

S3 Platform Peer-Review Workshop for National RIS3

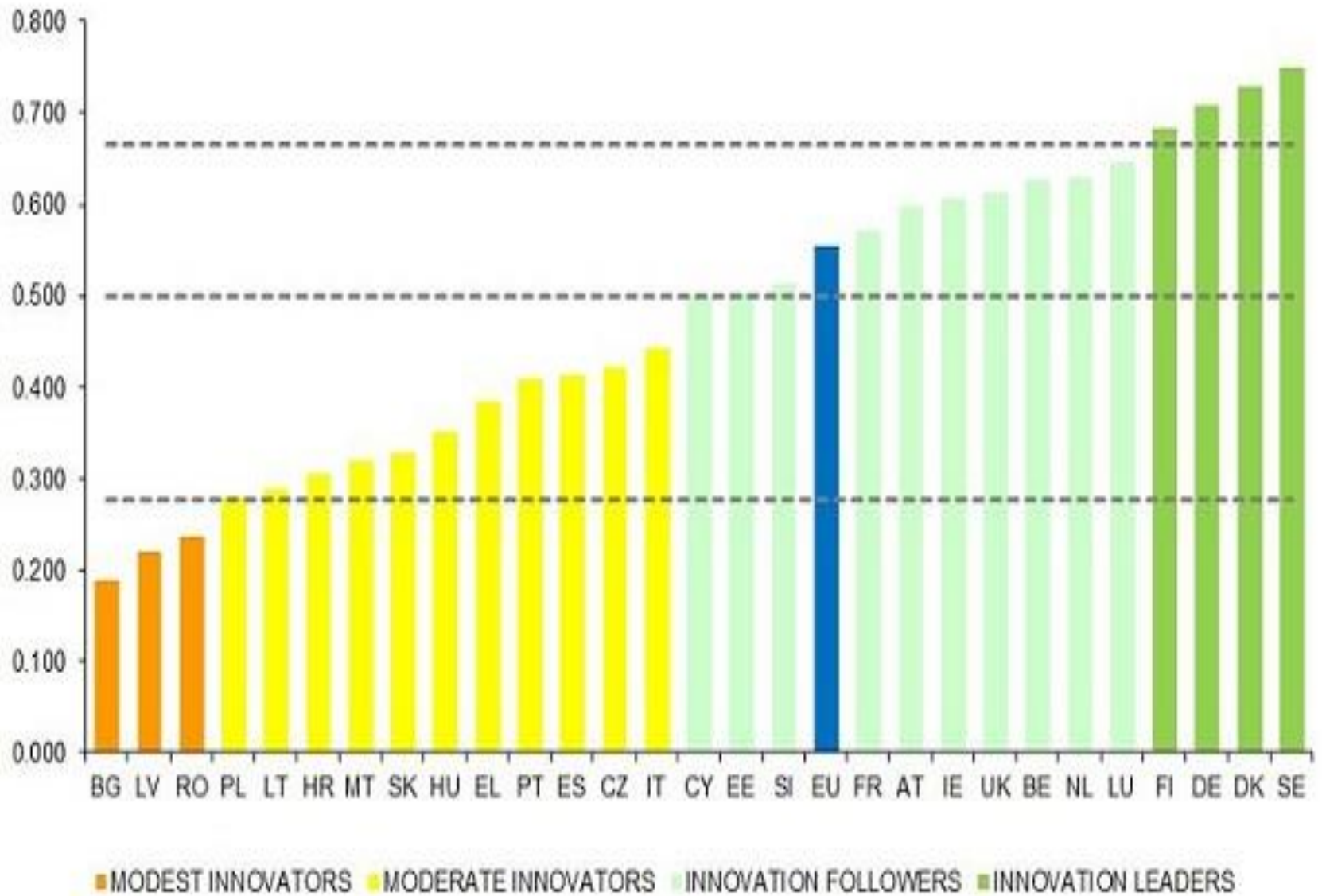
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Slovenia

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- Is investing in the knowledge economy a good strategy for transition regions/countries?
 - **Yes!**
 - One question remains
 - **How?**

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- Countries and regions have made some progress towards the knowledge economy along several dimensions
 - R&D centers
 - Highly skilled workers (PhDs, researchers, engineers)
 - Scientific outputs
 - Participation to the EU R&D programs (FP7)



However...

- While countries have managed to improve their knowledge gap, they have difficulties to translate it into real economic convergence
- This is the case when improvement in knowledge is mostly a public sector/science/high edu component, with scoring on business innovation performance remaining low

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- The knowledge economy is **neither** just about building knowledge infrastructure (high edu and science) **nor** about creating silos of high tech..
 - .. and then waiting for the *magical spillovers*
 - To have an economic impact, knowledge and talents need to be used to produce innovation, to transform structures and to generate good jobs : **spillovers**
 - **But spillovers don't happen magically!**
 - Need for companies with sufficient capabilities, networks, relational density



News from Texas

- « *The state has decided to invest \$2.5 billion for science teaching and research in the Universities of Texas* »
- But the students go on the East and the West coasts to find good jobs
- Midwest syndrom : Knowledge here, innovation elsewhere!



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- Building a knowledge economy..
 - .. is about translating knowledge and people into new products, processes, organisations (innovations)
 - .. is about using knowledge to transform structures (incl. traditional sectors)
 - Key issue :
 - Capacity of firms to develop new specialties and generate structural change via research and innovation
 - Plugging industries/agriculture/services (incl. traditional sectors) into the knowledge economy

Knowledge economy

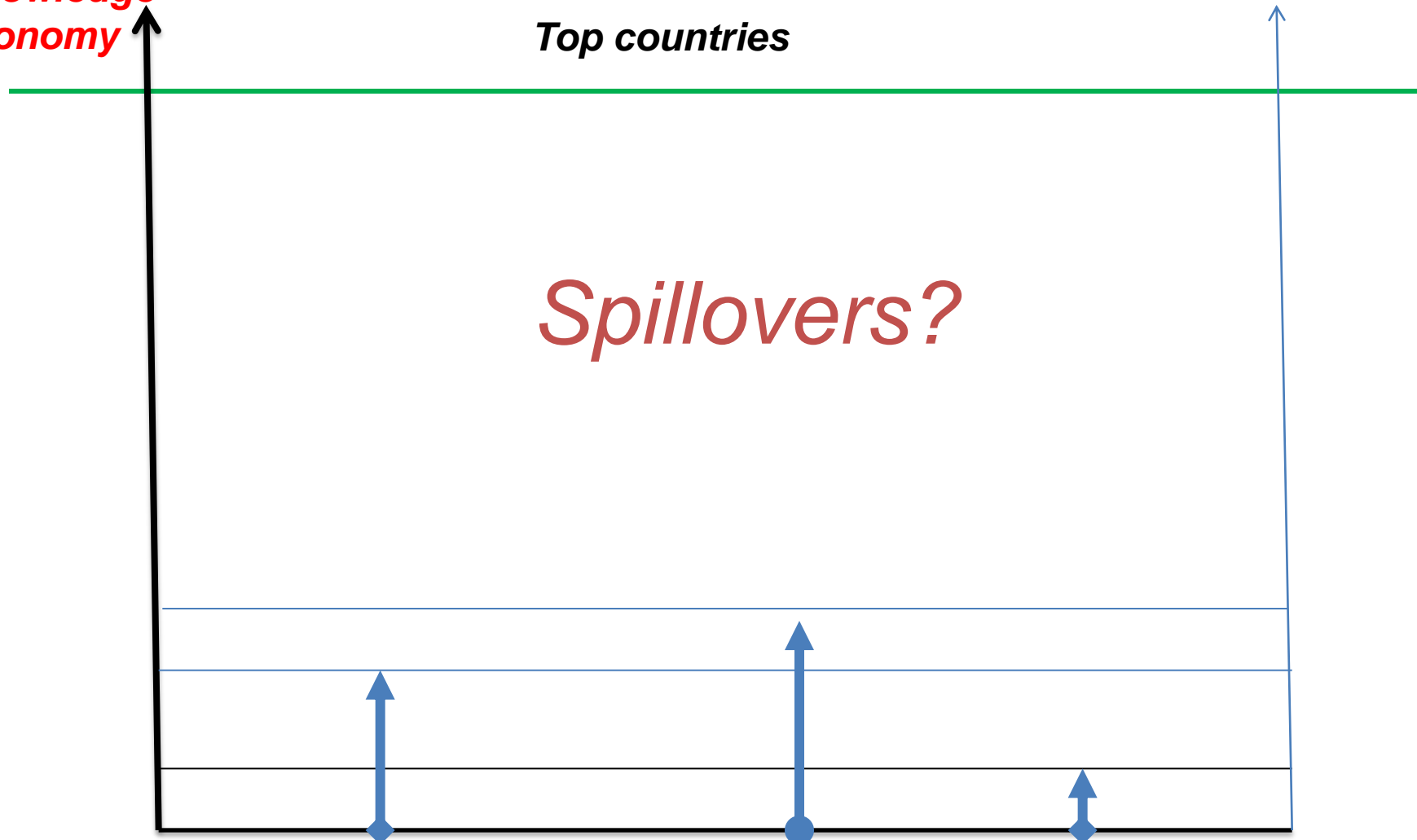
Top countries

Spillovers?

Scientific publications

R&D centres

Doctoral programs



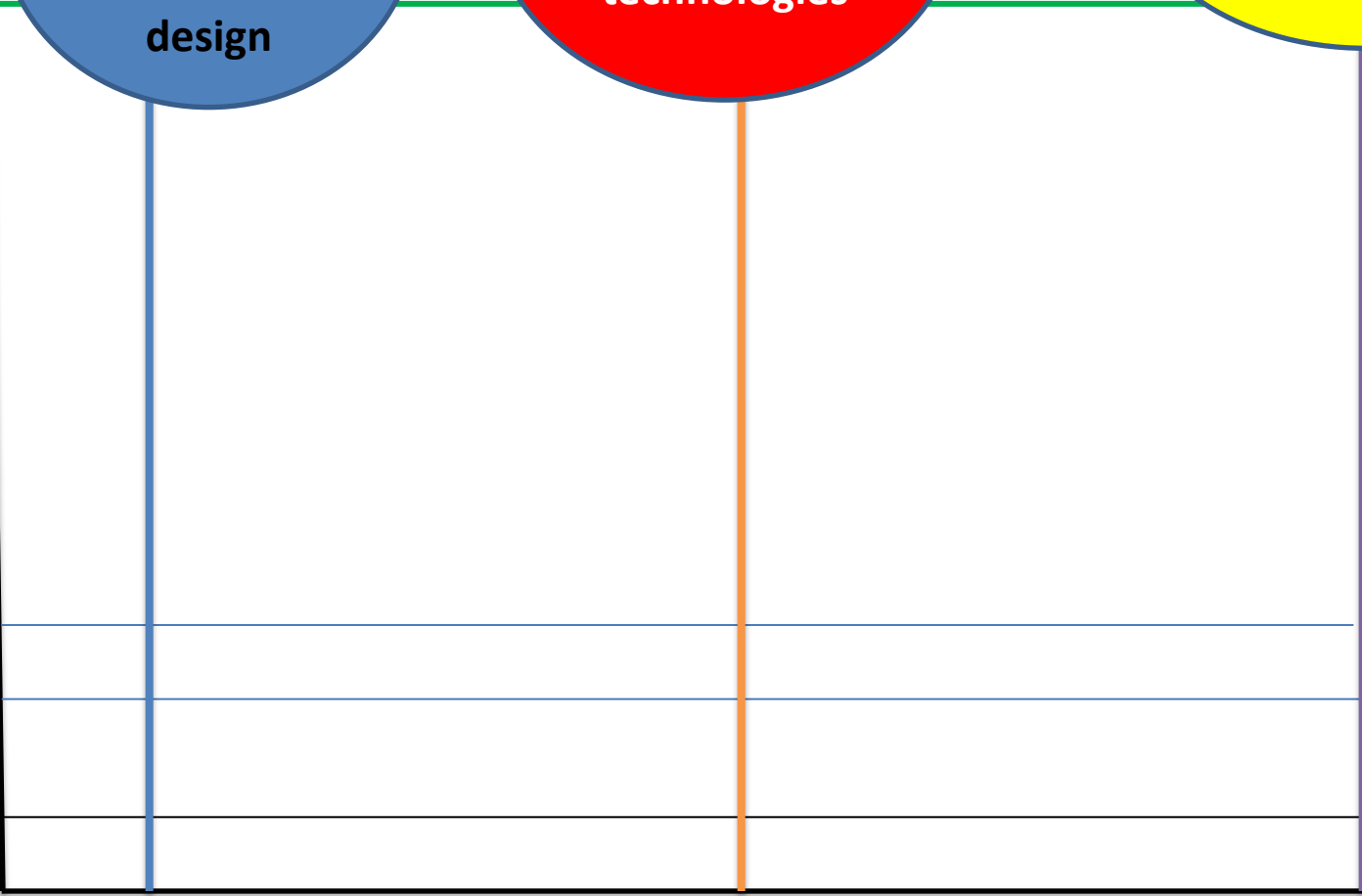
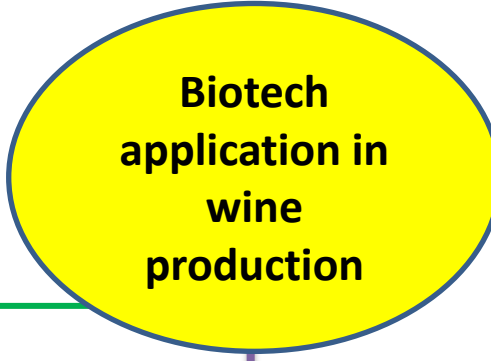
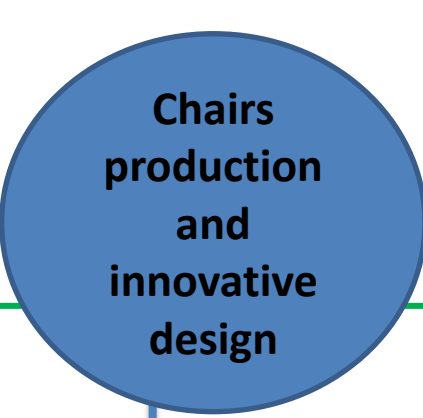
**Knowledge
economy**



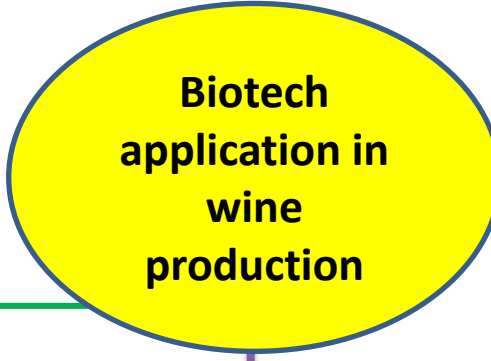
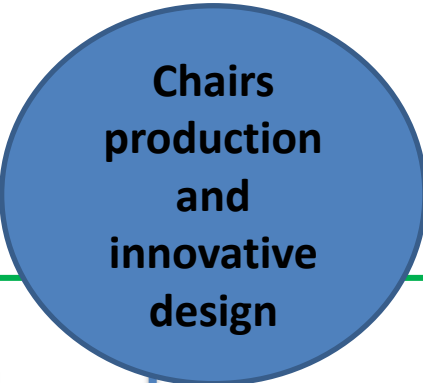
Top countries

Spillovers?

Knowledge economy

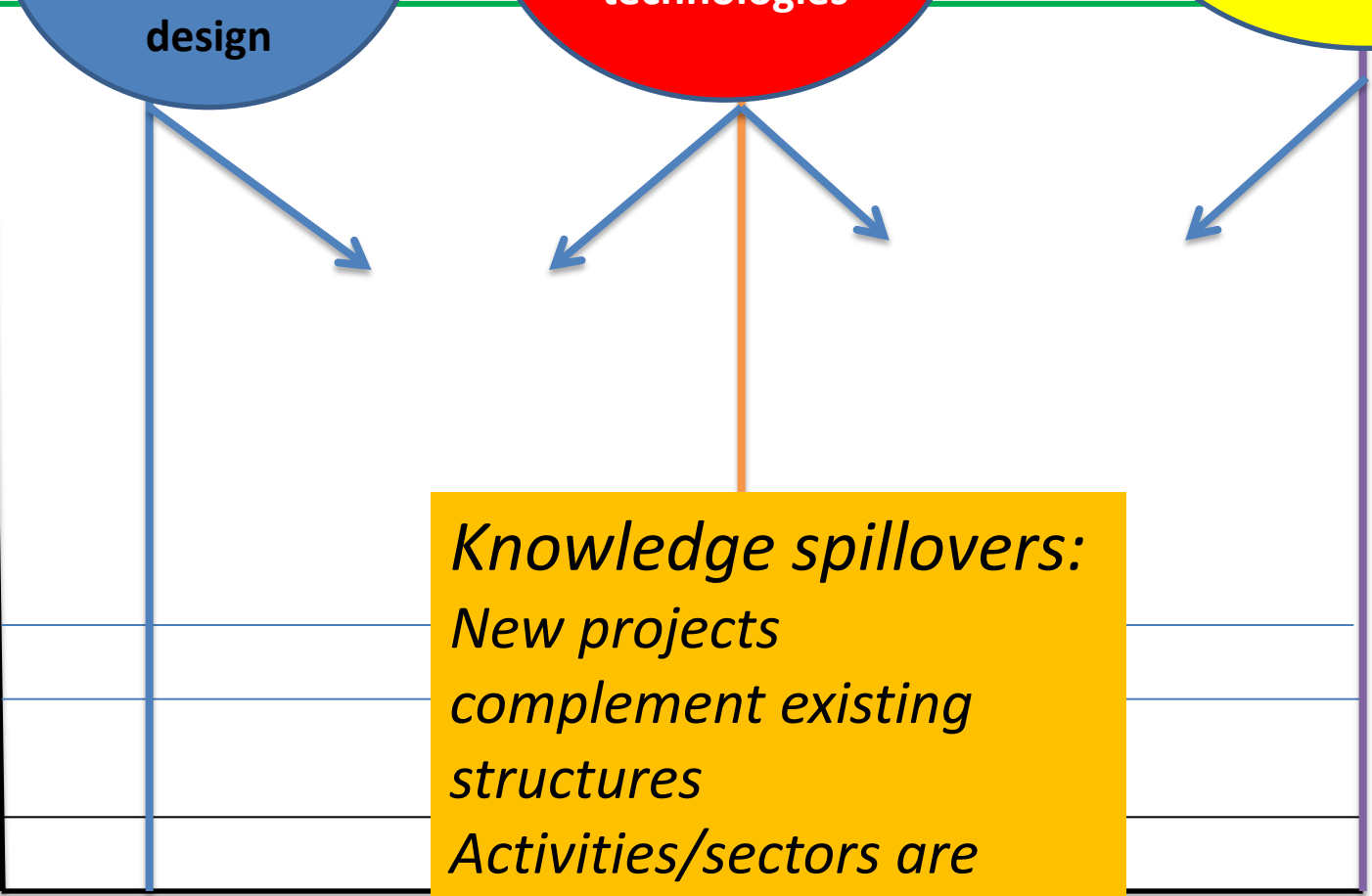
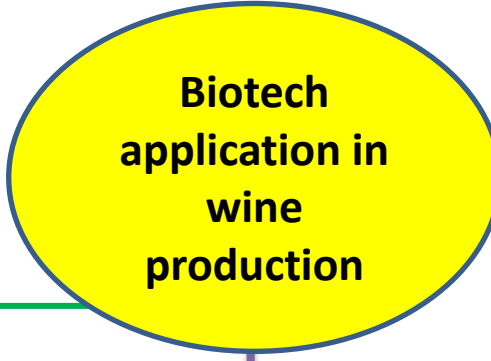
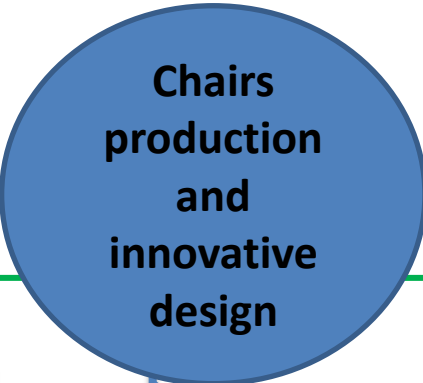


Knowledge economy



New activities emerge from the connections between entrepreneurs, lead users, local universities and public research organisations, etc.. to explore and open new opportunities

Knowledge economy



*Knowledge spillovers:
New projects
complement existing
structures
Activities/sectors are
connected*

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- We need a mechanism to help (to force) connections between research and industry; to get things (innovation) started in industry/agriculture/services
 - **We need to put in place a process :**
 - to identify focal points where the connection between research and industry (or agriculture or services) is crucial to open a new activity;
 - to support the development of these new activities (priorities), by achieving critical mass (networks, clusters) and helping coordination between complementary investments
 - to measure progress (innovation, job, structural changes)
 - This mechanism is called : **a smart specialisation strategy**

Welcome to Utopia!

- A traditional sector in Portugal : shoes' industry which is under competitive pressure because of the success of chinese footwear industry (average price in Europe: 4 Euros!)
- An engineering school in Porto : INESC develops fundamental and applied knowledge in advanced engineering
- Specialised suppliers and software companies develop and commercialize advanced tools (such as water jet equipments)
- Numerous shoes companies adopt such tools allowing to respond quickly to small orders and to market a variety of models and designs

*CEI / Zipor
Group
Water jet
cutting systems* ★



***Modernisation & diversification through research and innovation**

Second largest European exporter
Second highest value shoes in Europe

***Spillovers to other sectors**

Metal working, furniture, automotive

***The process has two faces**

Transforming a sector
Building capabilities



*CEI / Zipor
Group
Water jet
cutting systems* ★



This is smart specialisation because:
What is prioritized is not a sector but ***a new activity***
The agency has been instrumental in supporting the formation of a consortium to integrate knowledge and generate ***entrepreneurial discovery***
Not just high tech but ***high tech penetration into a traditional sector***
Expected outcomes :
structural change, spillovers to other connected activities

Not sectoral prioritisation but *new activity*

- What is prioritized is not a sector but the new activity to develop advanced manufacturing tech. for the shoes' industry
- Sectoral prioritization creates distortions
- 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 S3

Entrepreneurial discovery

- The key event : discovery of a new domain potentially rich in innovation and spillovers
 - Entrepreneurial discovery opens/explores a new domain of opportunity.
 - It precedes routinized innovation
 - Essential phase or decisive link that allows a system to reorient and renew itself
- Anatomy
 - knowledge integration – science – technology – insights and vision;
 - and economic experimentation
- A rather simple event!

Anibal Abrantes managed the first Portuguese mould making company

The market of glass industry declined

Mass production of plastic products began

Abrantes started to experiment and explore the production of mould for this new material

E.D.: the decisive link that allows a system to re-orient and renew itself

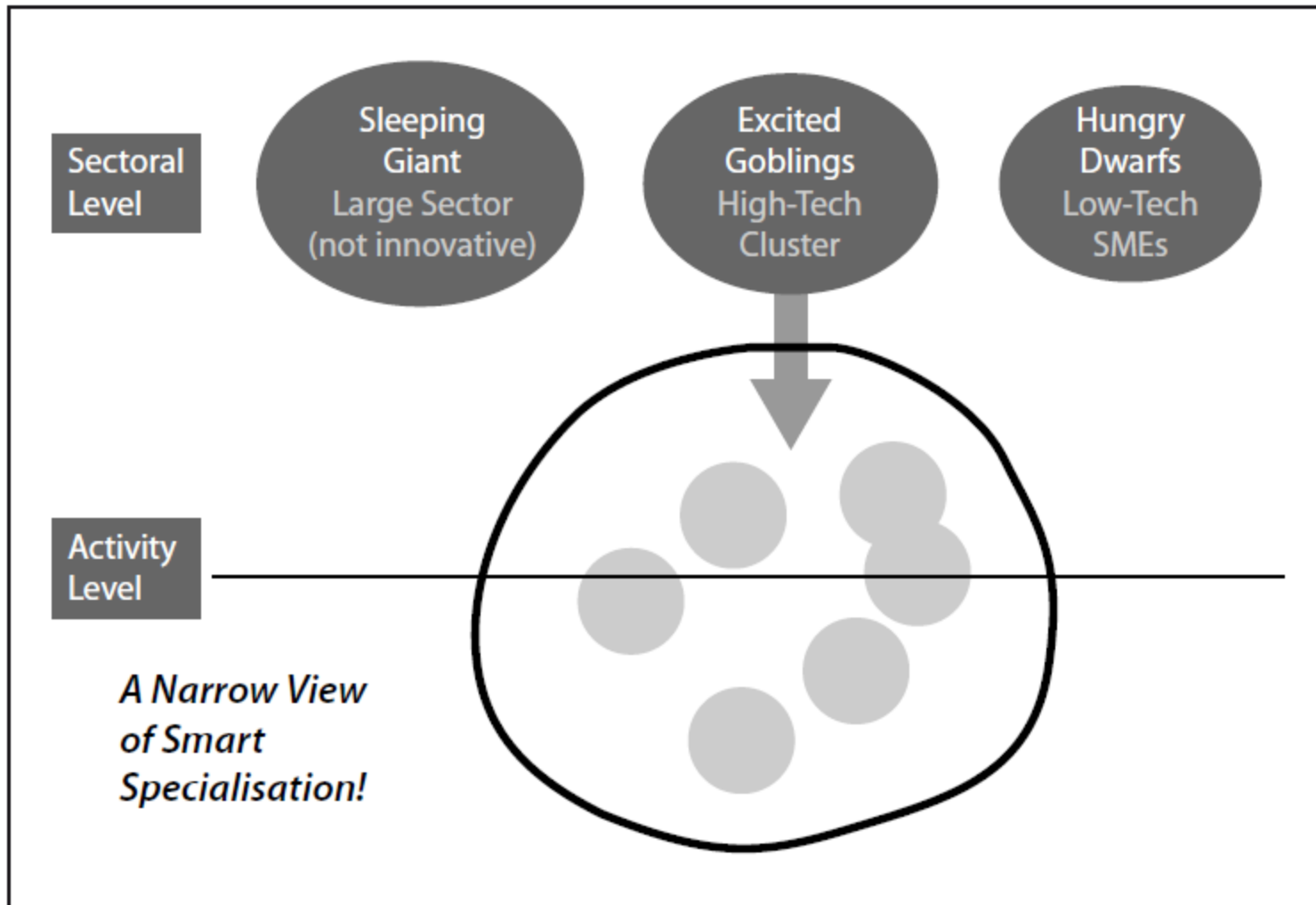


Entrepreneurial discovery

- Some times it happens spontaneously – thanks to private capabilities of entrepreneurs
- Many times, policy is needed to build and develop projects : policies can help to manage risk, uncertainty, weak appropriability; connect different entities and integrate knowledge; solve coordination failures

Not only high tech!

- *Sleeping giants*
- *Excited goblins*
- *Angry dwarfs*



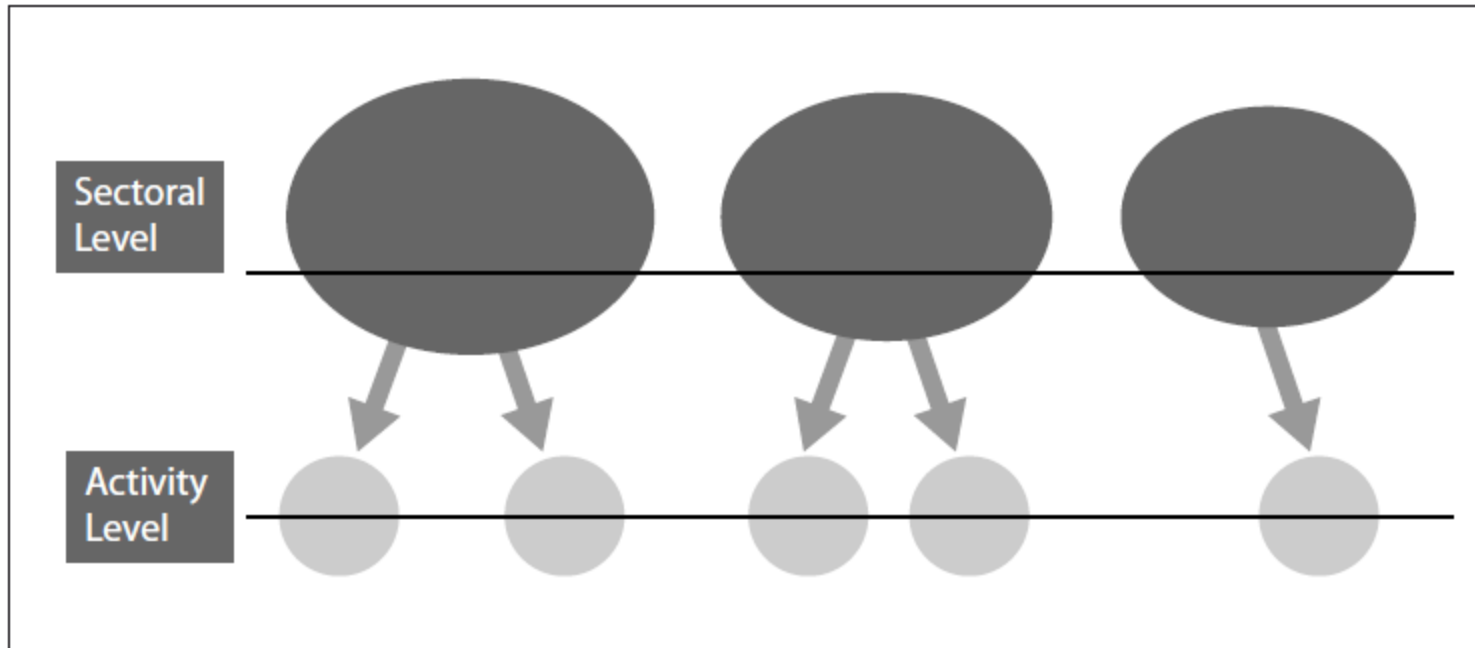


Figure 3.2: *An Inclusive Smart Specialisation Strategy.*

*«While dynamism is crucial, we want dynamism with economic justice – with what I call economic inclusion. It means drawing companies and people into the economic sector of a modern economy, where new ideas for new processes and products are conceived and experimented»
(E.Phelps, 2012)*

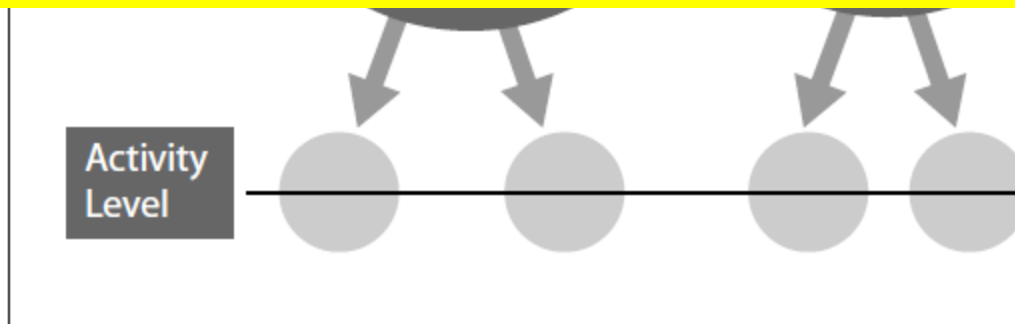


Figure 3.2: An Inclusive Smart Specialisation Strategy



You need a strategy

- Putting in place a process in order to:
- Identify, evaluate and support a few e.d. projects
- Help e.d. projects to emerge in sectors with poor capabilities (inclusiveness) : platforms/programs
- How to assess and prioritize? (next slide)
- Evaluate progress according to clear benchmark for success and failures (cost, productivity, innovation, job)
- Keep alertness : new opportunities will emerge while some projects will be terminated : *the strategy is a living document*

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.

Go beyond the obvious (smart) specialisation

- In most countries only a limited number of sectors (and also actors) play a key role in the growth of BERD
 - Pharma, ICT, motor vehicles
 - By definition several priorities will be set here (*the excited goblins!*)
- But new mechanisms must be developed to generate projects/priorities in other sectors (*sleeping giants and hungry dwarfs*)
 - Platform, consortia
 - Private sectors entrepreneurs but also universities and other actors bid for public resources by bringing forth pre-investment proposals
 - Use twinning and teaming initiatives - e.g. Croatia + EPFL
 - Twist FDI towards S3

SMART SPECIALISATION

OPPORTUNITIES AND CHALLENGES FOR
REGIONAL INNOVATION POLICY



What is important is to have a process in place (a strategy) which helps to reveal or to build the new activities that will construct the future competitive advantages of the country

DOMINIQUE FORAY



Thank
you!