

S3 Platform – Peer Review Workshop

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**RIS3 from Strategic
Orientations towards Policy
Implementation:
The Challenges**

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KEY Challenges RIS3

Two **novelties/key benefits** of RIS3:

- from introspection to “extrospection” : an open view to regional policies
- from administrative to strategic management of policy

Main **challenge** in **implementation** of RIS3:

- Translate broad strategies into efficient and integrated policy mixes

Main **bottlenecks** to “serious” implementation of RIS3:

- Policy-makers resistance to:
 - Long-term investments (returns beyond 4-year legislature...)
 - Genuine prioritisation (selection and de-selection!) – coping with lobbies...
 - Cross-domains, cross-level and cross-border policies
- Little evidence to identify “white spaces” between sectors, clusters, poles,...
- Need for more robust, systematic and systemic policy evaluations

Implementing RIS3

Challenges:

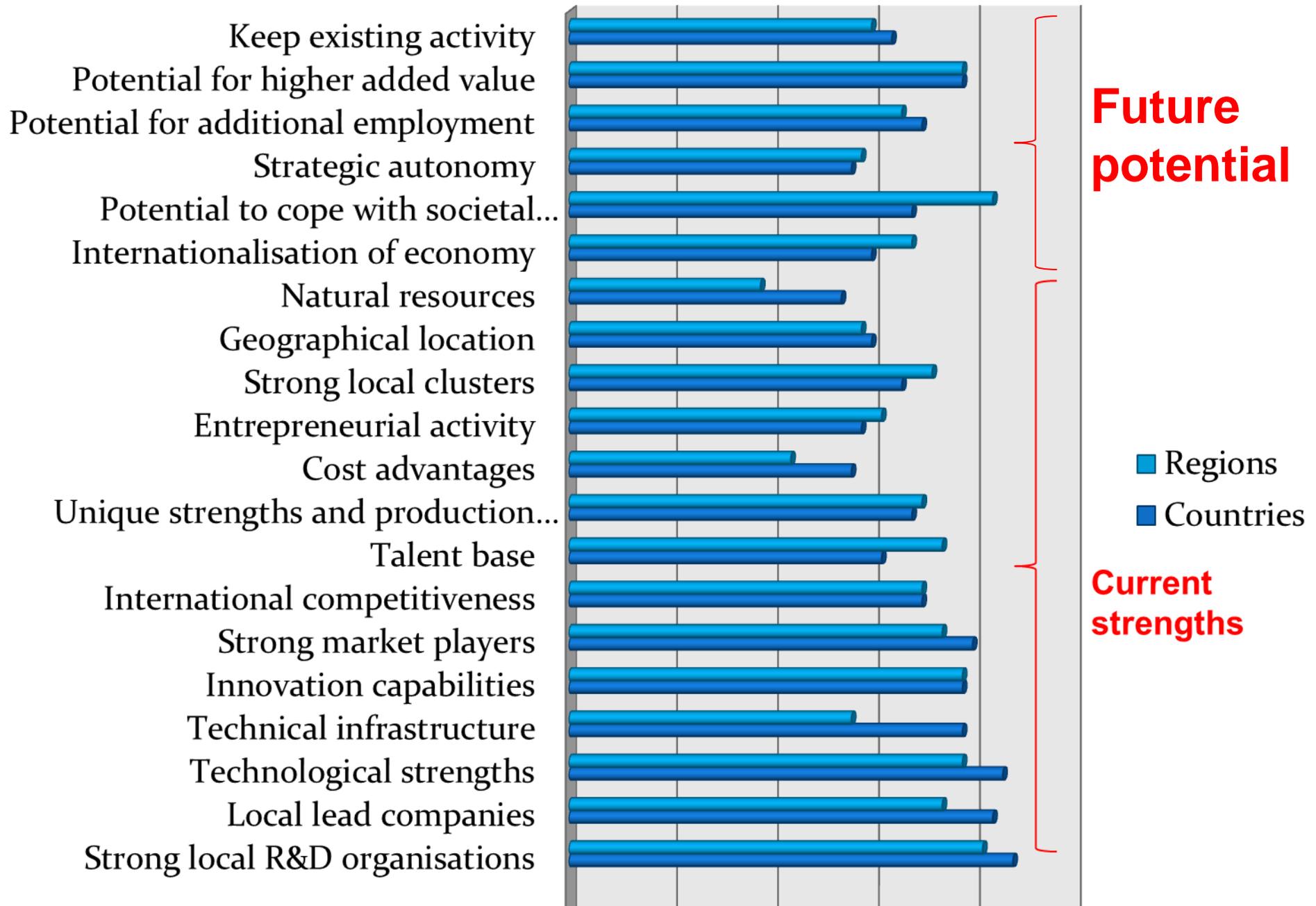
- Overcoming **path dependency and inertia**:
 - adapting old institutions to new policy models
 - developing unlearning capability in policy circles
 - bringing coherence in “historical” policy mix
- From «**silo**»-driven to «**outcome**»-driven policies:
 - starting from desired outcomes rather than from instruments machinery
 - from incremental improvements in existing portfolios to radical restructuring
 - Developing systems for policy accountability focusing on effectiveness rather than efficiency
- Allowing **policy experimentation** (innovation!) in policy

The S3 OECD enquiry

- **Priorities**
 - Implicit/explicit
 - RDTI/economic
 - Regional/national
- **Processes**
 - Selection criteria
 - Stakeholders involvement
 - Analytical and evidence base
- **Policies**
 - Policy instruments
 - Budgets
 - Monitoring & Evaluation

Source: OECD (2013) Smart Specialisation in global value chains: designing and assessing smart specialization strategies

Selection criteria for priorities



Key findings: PRIORITIES

- Difficulties to ensure the validity of responses to the question of **existence of explicit and implicit priorities**
 - Inconsistency between: i) policy documents ; ii) budgetary allocations; and iii) existence of major institutes, organizations or programmes dedicated to the priorities.
 - Timing issue: priorities definition / policy mix definition
- Explicit priorities are more frequent for **research and innovation** than for economic development
- Prioritization is more intense at **regional** than at national level
- Prioritization **trends** are on the rise, at strategic and implementation levels

Source: OECD (2013) Smart Specialisation in global value chains: designing and assessing smart specialization strategies

Key findings: POLICIES

GAP POLICY FORMULATION / IMPLEMENTATION

- No clear link between priorities and **policy mixes**
- A strategic view on public « innovation » budget is missing
- Key policy instruments:
 - Dedicated institutes, competence centres
 - Thematic R&D funding programmes
 - Cluster policies (regional level)
- A-typical policy instruments:
 - Innovation-driven public procurement
 - Bonus system in generic funding programmes
- Monitoring and evaluation systems hardly tuned to priorities

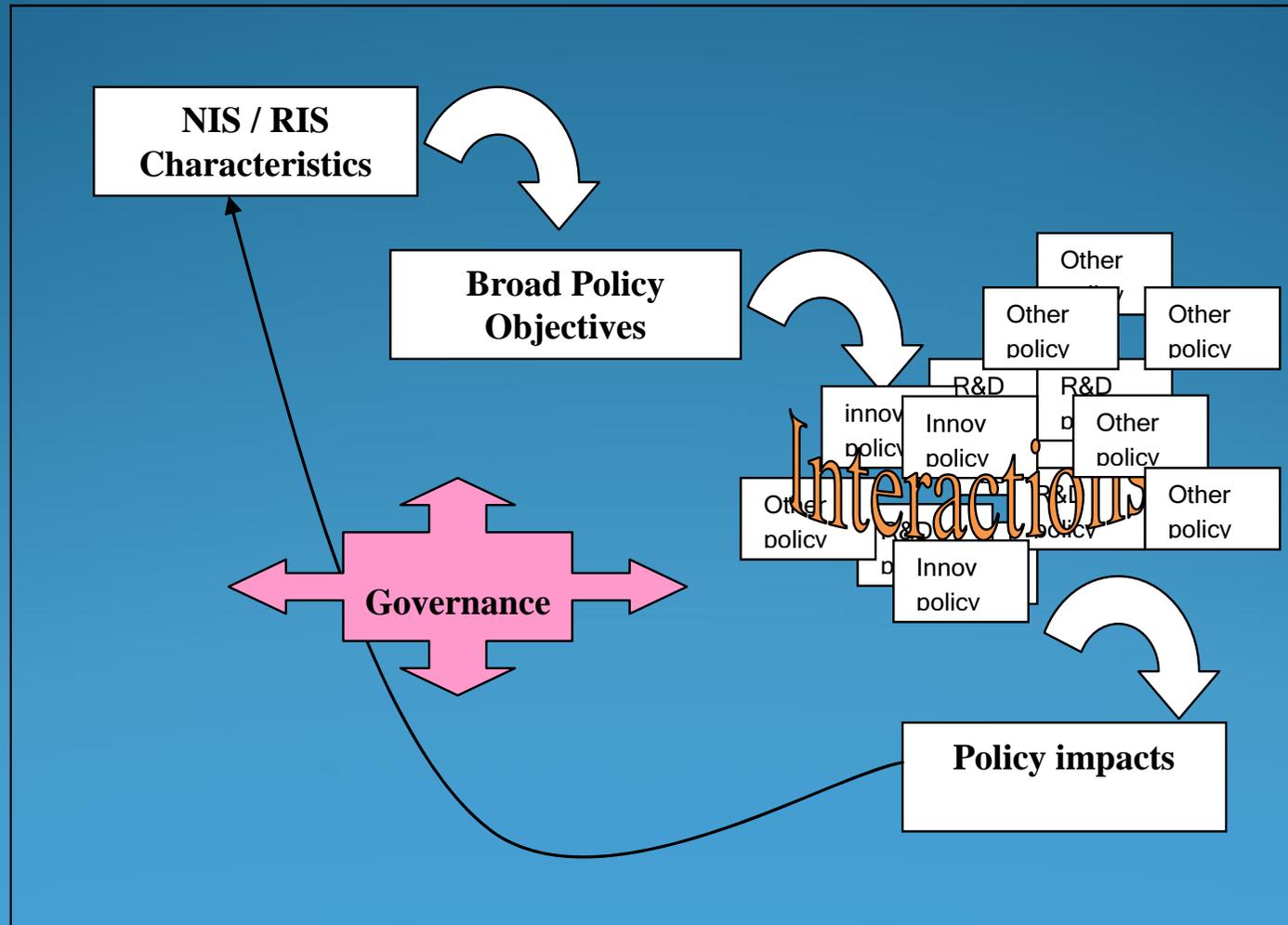
Source: OECD (2013) Smart Specialisation in global value chains: designing and assessing smart specialization strategies

Policy Mix Definition

Combination of policy instruments, which interact to influence framework conditions, alleviate barriers and raise capabilities for innovation

- **Instruments:** all programmes, organisations, rules and regulations with an active involvement of the public sector, which *intentionally* or *unintentionally* affect innovation
- **Interactions:** the influence of one policy instrument is modified by the co-existence of other policy instruments in the policy mix
- Influences on innovation are either **direct** (instruments from innovation policy field) or **indirect** (all policy instruments from any policy field which indirectly impact on innovation)

Policy mix conceptual framework



Different regions require different strategies

Type of region	Main strategy		
	Building on current advantages (science push/technology-led or a mix)	Supporting socio-economic transformation	Catching-up: towards the creation of knowledge- based capabilities
Knowledge hubs			
Knowledge and technology hubs	◆	◆	◆
Knowledge-intensive city/ capital districts	◆	◆	◆
Industrial production zones			
US States with average S&T performance	◆	◆	◆
Service and natural resources regions in knowledge-intensive countries	◆	◆	◆
Medium-tech manufacturing and service providers	◆	◆	◆
Traditional manufacturing regions	◆	◆	◆
Non S&T-driven regions			
Structural inertia or de-industrialising regions	◆	◆	◆
Primary sector-intensive regions	◆	◆	◆

Different regions require different strategies

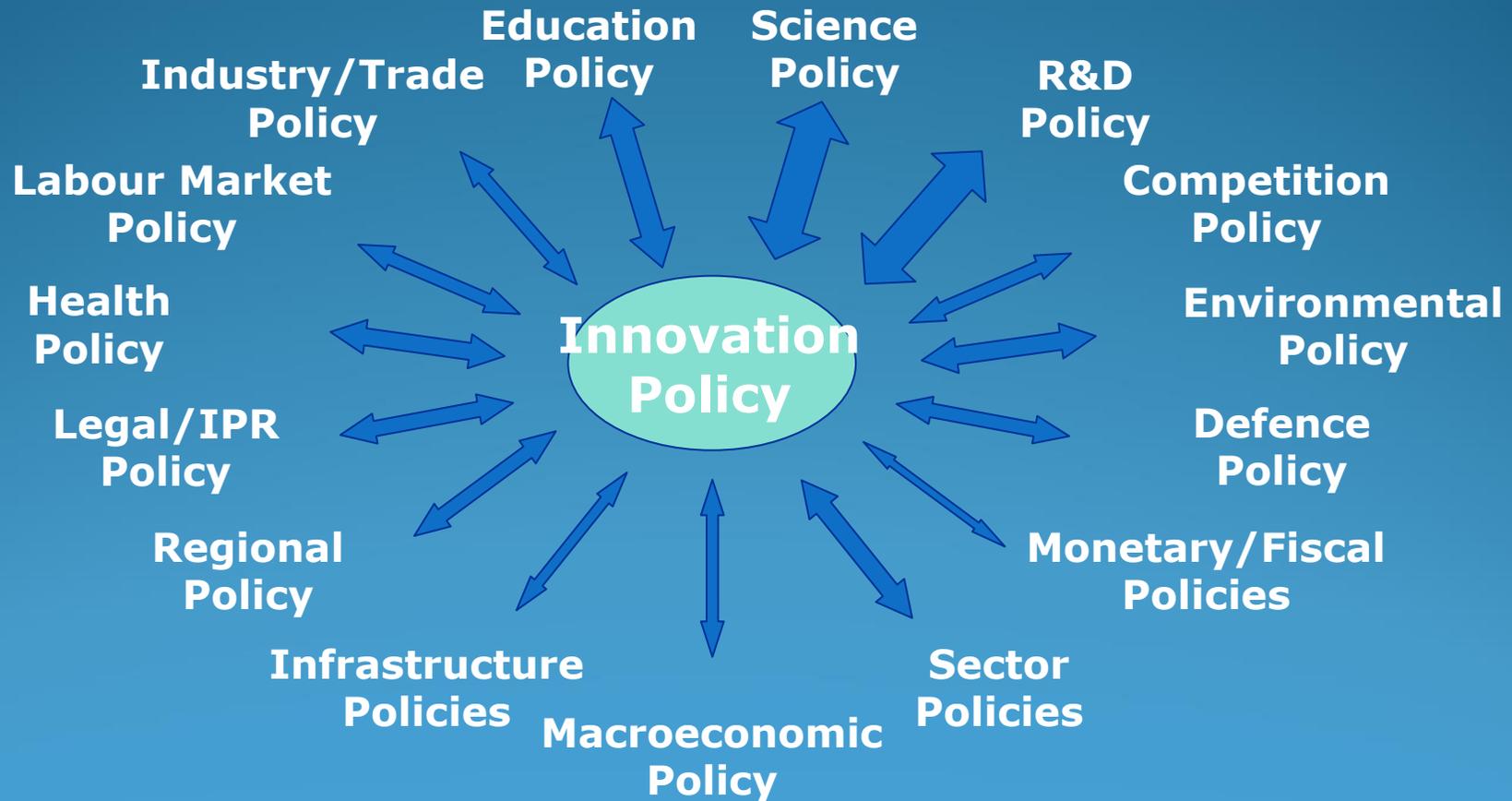
	No external connection	Single external connection	Multiple external connections
Centralised RIS	Build hinge through hub	Build multiple global connections	Regional networking
Decentralised Dense RIS	Find external connection/get a global perspective	Build multiple global connections	Anchor global firms regionally
Decentralised Sparse RIS	Change system/path-breaking grand project	Increase regional networking/build global connections	Increase regional networking/prepare for global linkages

Key issues for building smart and efficient policy mixes

- Value of **integrated** (“packaged”) policy instruments
- Finding the right **balance** between instruments addressing firms in isolation v. systemic relations; fostering internal v. external connections
- Drawing effectively on **interactions** between several areas of policy
- Vital component of policy mixes: **human resources** for innovation and associated policies to attract and retain talent
- Putting more weight on **demand-side** policy instruments, in particular by introducing innovation-oriented public procurement

Source: Regions and Innovation Policy OECD 2011

Policy Domains depend on each other



Policy Interactions

➤ Interactions between policies:

- **positive** and complementary, with one amplifying the effect of the other in terms of impacts on innovation
- **negative** and interfering destructively, with one attenuating the impact of another
- **neutral** and functioning quite independently, with impacts also independent

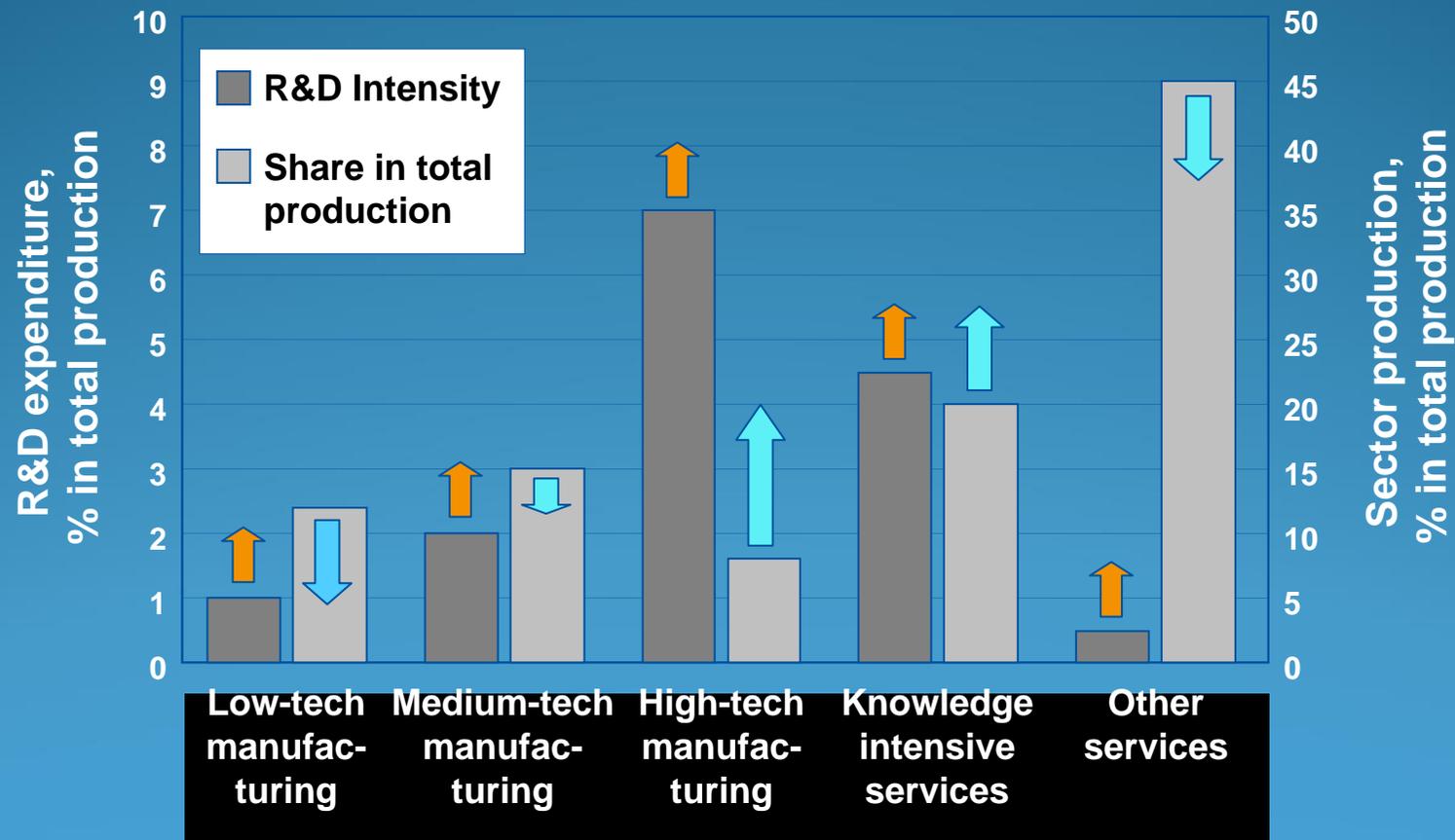
➤ One policy problem → One new instrument ?

the extensive implementation of new instruments bears increased risks of substitutive effects or unwanted interferences

Industrial restructuring: two approaches with different impacts on policy mix design

High-tech industry approach

R&D intensification approach



High-tech industry approach

- Identifying right target sectors
- Involving national and regional levels
- Bottom-up definition of research agendas
- Sequencing public support by target groups
- Involving non-R&D policies early, incl. regulation issues
- Harmonising technology-focused and generic R&D policies
- Establishing research infrastructures, esp. in basic research
- Connecting actors and encouraging industry-science links
- Addressing skill demands
- Encouraging internationalisation early
- Following a long-term view, but being flexible to address new challenges

R&D intensification approach

- Identifying barriers to R&D/innovation
- Developing a coherent industrial restructuring strategy and programme
- Harmonising R&D policy with economic strategy
- Providing effective incentives for firms to invest in R&D
- Offering a favourable business environment
- Ensuring human capital supply
- Developing domestic demand for innovation
- Encouraging internationalisation
- Adapting policy to changes in the environment

Mini-mixes

- Programmes that **package** different instruments (funding mechanisms - programme objectives - delivery mechanisms- target groups) and/or routes, into one coherent initiative. Designed in such a way that the elements complement each other to achieve a specific policy goal (e.g. innovation in bio-tech) or support a specific target group (e.g. NTBFs).
 - Often across different governance boundaries
- Thesis: mini-mixes have a more '**synergetic**' approach and might therefore be more effective and have fewer internal conflicting influences

Mini-mix example: Technopartner NL

Integrated programme to support technology-based start-ups

- TechnoPartner Seed capital facility
- TechnoPartner Knowledge Exploitation Subsidy Arrangement (SKE) (pre-seed funding for R&D etc.)
- Patent support facility (legal & strategic advice)
- TechnoPartner platform (exchange of experience)
- Business Angel Programme (management support)
- Institutional pillar (strategic intelligence)

Which policy instruments?

Target of support	Form and focus of innovation support services for SMEs	
	Reactive tools providing inputs for innovation	Proactive tools focusing on learning to innovate
Global connections	Excellence poles Cross-border technology centres Funding for international R&D or innovation projects	International technology transfer schemes Mobility schemes Support for global networking of firms Cross-border innovation vouchers Lead market initiatives
Regional system	Collective technology or innovation centres	Cluster policies Proactive brokers, match-makers Innovation vouchers Support for regional networking of firms Schemes acting on the culture of innovation
Individual Firms	Incubators with “hard” support Traditional “reactive” technology centres Seed and venture capital funds R&D subsidies or tax incentives	Management advice Incubators with “soft” support “Proactive” Technology centres Audits, monitoring of needs Innovation Coach Innovation management training Techno-economic intelligence schemes

Which policy instruments?

	Knowledge Generation	Knowledge Diffusion	Knowledge Exploitation
Traditional instruments	Technology funds, R&D incentives/supports/grants Support to scientific research and technology centres, Support to infrastructure development Human capital for S&T	Science Parks Technology Transfer Offices and schemes, Technology brokers Mobility schemes, talent attraction schemes Innovation awards	Incubators Start ups support innovation services (business support and coaching) Training and awareness-raising for innovation
Emerging Instruments	Public private partnerships for innovation Research networks/poles	Innovation Voucher Certifications/accreditations	Industrial PhDs Support to creativity Innovation benchmarking
	Competitiveness poles Competence centres New generation of scientific and technological parks and clusters Venture and seed capital Guarantee schemes for financing for innovation		
Controversial instruments	Cross-border research centres	Open source-Open science Markets for knowledge	Regional Industrial Policy; Innovation oriented public procurement

Which policy instruments?

Improve actors' competencies, investments and incentives to innovate

1 Public research

- Additional funding
- Revision of funding mechanisms
- Reform of PROs
- Strengthen public research infrastructures

2 Business R&D

- Additional funding
- Stimulate private investments in R&D
- Provide non financial support

3 Public sector innovation

- e-government and public services delivery
- Public administrations and govt demand for innovation

4 Private sector innovation

- Additional funding
- Stimulate private investments in innovation
- Provide non financial support

Improve actors' interactions

5 STI platforms and infrastructures

- Physical infrastructures (incl. ICT)
- Industry-science (incl. technology platforms, science parks etc.)
- Clusters and CoE
- Open innovation

6 Valuation and circulation of knowledge

- IPRs
- Knowledge markets

7 Adjusting to globalisation

- Internationalisation of domestic firms
- Attract FDI and foreign firms
- International mobility of human capital

Strengthen human capital

8 Create an innovation culture

- Interest of science among youth and society
- General awareness
- Rewards, awards, prizes

9 Improve supply of skills for innovation

- Education systems and participation to HE
- Supply the right mix of non S&T skills / S&T skills
- PhD and Postdocs
- Broaden access to S&T studies and ensure equity

10 Ensure good employment conditions and LLL

- Attractiveness of researchers careers
- Sectoral mobility
- Opportunities of LLL

Improve policy governance

11 Adapt governance structures

- Improve coordination
- Improve governance mechanisms (incl. agenda, formulation etc.)

12 Evaluate the impact of innovation policies

- Monitor innovation
- Feed back into policy

Source: OECD Innovation Policy Platform

RIS3 “smart” implementation

✓ Coherence, Coordination, Communication

- Tailoring policy goals and priorities to regional situation
- Tailoring policy mixes to policy goals: Macro balances in policy mixes
- Micro synergies within policy mixes
- Think and act cross-domains, cross-actors, cross-levels, cross-borders

✓ Use of Strategic Policy Intelligence Tools

- Monitoring and evaluation targets, indicators, analyses
- Outcome-oriented and evidence-based policy implementation