

Shaping social reality: foresight as platform for learning and networking

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Foresight ↔ Grand Challenges

Grand Challenges ...

- not confined to national borders
- require interdisciplinary research and cooperation btw. research and governance
- larger time-frame than most policy instruments are suited for

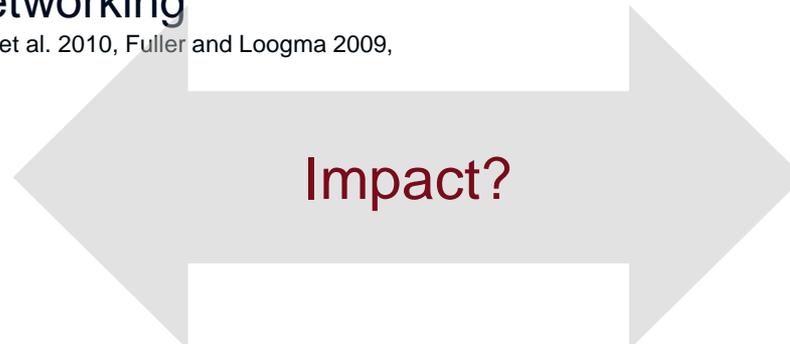
Governance to approach Grand Challenges needs to...

- deal with complex issues
- acknowledge interrelations between sectors/fields/challenges
- be anticipatory
- support structural change: changing foci, novel approaches, different forms of cooperation

➤ **How can foresight contribute to such governance?**

Foresight – a wide spectrum of expectations

- Foresight as “*vision-setting and policy coordination device as well as catalyst for system disruption*”
(EC 2005: 9)
- “Foreseeing” and shaping the future by means of policy making and facilitating social processes
(Van der Meulen 1999)
- Learning and networking
(Cagnin et al. 2011, Van Mierlo et al. 2010, Fuller and Loogma 2009, Smits and Kuhlmann 2004)
- ...
- Foresight as tool to legitimize decisions
(Havas 2005)
- Prestige project foresight
(Havas 2005)
- Foresight as venue for lobbying
- ...



Connecting foresight to change in the system

- Can foresight processes be “*catalysts for system disruption*”? (EC 2005)
- How can foresight help to achieve policy transition and system innovation?

How to measure impact of foresight on change in the system?

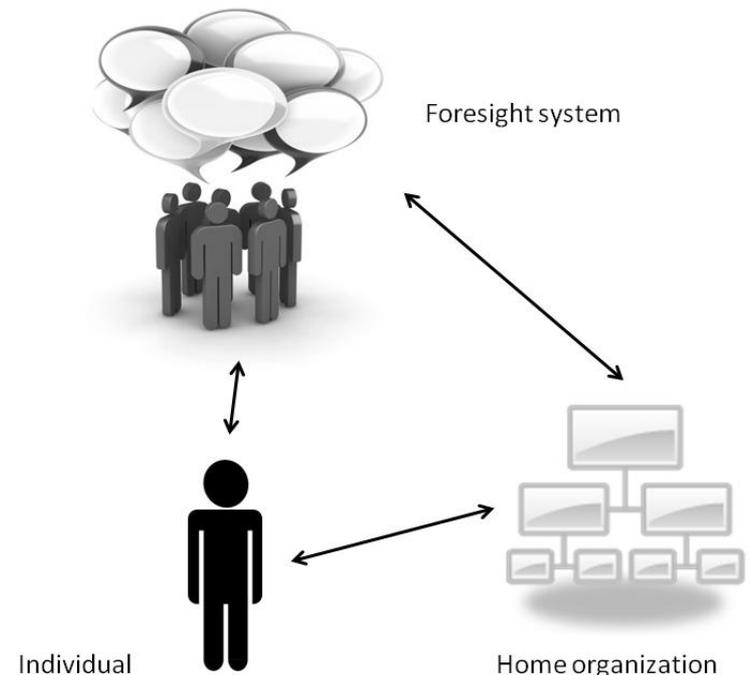
- Foresight as *systemic instrument* (Smits and Kuhlmann 2004) to support systemic functions in the system

Potential of foresight

- Facilitate interaction between (heterogeneous) actors
- Increase knowledge base of key actors in the system
- Provide a platform for learning and experimenting
- Stimulate vision development

Embedding the foresight process in the system

- Foresight process as social process
- Actors and interactions constitute temporary system: actors represent home organizations, stakeholder groups, sectors, etc.
- Individuals as ‘transmitters’ between the temporary foresight system and their home environments



Individual learning during a foresight process

Constructivist perspective on learning and knowledge

Learning: Social process of creating meaning in interaction

Knowledge: constructed in social interaction, influenced by previous knowledge

Learning in form of...

- Broadened perspectives
- Clearer picture of present situation
- Definition of future challenges and possibilities
- Reflection on own role and perspective
- Insight into other actors' rationales and emotions

Foresight system learning

Temporary foresight network

Facilitated communication and interaction + focus on longer-term future + creative thinking ('out of the box')

Learning in form of...

- Getting to know other actors in the field
- Shared definitions of present and future challenges
- Development of common visions and options for action
- Emergence of mutual involvement, joint responsibility, trust, competence, and interdependence

➡ Creation of common reality

Empirical investigation of learning and networking effects

1. Do actors learn and form new links in a foresight exercise?
2. Do new knowledge and links translate into observable change?

Focus empirical investigation on individual actor (→ ‘transmitter’)

Address three levels of impact:

Individual	Changed perceptions	Motivation? Surprise? Benefits?
Foresight system	Shared concepts, trust, commitment	Mutual understanding? Quant.& qual. of relationships?
Home organization	Change of action patterns, adaptation of strategy	Reactions? Influence?

Foresight as platform for learning and networking

Output of a foresight process

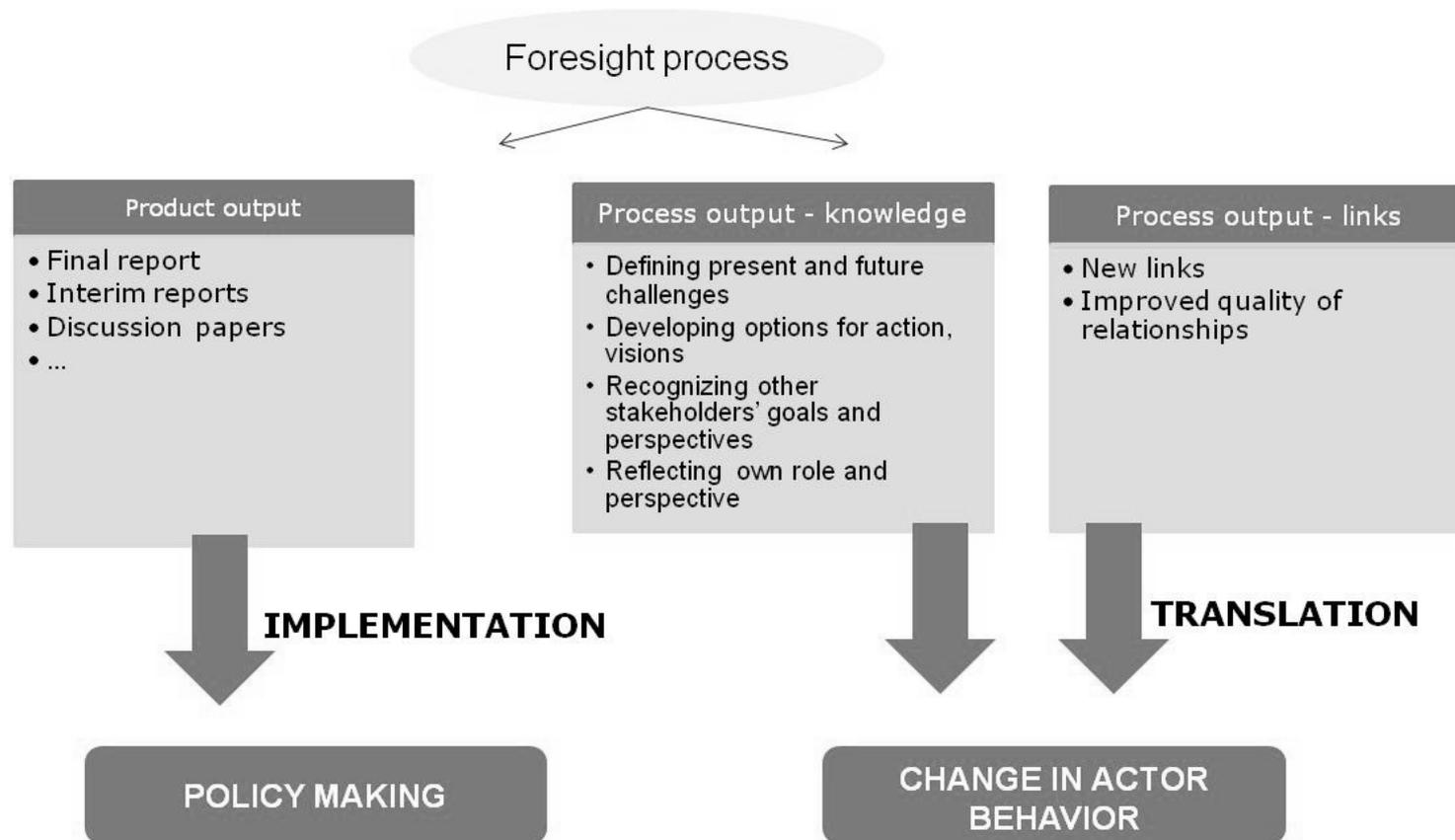
- Better knowledge of options for future action
- Increased mutual understanding and trust
- Novel/more intense relationships between actors

Restraints to translation into change in home organization...

- Individual level: Foresight but one potential influence
 - Incremental adaptation of perception on periphery of expertise
 - Application of “bits and pieces”, but no radical change of action
- Organizational level: Actor’s limited power of implementation
 - Position/influence in home organization
 - Isolated by their new perceptions

Thank you for your attention!

Output of a foresight process



Evidence from a recent case study at the AIT

- Foresight process increased mutual understanding between actors from different stakeholder groups, regions and sectors.
- Actors learned in moderated and informal discussion and were able to develop a more complete picture about the past and present state, as well as regarding potential future developments.
- Actors benefitted from insights into other stakeholders' rationales and behavior.
- Actors developed new relationships and intensified existing ones.

Areas of investigation (1)

Learning during foresight	
Motivation and expectations?	Cognition ↔ Action
Surprise?	Perception of difference
Benefit?	Integration into/adaptation of established constructs
Impact on home organization	
Dissemination?	Perceived value
Application?	Adapted communication/action

Areas of investigation (2)

Emergence of foresight system	
New relationships?	Integration/emergence of networks
Higher quality of relationship?	Trust, mutual understanding
Impact on policy making and system in general	
Influence on policy making?	Perceived influence
Better coherence of policies?	Systemic function of foresight
Better knowledge diffusion?	
Involvement of new actors?	
Reduction of uncertainty?	

Case study results (1) Individual and organizational learning

Individual learning took place

- Broadened perspectives
- A clearer picture of past and present developments, and of potential futures
- Insights into other stakeholders' rationales and emotions
- Revelations about one's own views

Evidence of impact on home organization

- Dissemination of new knowledge in formal and informal settings
- Application of “bits and pieces“ in discussions, decision-making
- *Integration of longer-term focus in decision-making...?*

Constraints to individual and organizational learning

Actor motivation and expectations

- Potentially small “window of interest”
- Little interest in self-reflection
- Loss of confidence in the foresight, if expectations are not met

Level of surprise during the foresight process

- Little perception of difference
- Perception of “nothing new” (if too close to established perceptions) or “nothing of interest” (if too far removed from established perceptions)

Actors’ limited influence upon returning to home organization

- Limited influence of individual actor
- Resistance to change in organization

Case study results (2) Influence on the system

Evidence of on-going interaction after end of foresight

- By-chance meetings among the “usual” group of stakeholders
- Follow-up projects with new contacts
- Exchange of information
- Exchange of anecdotes and stories

Little evidence of impact on system

- Adapt questions in further research: Specific inquiry for impact in terms of systemic functions

Shaping social reality: The objectivation of meaning



All social structure is generated out of subjectively meaningful action of interacting individuals (Berger and Luckmann 1966).

Creation of shared meaning in interaction:

- Symbols (words, images, objects, symbolic actions)
- Attribution of meaning

Objectivation: Transformation of subjective meaning into social reality

Social reality: Products of interaction (typologies, institutions, knowledge, etc.)

- Detached from their original context
- Perceived as social facts (“things“) by others

How to survey individual learning in foresight? (based on the constructivist framework)

Survey questions	Conceptual basis
What was new?	Perception of <i>difference</i> : external stimulus for learning
What was surprising?	
How did you benefit?	“Window of interest” • Cognition \leftrightarrow Action • <i>Cognitive dissonance</i> (Festinger 1957)
What was the added value?	
Do you now feel different about...?	• Generation of identity • Reflection on own role, perceptions

Case study results (1): Stakeholder learning takes place

RQI: (How) Do actors *learn* in participatory, policy-oriented foresight processes? ...

Categories of stakeholder learning

- Broadened perspectives
- A clearer picture of past and present developments
- A clearer picture of potential futures
- Insights into other stakeholders' rationales and emotions
- Revelations about one's own views

Interview replies: Surprise during the foresight

Dimension	Count (N=71)
Specific statements	16-20
Surprise: not really	11-15
Extent of lobbying	6-10
Diversity, context of others	6-10

Individual quotes

(Public actor) *Yes, there was this one conversation with a certain actor from [...], which caused new, surprising insights and better understanding on his part.*

(Academia) *There were many surprises content-wise, particularly in this one presentation by [...]. I also approached the project team during the breaks, to specifically ask about technologies.*

(Association) *I don't think anything has been a surprise. I think the views and issues raised were statements I was familiar with, also the people you expected to raise these issues raised the issues. All the different views pulled together and the creating of a picture of how the future could look, that has been of interest.*

Interview replies: Benefit from participation

Dimension	Count (N=11)
<i>Learning</i>	6-10
Getting to know other stakeholders	1-5
Opportunity to present own views	1-5
Input for work	1-5
No benefit	1-5

Individual quotes

(Business) *I have a broader picture of the sector and a clearer perspective of its future until 2050.*

(NPO) *My main benefit came from contacts with other stakeholders in Brussels, from insights into how they work, what they think about, and how they feel about [the foresight topic].*

(Industry) *I could present and discuss my views.*

(Association) [laughs] *I had some revelations about personal old views.*

Case study results (2): Constraints to individual learning

RQI: ...and which are the main success factors
and constraints to individual learning?

- **Motivation for participation**
 - Potentially small “window of interest”
 - Little interest in self-reflection
 - Loss of confidence in the foresight, if expectations are not met

- **Level of surprise during the foresight process**
 - Little perception of difference
 - Perception of “nothing new” (if too close to established perceptions) or “nothing of interest” (if too far removed from established perceptions)

How to survey change of behavior after the foresight? (based on the constructivist framework)

Survey questions	Conceptual basis
Have you ever looked back on the FS?	<ul style="list-style-type: none"> • Time lag between learning and application of knowledge • “Reservoir of knowledge”
Did you act differently because of the FS?	
Benefit for home organization?	<ul style="list-style-type: none"> • Change of focus as impulse for adaptation of communications and routines • Integration of long-term focus
Interaction with other FS actors?	<ul style="list-style-type: none"> • Emergence/integration of networks • Trust, solidarity, ownership, alignment
Change of quality of relationships?	

Interview replies: Perceived impact on behavior

Individual quotes

(Industry) *It is hard to say, because I can't say how I would have acted otherwise. But I do think so, because you take along what you have learned; and I have used knowledge from [the foresight process] to support my arguments.*

(Private business) *The vision indirectly left its mark on strategic processes.*

(Private business) *I realized that policy is much more pragmatic than I had thought before. This changed my perception of political decisions. It also gave me the impulse to [...] be aware of the fact that things will only happen in small steps, and to orient myself more on what is feasible.*

(Association) *I have been participating in discussion in a different way because of the foresight process.*

(Private business) *There have been follow-up projects with other stakeholders and research partners, and there has been other contact, for example exchange of literature.*

Case study results (3): Little evidence of observable change

RQ2: Does learning during FS translate into observable change at individual, organizational, system level?

- **Individual level:** FS but one potential influence on individual actor behavior
 - Incremental adaptation of perception on periphery of expertise
 - Application of “bits and pieces”, but no radical adaptation of action
- **Organizational level:** Actors’ limited power of implementation upon returning to home organization
 - Position/influence in home organization
 - Isolated by their new perceptions (“*Cultural islands*”, Schein 2010)
- **System level:** FS but one potential influence on relations and institutions

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calling for an integrated approach to research and innovation for their exploitation (European Commission, 2010). This implies certain factors that have to be accommodated to enable innovation generation. Innovation generation is dependent on collaboration and networking (Archibugi, D., Lundvall, B., (edit), 2001), knowledge diffusion across boundaries of cognitive objects, disciplines and backgrounds (Fischer (2005) and complementary competences within alliances based on mutual interests and benefits. technological solutions alone. Dealing with the specific grand challenges requires broader changes in human perceptions and behaviour, norms and values of societies as well as social innovations promoting non-technological solutions. (Cagnin, et. al. 2011). Overall, grand challenges stress the importance of multi-disciplinary research, a multiactor approach in examining current state of affairs and exploring possible solutions, multi-level governance and policy coordination across geographical boundaries and the numerous affected policy areas, as well as an environment enabling research and innovation generation and exploitation both in science and technology and society.(Amanatidou 2012)

- Consequently, the empirical investigation focuses on the individual stakeholder, as he/she functions as transmitter between the temporary foresight system, (where knowledge is created and links are formed) and the stakeholder's home organizations. Open questions in semi-structured stakeholder interviews address three levels of impact ensures the establishment of cause and effect relationships, and makes it possible to explore three levels of impact:
 - Individual stakeholder: Change in perception
 - Home organization: Dissemination of new knowledge, influence on strategic behavior
 - Foresight network: Follow-up interaction (projects, communication)