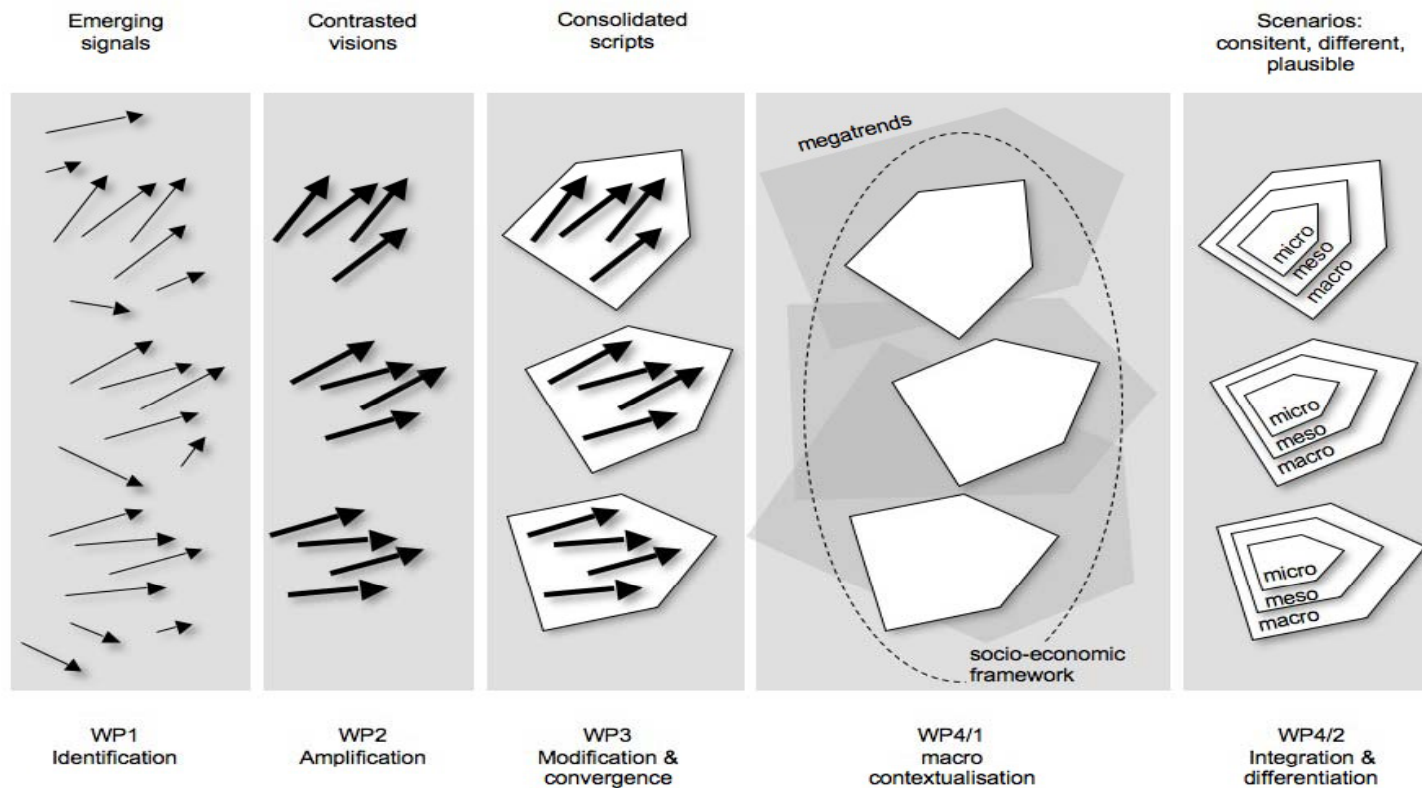
INFU Methodology

From Weak Signals to Scenarios

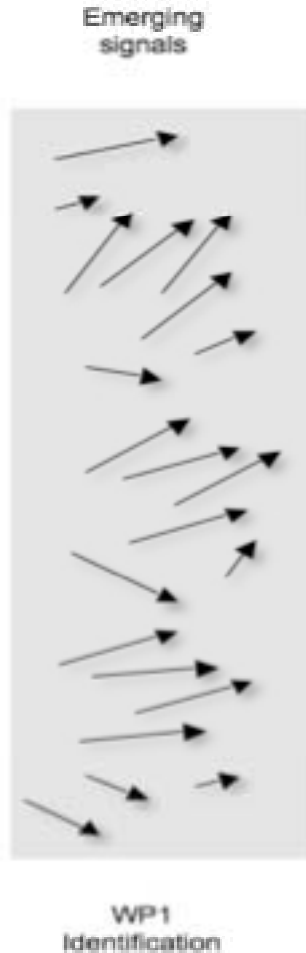
Oct. 2009

Nov. 2010

March 2011

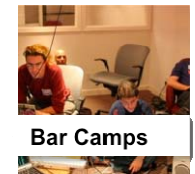
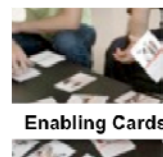
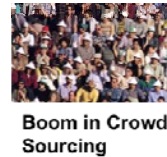
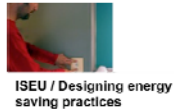


New innovation patterns: Academic literature



- Open Innovation (Chesbrough)
- User Innovation (von Hippel)
- Virtual Customer Methods (Dahan & Hauser)
- Innovation communities (Tuomi)
- Commons-based Peer-Production (Benkler, Herstatt & Raasch)
- Crowdsourcing (Howe, Brabham)
- Personal Fabrication (Gershenfeld)
- Soft Innovation (Stoneman)
- Design Innovation (Verganti)
- User Created Content (OECD)
- Value innovation (Kim and Malbourgne)
- Eco-Innovation Models (Stahel, Braungarth & Lovins)
- Service Innovation Patterns (Miles)
- Innovation in the Public Sector (Windrum & Koch)
- Social Innovation (Young)

Scanning weak signals



SLIDE 5

Amplification of signals to construct visions

Selection of signals



Amplification of selected signals



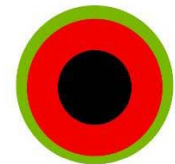
Transfers to other sectors, to other user groups...

e.g. from fashion to furniture industry; elderly people instead of kids or vice versa...



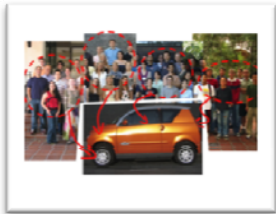
Generalisation as the mainstream practice...

e.g. what if active users involvement in innovation processes would become the default...



Radicalisation of the principle...

e.g. what if user involvement in innovation process developed into an innovation actively developed by the demand...



1_Open Source Society...

What if open source development became an all encompassing innovation pattern?



2_Virtual-Only Innovation...

What if many innovations were enjoyed only virtually?



3_Negotio-Vation...

What if innovation became publicly negotiated?



4_Innovation on request...

What if companies generated innovations from user communities?



5_Public Experimentation...

What if experimentation was at the core of innovation?



6_No-innovation...

What if innovation fatigue took over and No-Innovation was en-vogue?



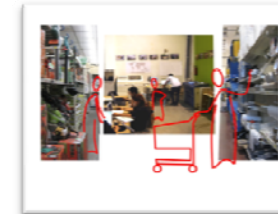
7_Innocamps...

What if people innovated together in proper places?



8_90% Innovation...

What if innovation was directed at population living in poverty?



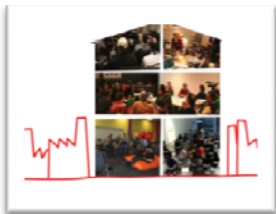
9_CIY Create It Yourself...

What if people produced products themselves in fabrication laboratories?



10_Innovation Imperative...

What if the emphasis on innovation spread to all workplaces?



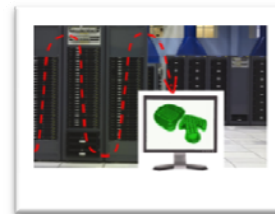
11_Innovation Marketplace...

What if companies externalised innovation to an open innovation marketplace?



12_Innovation Campus...

What if companies collaborated in joint innovation places?



13_Darwin's Innovation...

What if companies used digital systems to randomly create and test innovation?



14_Web-Extracted Innovation...

What if we scanned the internet for ideas and automatically picked the best ones?



15_Innovation meets Education...

What if innovation skills were on the education agenda of kindergarden?



16_Relocated Innovation...

What if the bulk of innovation were to come from today's emerging markets?



17_Waste-based Innovation...

What if the principle of "Waste equals Food"/"cradle to cradle" was widely adopted?



18_Laboratory Stores...

What if stores were to become laboratories where companies and customers co-developed innovations?



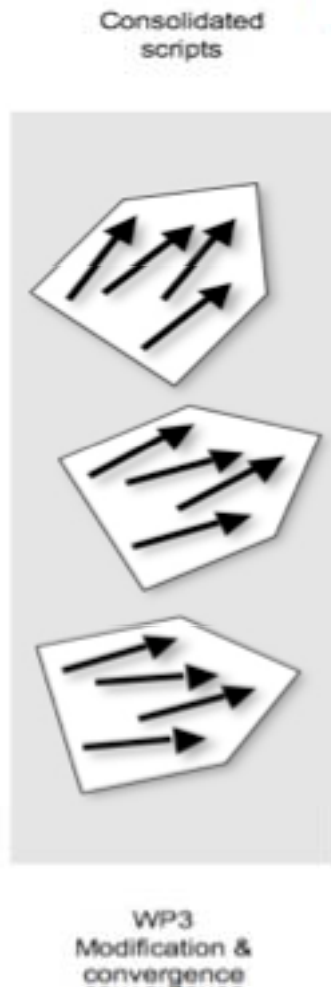
19_City driven Innovation...

What if cities became stronger actors in the field of innovation?

Source:
Jegou et al. (2010)

SLIDE 7

From innovation visions to consolidated visions



- Evaluation of 19 visions in an online survey (60 participants) according to clarity, newness, impact, desirability, likelihood
- Discussed in detail with 20 experts from industry & academia

Clustering & Selection

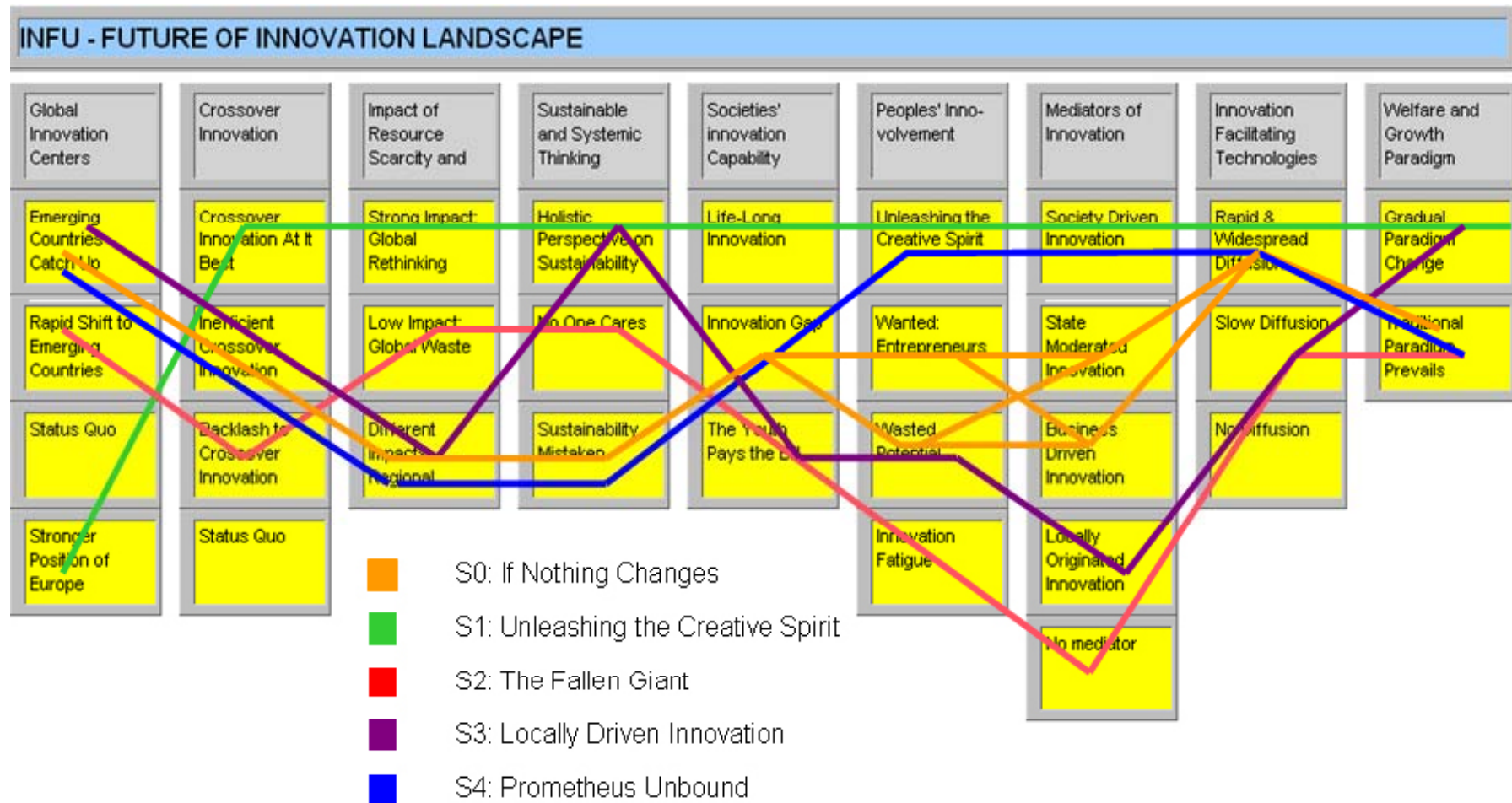
Outcome: 8 consolidated visions were identified. These visions were elaborated in Mini-Panels across Europe by self-organised expert groups (= an innovation experiment)

- Open Source Innocamp Society
- Ubiquitous Innovation
- Waste-Based Innovation
- Automatised Innovation
- Innovation Chain Integration
- City-driven system Innovation
- Deliberative Innovation
- Social Experimentation

Findings of the Panels

- Several visions are incorporating fundamental changes in the **mechanisms mediating between innovation demand and innovation supply**. In most cases, the role of companies as dominant brokers between needs and solutions is seen to be shrinking and more direct involvement of individual or (more often) collective innovation users is described. A wide variety of **hybrid value creation business models** is being proposed.
- The issue of defining adequate **enabling platforms** between innovation demand and innovation supply and the adequate level for establishing these innovation support infrastructures is addressed in several visions (e.g. Fab-Labs, 3D printing facilities).
- Most visions emphasise the need to **address societal challenges and ,in particular, environmental issues** as a key driver of change not only for the target of innovation but also for innovation patterns.
- Some visions describe **fundamental changes in the macroeconomic environment** such as “economy of contributions”, “on demand economy”, “surplus ecosystem” “learning intensive economy”.

Scenario Building



Conclusions

- Methodology:
 - The bottom-up approach by identifying signals was considered as very valuable by many experts, but, still difficult to go beyond today's notion of innovation
 - Visions were easy to grasp because of visualisation.
 - High interest in the project and high response rate for the were achieved because of the inspiring images.
 - Organizing mini-panels (divergence) deepened the understanding of different points of view and perspectives.
 - However, not all mini-panels developed a vision according to our understanding.
- Outlook
 - The findings may provide useful insight for innovation strategies directed at structural transformation for addressing the Grand Challenges.

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