
Agenda & Main Question

1. Observations: the normative turn of innovation policies - **Grand Challenges** and **changes in the nature of innovation**

2. Research demands: **innovation systems** and **orientation failure**

3. Implications for **policy instruments** like participatory evaluation and foresight

Are systemic instruments, which are designed to address the capability of innovation systems, also suited to address new requirements on research and innovation activities implied by the normative turn of innovation policy?

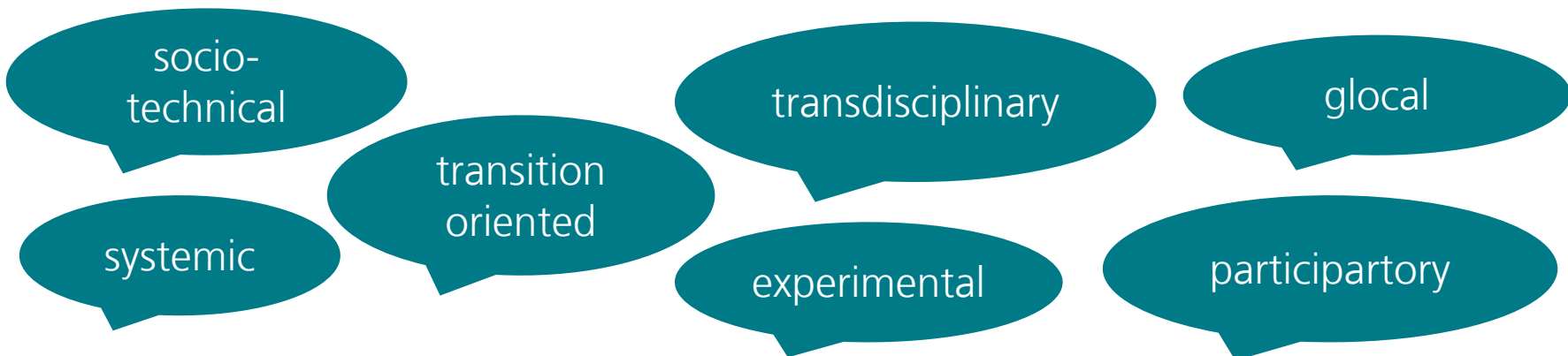
1. Observations: **Systemic Instruments, Grand Challenges** and changes in the nature of innovation

- **Paradigm shifts in innovation policy** → from „market failure“ to „system failure“ respectively traditional mission orientation to diffusion oriented activities to systemic approaches and today's new mission orientation (addressing **Grand Challenges**).
- The innovation system heuristic contributed to the idea **to optimise “innovation ecosystems”** in order to enhance innovation capability and thereby foster economic growth and competitiveness.
- These rationales have been complemented: today **innovation should also address the “Grand Challenges of our times”** such as health, sustainability, mobility and security.

1. Observations: Systemic Instruments, Grand Challenges and changes in the nature of innovation

There is demand for different types of innovation patterns, termed „**transformative innovation**“ (Steward 2008), „**collective experimentation**“ (Joly et al 2010) or „**transformative research**“ (WBGU 2011).

The following **characteristics of challenge driven innovation activities** have been brought forward:



2. Research demands: **innovation systems** and **orientation failure**

- So far, there is **no attempt to build on the innovation system heuristic in order to modulate innovation journeys towards certain desirable objectives.**
- Do we need to talk about "**orientation failure**"?



Introducing any kind of **goal orientation** into complex innovation landscapes and modulating innovation trajectories requires **intimate understanding** of innovation systems.



Accordingly, **imposing GC** as a major rationale of policy and hence a major goal of research and development by a **top-down** organized process **will most likely not lead to any real transformative innovation, but will rather lead to subsuming previous research under new headlines**



It is widely acknowledged that **picking the winners among key technologies will no longer do the job** → rather, inroads for socio-technical transition need to be identified by linking up technological and societal change into "configurations that work" in new transformative ways.

3. Practical considerations for instruments like participatory evaluation and foresight

Systemic instruments "aim to address problems that arise at the innovation system level and which negatively influence the speed and direction of innovation processes" (Wieczorek/Hekkert 2012: 74)

Participatory Evaluation

bi-directional - info is provided to the stakeholders and **feedback loops** to the involved actors are established to provide **room for learning**

Normative/GC orientation, through:

- definition as **external goals**
- assessment of **transformative impacts on actors**

Several difficulties: time-intensive ≠ short duration contracts, clients & evaluators need to share the same intentions role of impartial observator

Foresight

engages **diverse actors** in a joint **learning process** thus creating future oriented **attitudes & linkages** thus ultimately **enhancing the responsiveness** of the IS towards future challenges

Normative/GC orientation, through:

- the **socio & technical** need to be tackled (equal level of expert, actor recruitment)
- current methods need to be completed by **methods that mobilise emotions**

Challenge: discovering the transformative potential of the present (Miller 07)

Conclusion

- Today's challenges are defined as **societal and environmental tasks** and are perceived to trigger a normative turn in innovation policy, which is evolving into a **major rationale** for policy besides economic growth and competitiveness.
 - Innovation studies indicate that **addressing the GC requires a different type of research projects al-together** (socio-technical, systemic, transition oriented, experimental, glocal, transdisciplinary and participatory)
 - Analytical & theoretical implications of **IS analysis need to be widened** from “only” research and innovation **to socio-technical solution seeking** and therefore capture social and technological innovation in an equal manner.
 - We also see the need to further reflect on the potential and strength of “**whole-of-government**” policies (cross-ministerial, systemic effort of solution seeking along the identified challenges)
 - Examples for the refinement of policy instruments:
 - Participatory evaluation** - analysis of new impact types or behavioural additionality to account for a normative orientation of the policy programme under consideration.
 - Foresight processes** – exploration of innovation journeys in a holistic manner to provide orientation.
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Thank you for your attention



Quelle: iStockphoto.com/Jeff Gardner

Literature

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