On the economic fundamentals of smart specialisation

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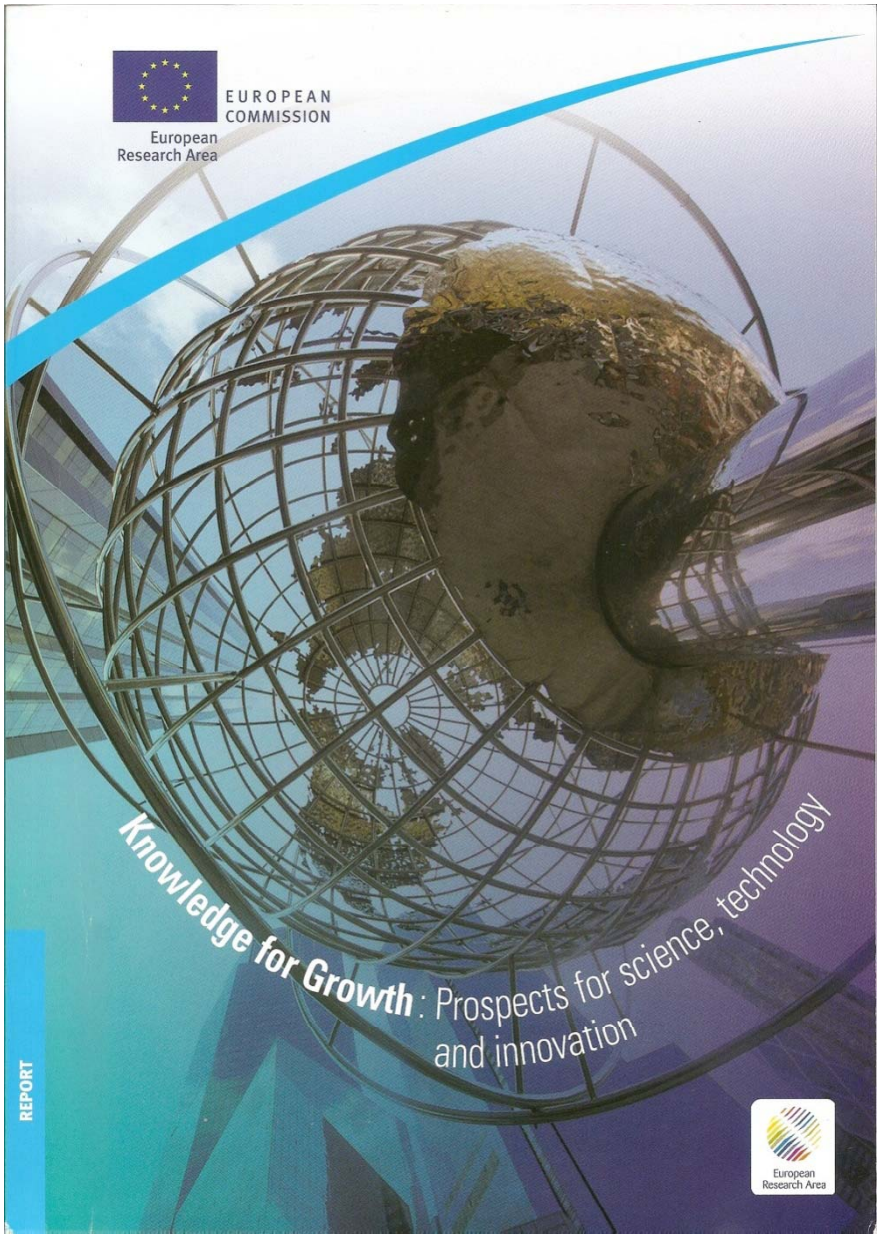
En "forkert" klædedragt f.eks., kan forårsage,
at konsulenten må bruge lang tid på at overbevise om, at han er den rigtige til opgaven

- Mr. Smart « *Any regional economy needs structural changes under the form of modernisation, transition, diversification, establishment of new industries* »
- The President of the Region « *True! We are investing heavily on ICT & nano and we have a bio-valley!* »
- Mr. Smart « *Great! But any region needs also to particularize itself and to develop a unique knowledge-base* »
- The President of the Region « *Oups! This sounds very complicated!* »

D.Foray, P.A. David and B.Hall , 2010

Smart Specialisation: the Concept

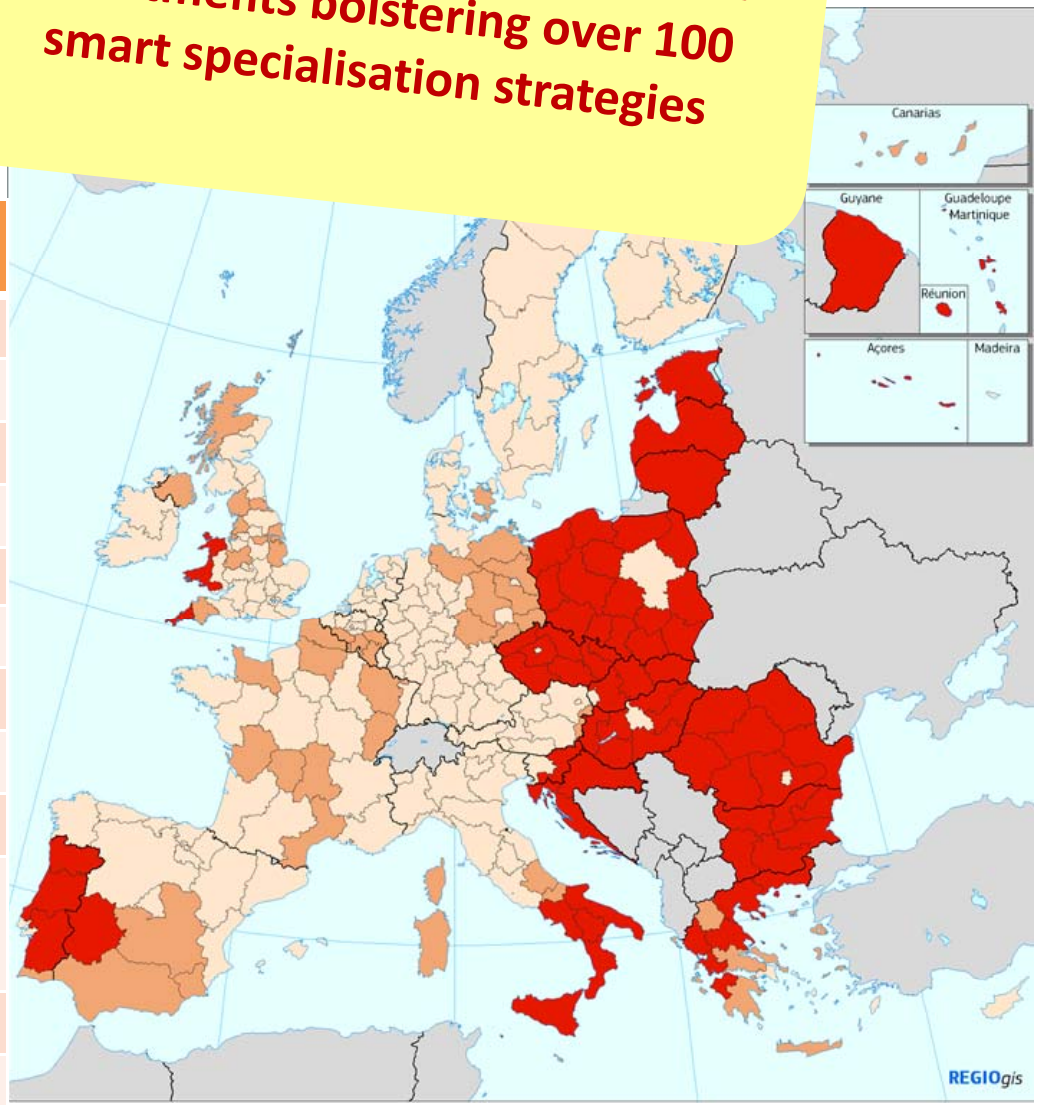


Eligibility map 2014-20

Less developed region (GDP/head: less than 75%
Transition regions (GDP/head between 75% and 90%)
More developed region (GDP/head: more than 90%)

Up to €100 billion for innovation investments bolstering over 100 smart specialisation strategies

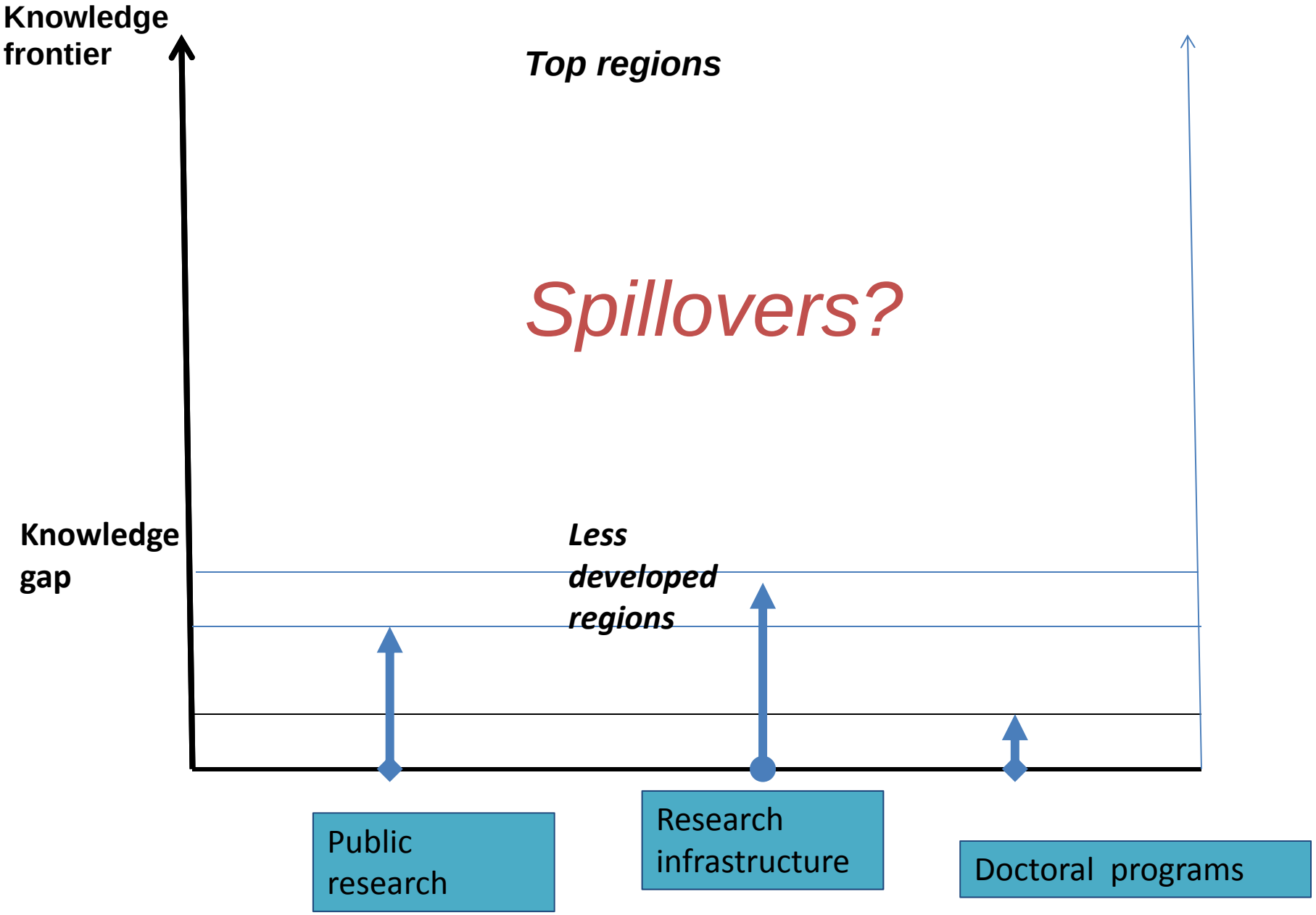
	Billion EUR
Less developed regions	164.3
Transition regions	31.7
More developed regions	49.5
Cohesion Fund	66.3
European territorial cooperation	8.9
Of which	
Cross border cooperation	*6.6*
Transnational cooperation	*1.8*
Interregional cooperation	*0.5*
Outermost regions and northern sparsely populated regions	1.4
Youth Employment initiative	3.0
TOTAL	**325.1**



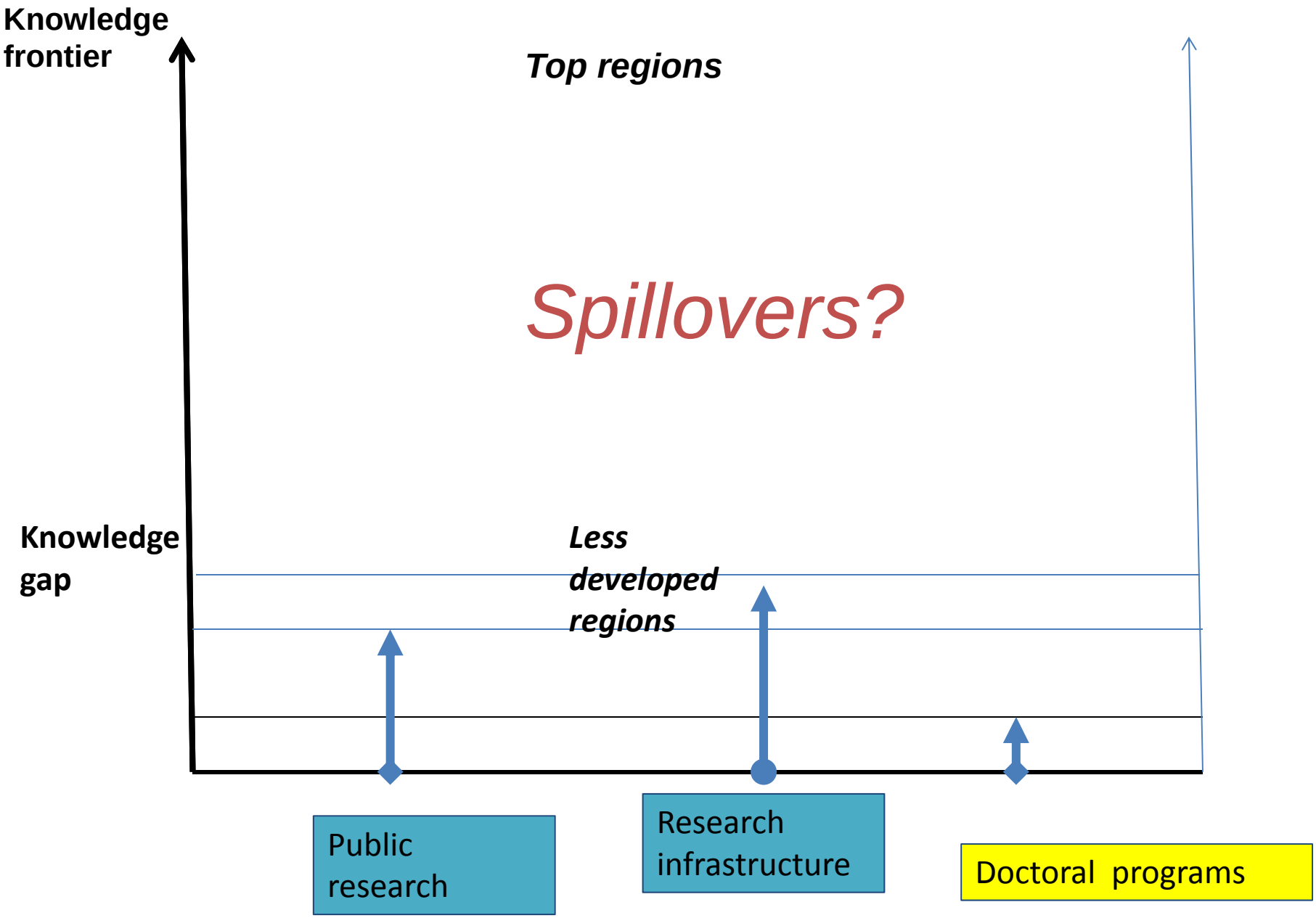
Horizontal Policy is not enough

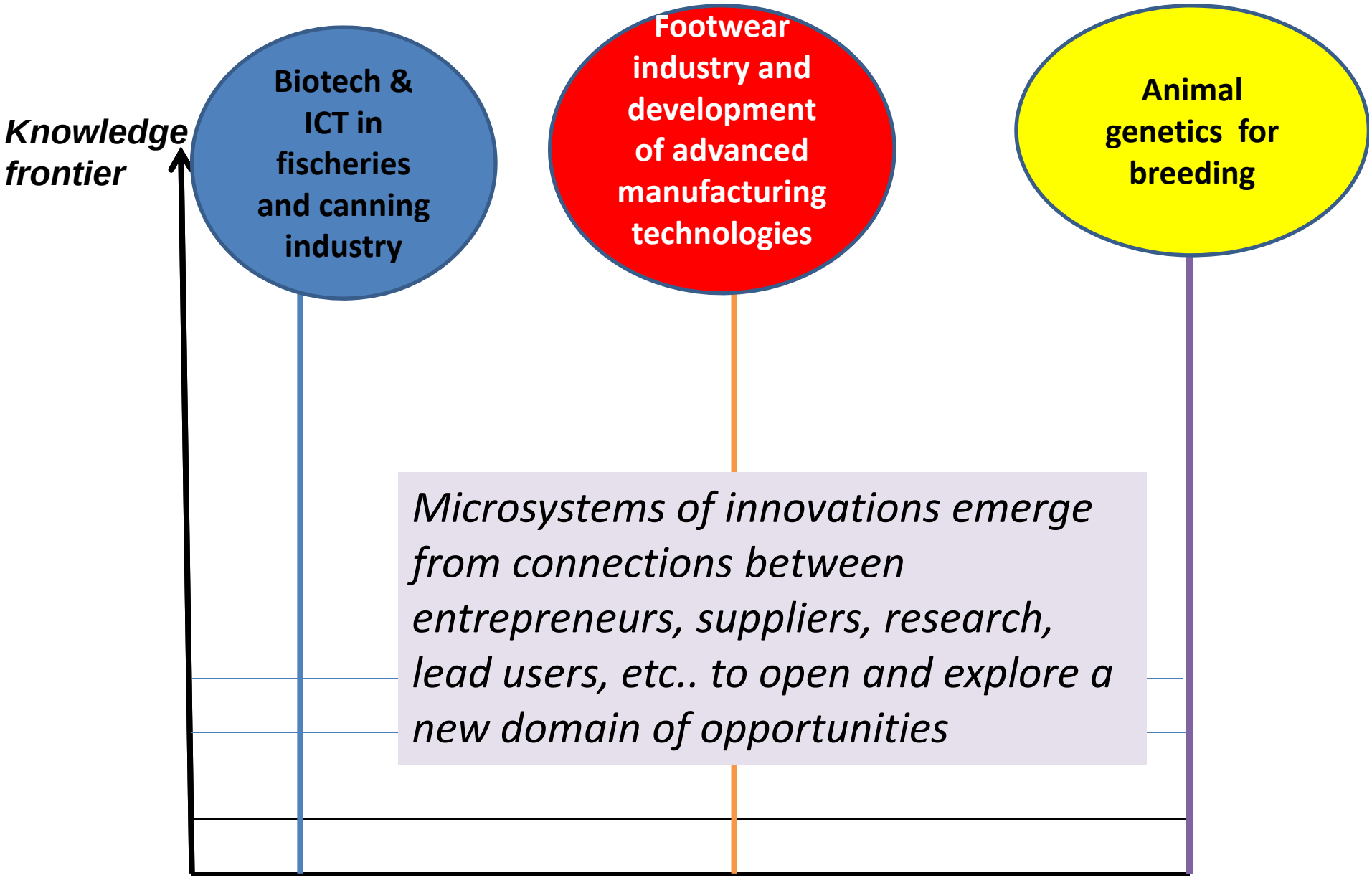
- Dominance of horizontal policies – emphasizing framework (general) conditions
  - OECD/EC consensus
- **But these policies failed in many cases (less developed/transition regions**)
  - Horizontal policy did not reduce the knowledge gap
  - When the knowledge gap has been some what reduced, this did not translate into real economic progress
- Need for a policy **to form specific capabilities in specific activities** where future competitive advantages can be built and structural changes can be driven

Low impact of horizontal policy

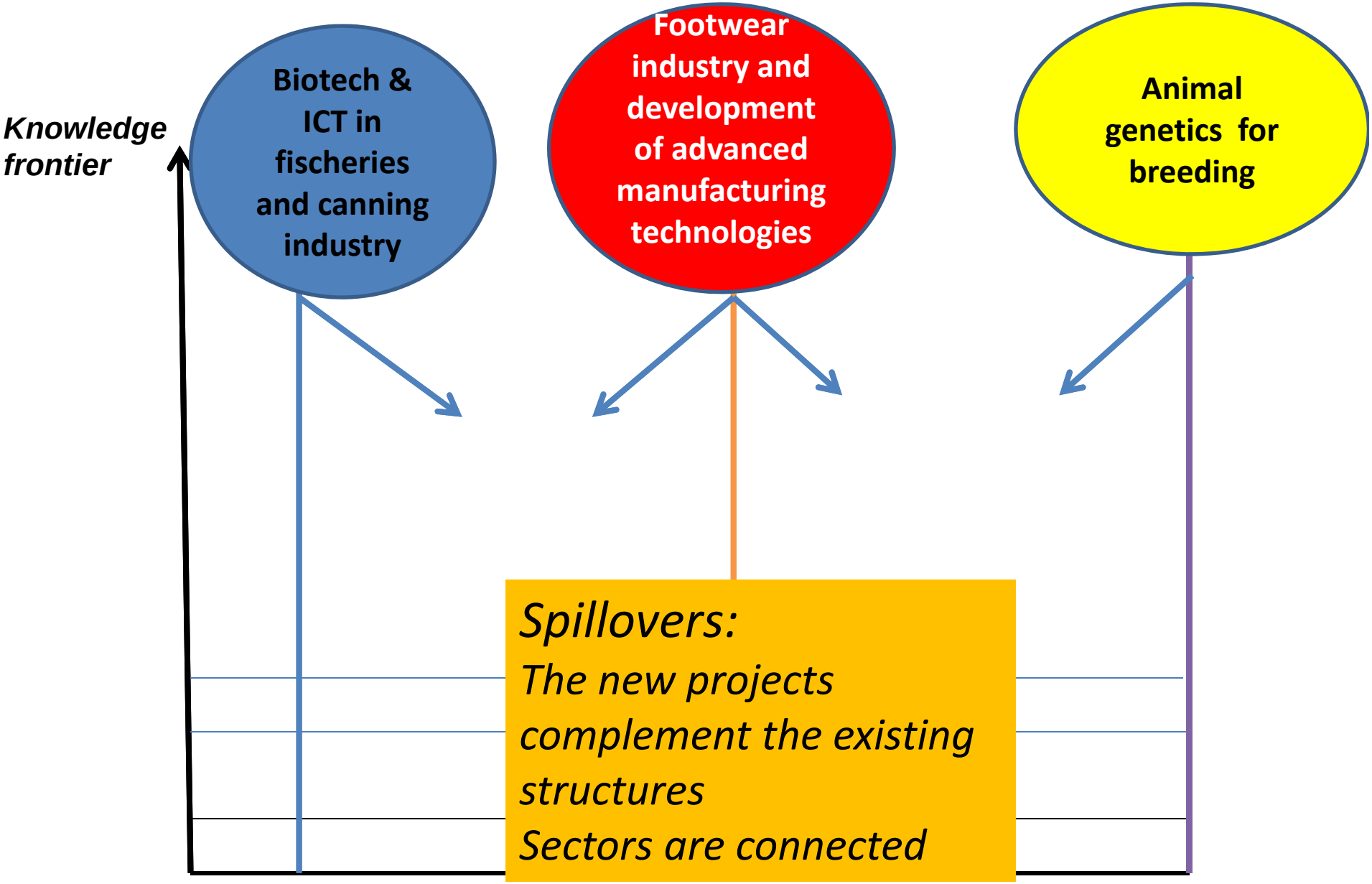


Low impact of horizontal policy



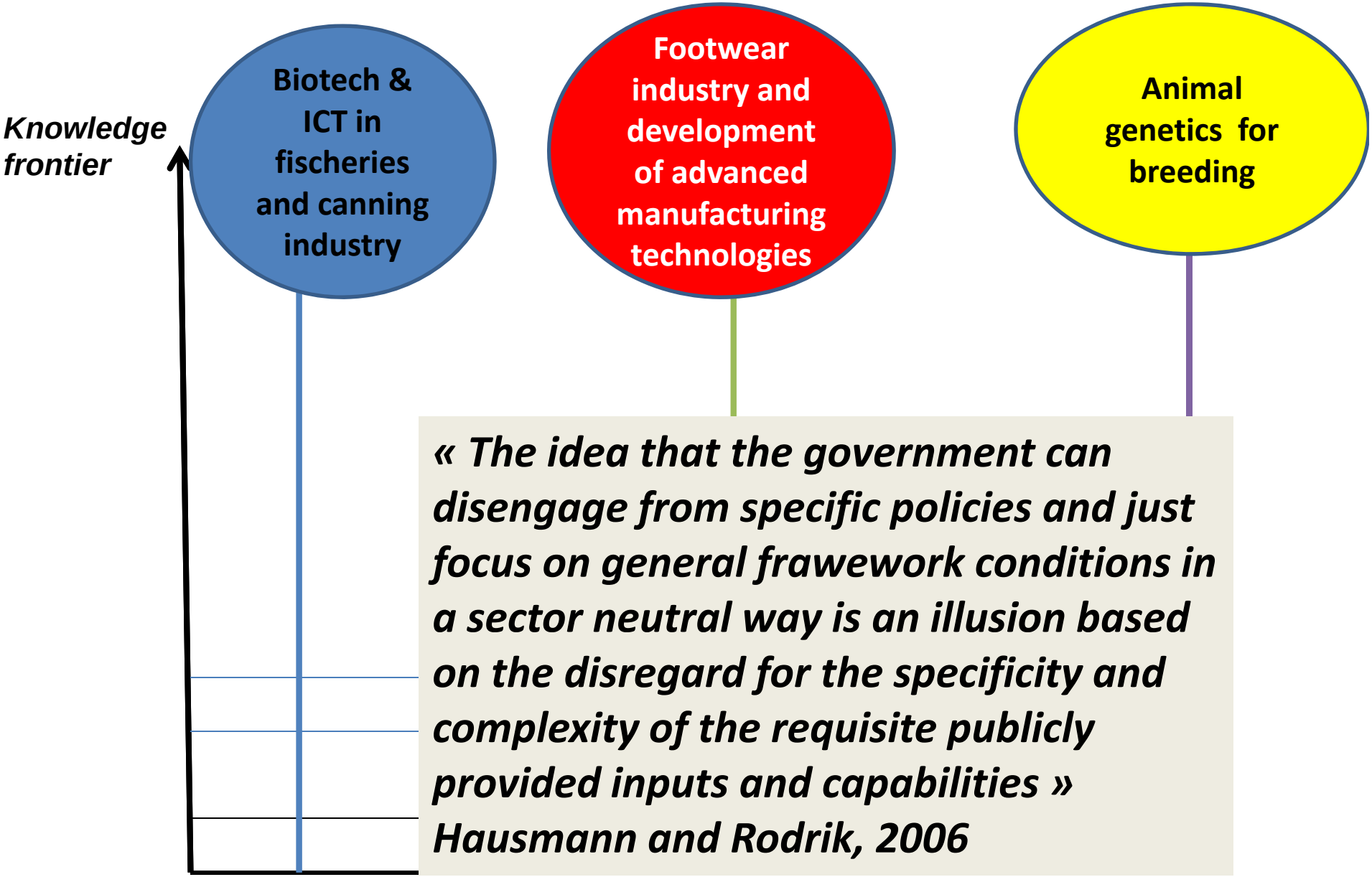


Smart specialisation


Knowledge frontier
Biotech & ICT in fischeries and canning industry
Footwear industry and development of advanced manufacturing technologies
Animal genetics for breeding
Spillovers:
The new projects complement the existing structures
Sectors are connected

Smart specialisation has two faces

- **Building capabilities** (organized in a micro-system of innovation)
- **Driving structural change** (modernisation, etc..)
- Of course a region can « import » all inputs factors for structural changes and get them without building capabilities. This is OK (perhaps a good sectoral policy in certain cases) but this is NOT smart specialisation
- Or it can « import » some factors AND build capabilities. This is smart specialisation
- Local capabilities formation is central **but the goal is NOT to get autarkic, self-sufficient regions**
  - Extra-regional ressources need to be mobilized



« The idea that the government can disengage from specific policies and just focus on general frawework conditions in a sector neutral way is an illusion based on the disregard for the specificity and complexity of the requisite publicly provided inputs and capabilities »
Hausmann and Rodrik, 2006

« *We are doomed to choose* »

Haussman and Rodrik, 2006

- **Choices are inevitable**; mistakes need to be minimized
- Mistake type 1 : **the Government has the perfect knowledge** and knows *ex ante* what should be done. What the priorities should be
- Mistake type 2 – **choices are made at sectoral level**
- Mistake type 3 – **choices are made for ever** (as in the world of Ricardo)

Design principle 1
Entrepreneurial discovery

- The government does not have innate wisdom or the *ex-ante* knowledge about future priorities.
- The knowledge about what to try and where to go is not obvious and not visible! It is hidden – It needs to be discovered!
  - The discovery process forms an integral part of political action
- **E** means entrepreneurial (in a broad sense) : firms, universities, public research, lead users, communities
- **D** means discovery, i.e. opening and exploring a new domain of opportunities


Exploring the potential of nanotech to increase operational efficiency in pulp&paper
Developing biotech application in fisheries and canning industry
Developing advanced manufacturing tech for the footwear industry
Exploring the potential of animal genetics for the breeding sector
Opening the domain of smart mobility within buildings
Discovering the potential of the integration of textile and chemistry
Discovering the economic feasibility of producing Swiss caviar

Entrepreneurial discovery *cont.*

- Entrepreneurial discovery precedes innovation
- Entrepreneurial discovery is not an exceptional event!! But it imparts to the local economy potentialities for evolution
- In many cases it is internalized in big companies
- In many cases it requires partners, networks and collaborations
- It has a strong learning dimension

Entrepreneurial discovery *cont.*

- Knowledge is local, dispersed, decentralized – central planning cannot get this information – needs for strategic interactions
- **Entrepreneurial discovery is the costly and unavoidable process of generating the necessary information about the value of future domains of research and innovation**
- Based on this information, the Government can select a few number of new activities according to criteria about potential impact, feasibility , proximity to market, significance for the regional economy, number of actors involved, etc.

Nine criteria to assess ex ante projects or domains and select priorities

*Proximity to market

*Does the activity open a new domain potentially rich in innovation and spillovers?

*What is the degree of collaboration, the number of partners involved?

*Is public funding needed?

*What is the significance of the activity for the regional economy?

*What is the capacity of the region to keep the successful activity on its territory?

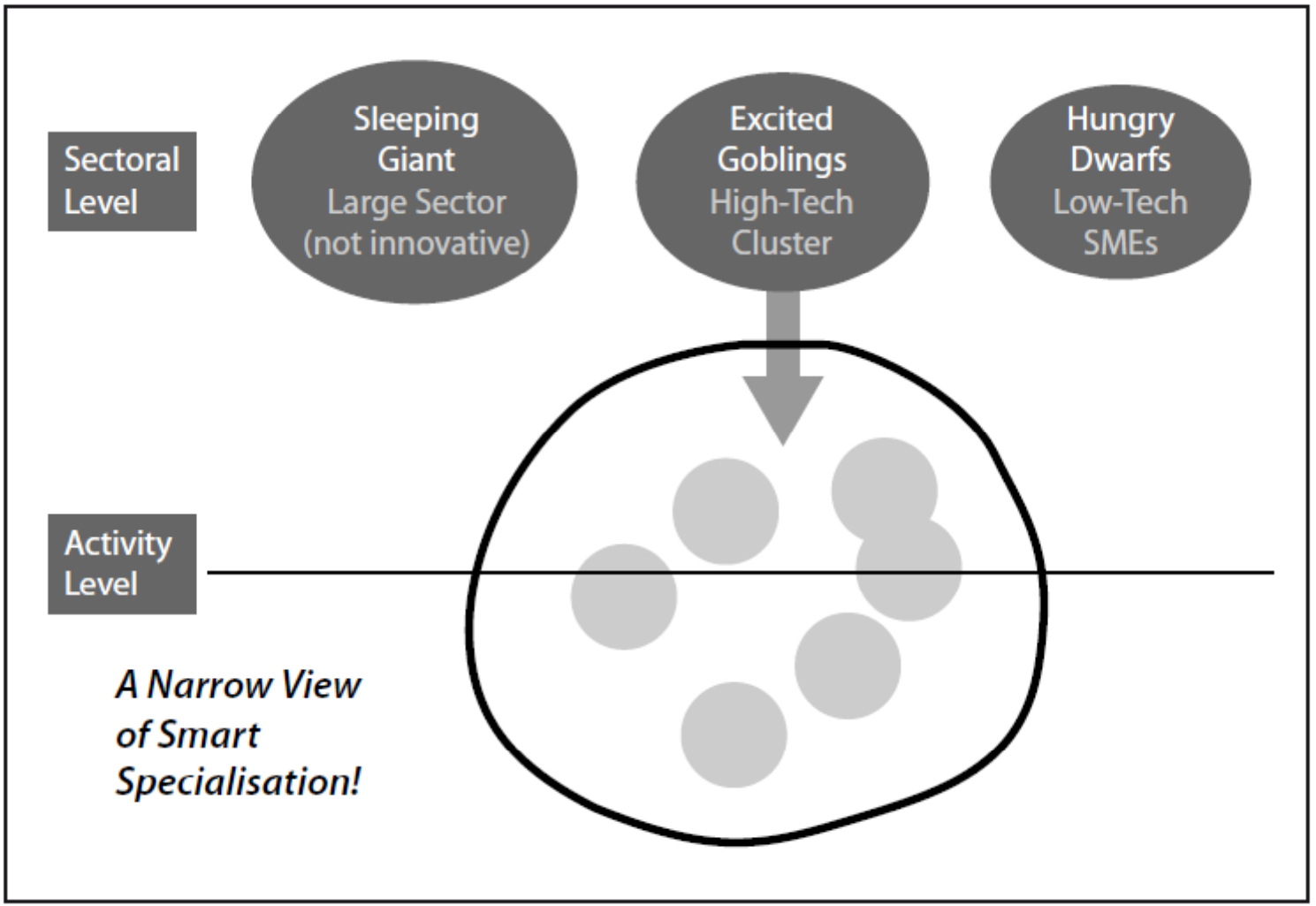
*Can this activity drive the region towards leadership in the selected niche?

*What is the degree of connectedness of the activity *vis-à-vis* the rest of the regional economy

* Private firms are ready to submit themselves to monitoring and performance audits.

Design principle 2-
No sectoral prioritisation

- What is prioritized is not a sector but the new activity
  - Sectoral prioritization creates distorsions
  - Activity level is the right one to see in detail the pieces of the knowledge economy that a region or country can take as a basis for its RIS3
  - Activity level allows for an inclusive strategy : discovery and priorities can happen in any part of the regional economy


Sectoral Level
Sleeping Giant
Large Sector
(not innovative)
Excited Goblings
High-Tech
Cluster
Hungry Dwarfs
Low-Tech
SMEs
Activity Level
A Narrow View of Smart Specialisation!

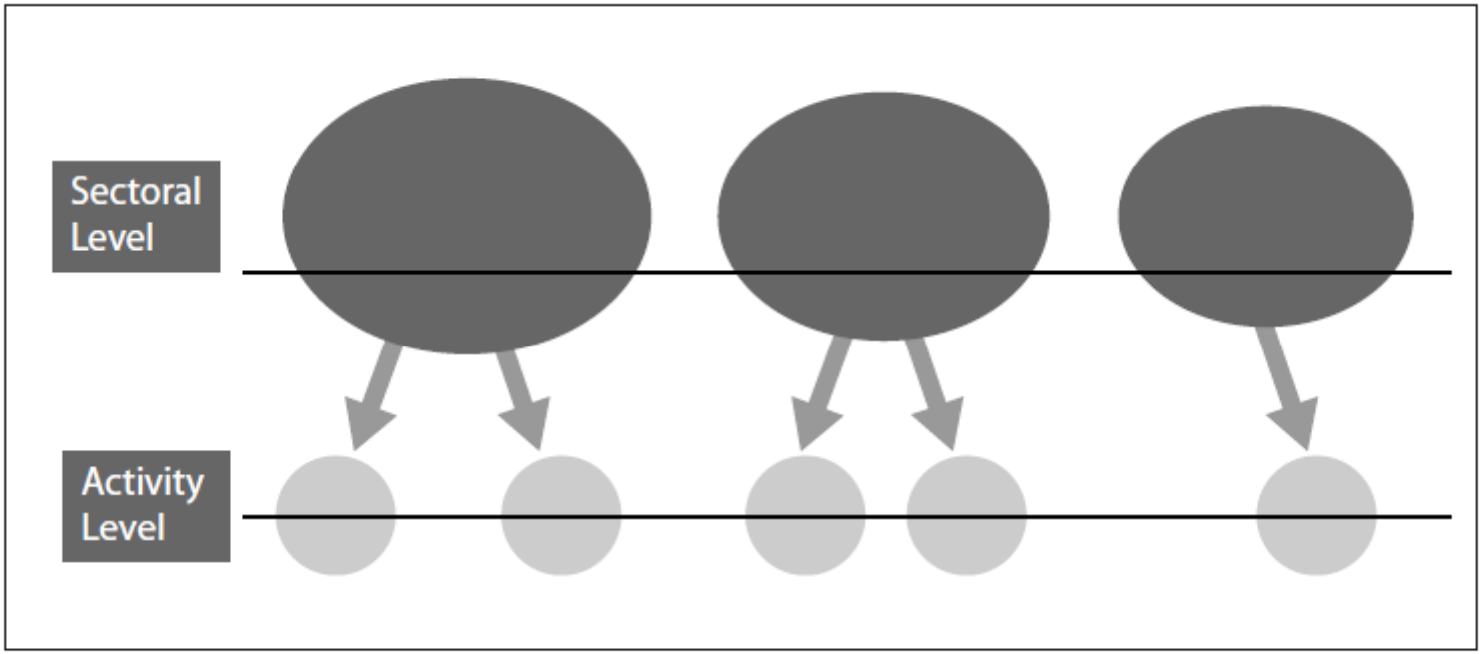


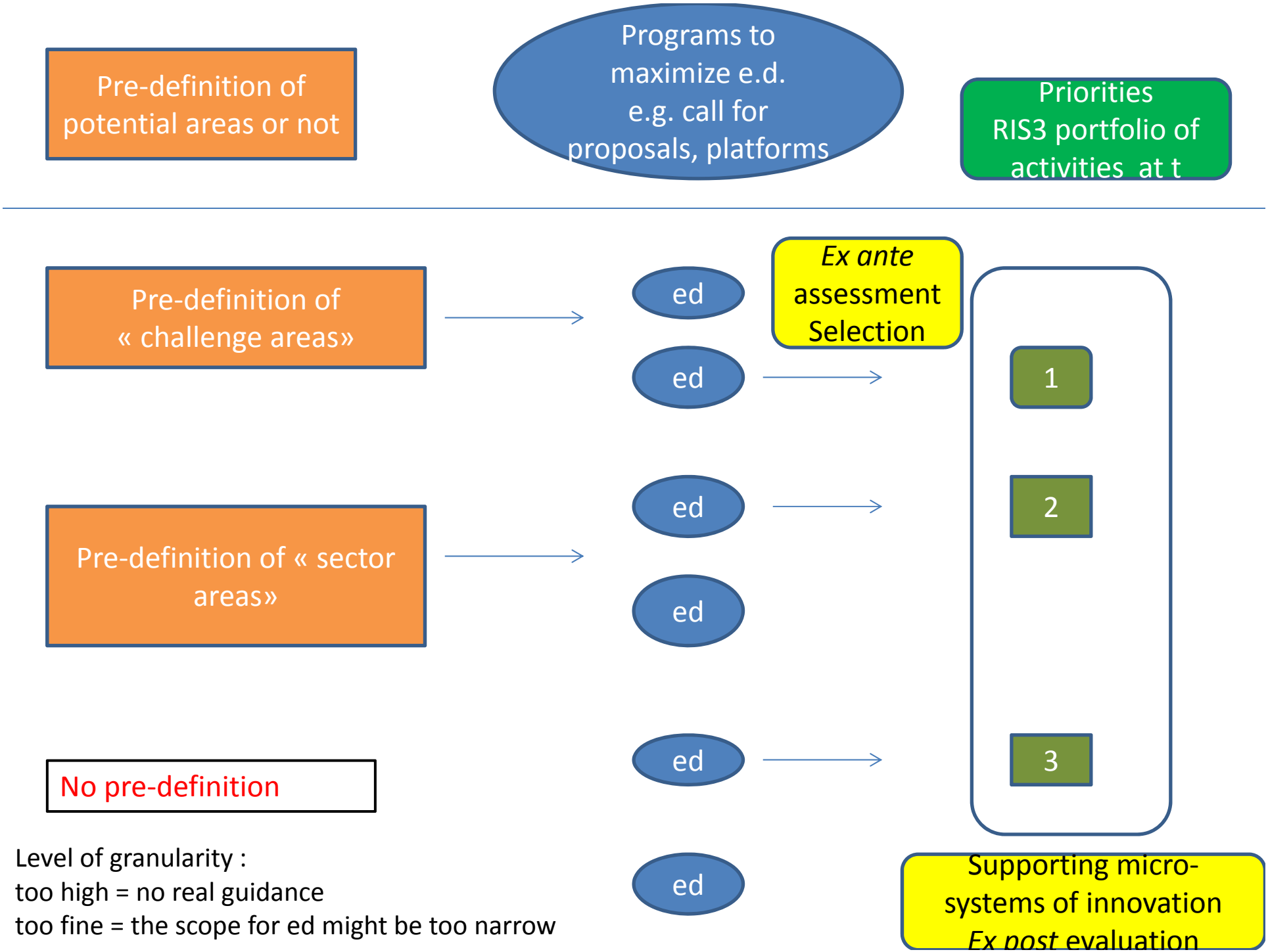
Figure 3.2: An Inclusive Smart Specialisation Strategy.

Design principle 3-
RIS3 has an experimental nature

- A few bets are placed on various domains
- **RIS3 is a living document**
  - After n years a new activity is no longer new (as a success or a failure it needs to exit)
  - New discoveries happen all the time and a few need to be integrated in the strategy

Stimulating and guiding ED

- Generic policy to stimulate ED
  - Leadership (firms, local university and PROs, cluster management, diaspora, extra-regional competences)
  - Platform
- Policy to stimulate ED in pre-defined areas where structural changes are badly needed
  - Specific programs for specific sectors
  - Specific programs for specific challenges



Level of granularity :
too high = no real guidance
too fine = the scope for ed might be too narrow

A smart specialisation strategy involves..

- .. putting in place a process:
- **to identify future domains** where competitive advantages can be built
  - stimulating and watching entrepreneurial discoveries
- **to concentrate resources** on a few number of domains
  - selecting domains and building micro-systems of innovation
- **to help these domains to grow**
  - providing specific capabilities and complementary resources,
- **to measure progress**
  - building indicators and benchmark
- **to re-initiate the process at any time**
  - making RIS3 a living document

After 2 years of implementation

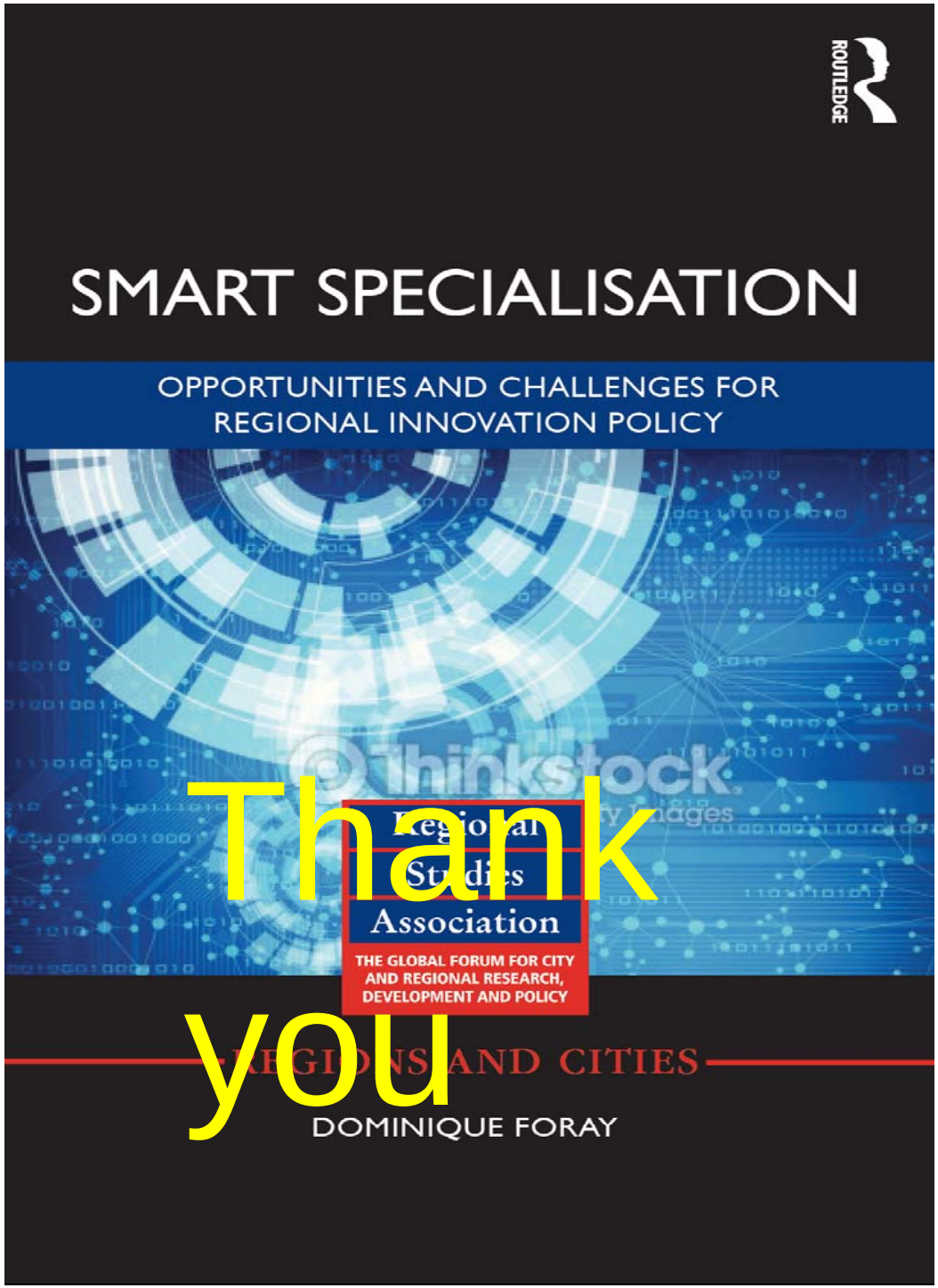
- **Entrepreneurial discovery is easier in practice than in theory !**
  - But the key actors need to be mobilised
- **Some early benefits**
  - Decentralisation (democratisation) is better than central planning
- **Best practices are emerging and governement capabilities improved significantly**

Smart specialisation and clusters

- *"Looking at a successful region in its full maturity may not provide prescriptive information about how such regions do develop. Conditions that we associate with an entrepreneurial environment are the result of a functioning entrepreneurship and do not illuminate the* ***early efforts*** *by which such entrepreneurship first took hold and the cluster developed"* (Feldman and Francis, 2001).

Smart specialisation and cluster

- The two policy concepts are orthogonal
- As cluster policy, S3 emphasizes the local concentration of resources and the provision of complementary capabilities to enhance local systems of innovation
- Different from cluster policy, RIS3 focuses on the ***early efforts***, the opening of a domain and the emergence of a new activity, as the preliminary and fundamental phase of any cluster generation and renewal


ROUTLEDGE
SMART SPECIALISATION
OPPORTUNITIES AND CHALLENGES FOR REGIONAL INNOVATION POLICY
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DOMINIQUE FORAY

Thank you