

# Beyond smart specialisation: New insights for regional innovation policies

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# Three key concepts

- The **entrepreneurial discovery process** which is the keystone of smart specialization strategies
- The **complex systems approach** which allows an holistic view of (regional) innovation policies
- The **will factor** which allows to understand the emergence of innovations at regional level

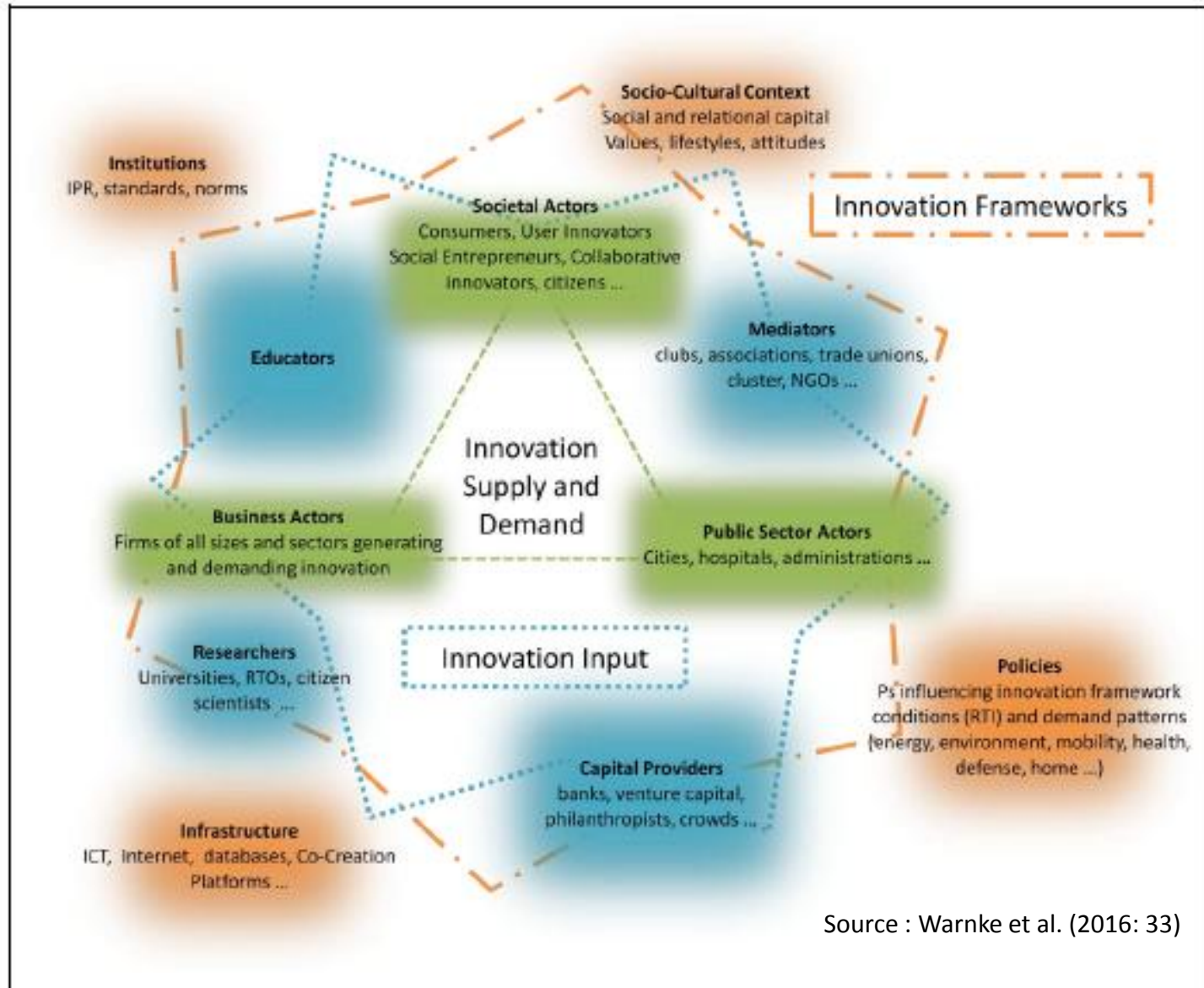
# Smart specialisation as rationale for innovation policy in European regions

- The philosophy of smart specialisation in a sentence : every region should be able to identify core fields in which it has competitive strengths, leading to market niches and thus competitive advantages
- Foray/ Goenaga (2013: 3) : „Smart specialisation is both a *policy objective* to force regions and countries to take such risks [of identifying desirable areas of intervention] and a *process* to help policy-makers to identify domains and activities for potential specialisation. The difficult policy challenge facing smart specialisation is to emphasise the vertical logic of prioritisation while avoiding the government failures usually associated with the top-down and centralised bureaucratic processes of technology choices and selection.”
- Foray/ David/ Hall (2011: 5) : „ Smart specialisation therefore implies rejecting the principle of a sharp division of labour between knowledge producers and knowledge users.”

# Five policy principles for identifying regional priorities

1. **Granularity**, i.e. the “right balance” of interventions through targeting new activities that involve groups of regional stakeholders who collaborate for exploring new, significant opportunities;
2. **Entrepreneurial discovery**, i.e. an interactive process with entrepreneurs and their information on new activities being at the core for generating knowledge on future opportunities;
3. **Observation and “rotation” of priorities**, based on the awareness that fields of specialisation have an evolutive character;
4. **Inclusiveness**, i.e. integrating also current less dynamic fields in need for structural changes; and
5. **Experimental character** and evaluation.

# A new analytical framework ?



Source : Warnke et al. (2016: 33)

# Introducing complex innovation systems thinking in smart specialisation processes

- What are complex systems (in a mathematical meaning)?
- Are innovation systems complex systems ?
- Are there emergent properties that can be identified?

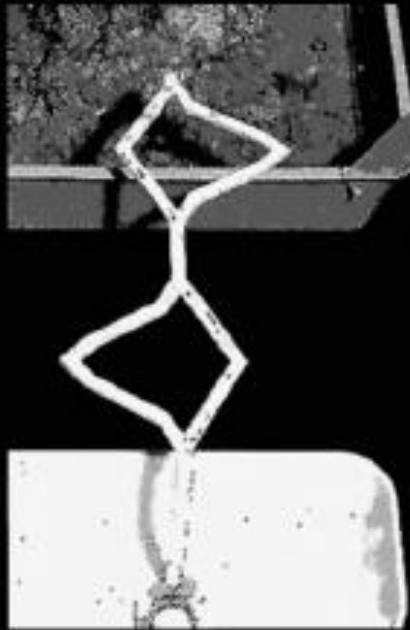
# Innovation systems are complex systems since they are based on complex behavioral patterns

- No firm seems to be able to innovate without **interactions with the “outside world”**. Innovations appearing as “autarkic may be extremely rare if not impossible.
- A **“trial and error” process** can be found in every “innovation story” : a “first shot” success may constitute a very unlikely exception.
- Underlying **selection phenomena** which concern : ideas, production and delivery processes, technologies, marketing approaches, types of collaborations and even actors (e.g. unsuccessful firms).
- **Strong heterogeneity of actors** (e.g. firms, academic institutions, public actors, intermediaries, individuals, etc.) induces a strong heterogeneity of preferences and behaviors.
- In the real world there is **no perfect competition** (e.g. full availability of information, atomistic markets, unbounded rationality, etc.) such as for instance (neo-)classical economics pretend.

# Schumpeterian ants?

## Social insects

Mathematically modelled!

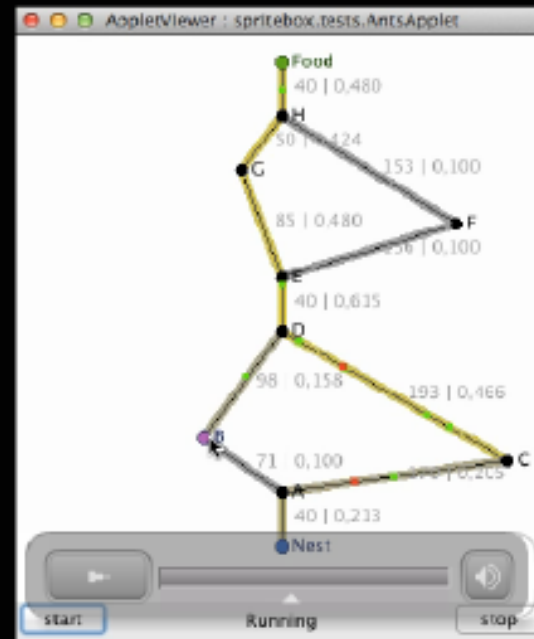
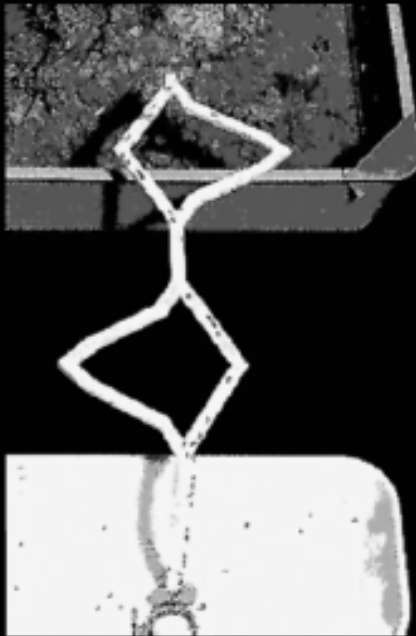




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## Traditional regional policies (based on optimization rationality) vs. entrepreneurial discovery (based on will factor)

<b>Traditional regional policies:</b> <i>Exploitation, relevance, causation</i>	<b>Entrepreneurial discovery:</b> <i>Exploration, novelty, effectuation</i>
Realization	Imagination
Implementation	Design
Efficiency	Curiosity
Planning	Serendipity
Procedural selection	Experimental variation

## Main characteristics of the will factor as an emergent property of systems following the smart specialisation logic

<b><i>Core dimensions affecting the will factor:</i></b>	<b>Smart Specialization Strategies</b>
<b><i>(1) Desire &amp; determination</i></b>	Pushing forward new ways of territorial development Avoiding lock-in situations and/or declining trends at regional level Reshuffling the cards in allowing new combinations of resources
<b><i>(2) Decision making</i></b>	Entrepreneurial discovery process Evolutionary selection between techno-scientific and sector-related fields
<b><i>(3) Competencies &amp; skills</i></b>	Convincing the (mostly) regional actors to adopt new forms of cooperation Creating confidence and policy support in the process of emergence of (mostly unexpected) ideas

# Complex systemic implications for smart regional innovation policies

- A smart (creative) way to design a regional innovation policy would consist of considering the complex local system in **constant evolution** and in interaction with the external environment.
- Each **micro actor** has its own representation of the system it belongs to. In order to manage efficiently the global system it is necessary to take into account those micro representations
- Micro actors must be associated with the governance since individual entrepreneurs - innovators in the sense of Schumpeter - carry the **future of the system**.

## Implications for innovation policy making (assuming that innovation systems are real complex systems)

- Due to the non-linearity of innovation processes (which lead to mainly unpredictable events) the incentives mobilized by innovation-related policies should target **marginal systemic effects (on micro actors)** rather than huge changes.
- Without the **willingness** (desire, psychological and social ability, leadership...) of individual project carriers, no creative idea can lead to innovation : project carriers should be the main targets.
- **Economics of innovation is not only economics of knowledge** : involving and supporting entrepreneurship is as important as stimulating knowledge creation and diffusion.



Thank you for your attention!