

# S3 implementation in the Baltic States: Monitoring and evaluation of S3 in Lithuania

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**Government  
Strategic Analysis  
Center**



# The Government Strategic Analysis Center (STRATA)

We are an expert institution that provides government and ministries with the independent, research-based information required to make evidence-based public policy decisions.

- **Areas of activities:**



Better Governance



Higher education



Research and Innovation



Human Capital

- **Types of activities:**



Monitoring and evaluation



Foresights on strategic issues



Recommendations to the  
Government and ministries



Coordination of analytical competencies  
cooperation network



Consulting on methodological issues regarding  
the drafting of evidence-based decisions

# Smart specialization in Lithuania

## Strategic goal:

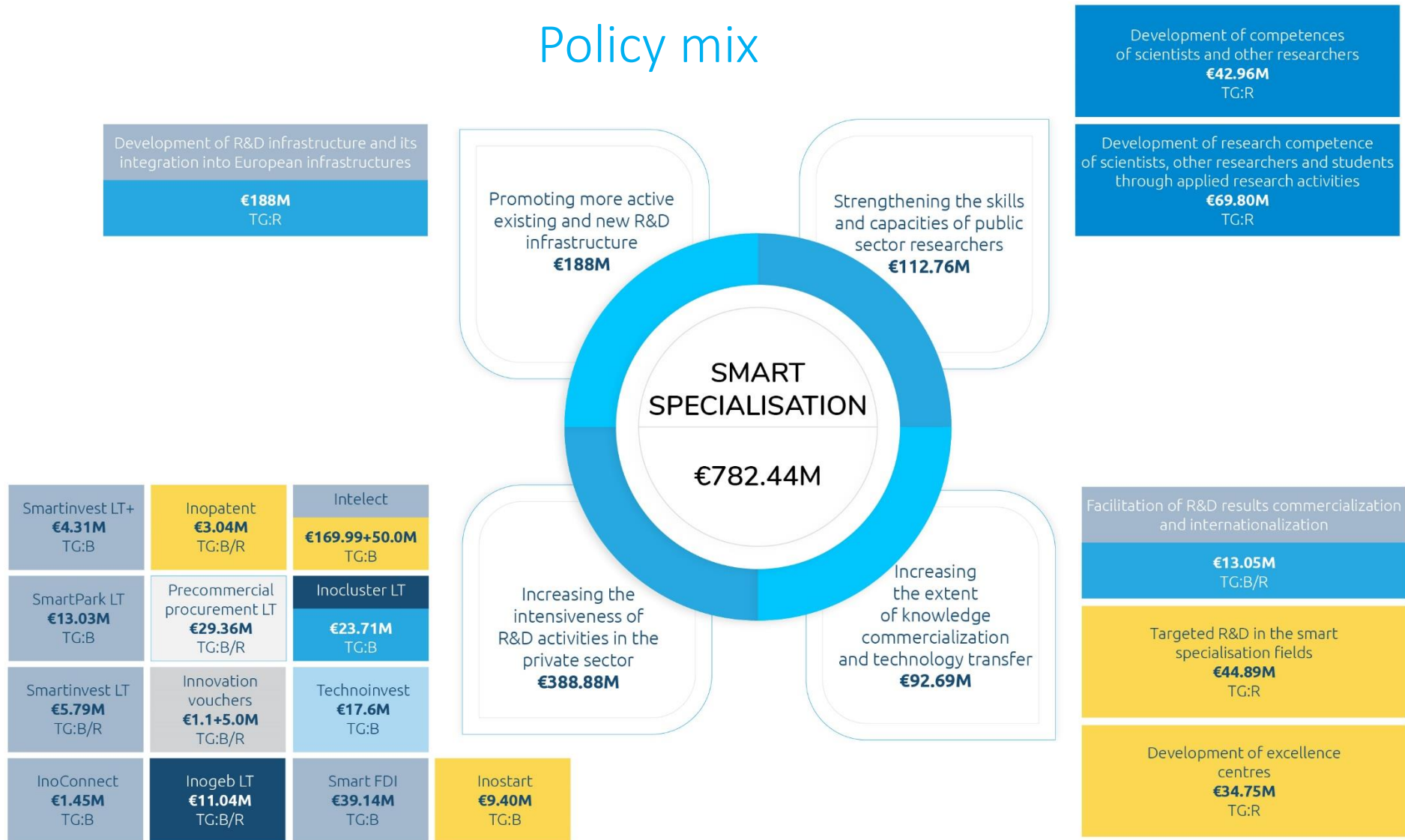
Increase the impact (and share) of high value added, knowledge-intensive and highly-qualified labour intensive economic activities in the GDP by structural changes of the economy

## Objectives:

- Create innovative technologies, products, processes and/or methods and, using the outputs of these activities, respond to global trends and long-term national challenges
- Increase competitiveness of Lithuania's legal entities and their opportunities for establishing in global markets – commercialisation of knowledge created in the implementation of the Priorities



# Policy mix



- RDI infrastructure
- Venture capital
- Innovation support services
- R&D grants

- R&D based FDI, internationalisation
- Public-private RDI collaboration, public sector RDI commercialisation
- Innovation demand building
- R&D human resources (grants)

Target group (TG):  
B: Business  
R: Rerearch and higher education organizations, public sector institutions

# Priorities (2014-2019)

## Agro-innovation and food technologies

- Safer food
- Functional food
- Biorefining

## Energy and sustainable environment

- Smart energy systems
- Energy from biomass, waste treatment
- Digital construction
- Solar energy

## Health technologies and biotechnology

- Molecular technologies
- Advanced technologies for health
- Advanced medical engineering

## Inclusive and creative society

- Educational technologies
- Implementation of breakthrough innovations

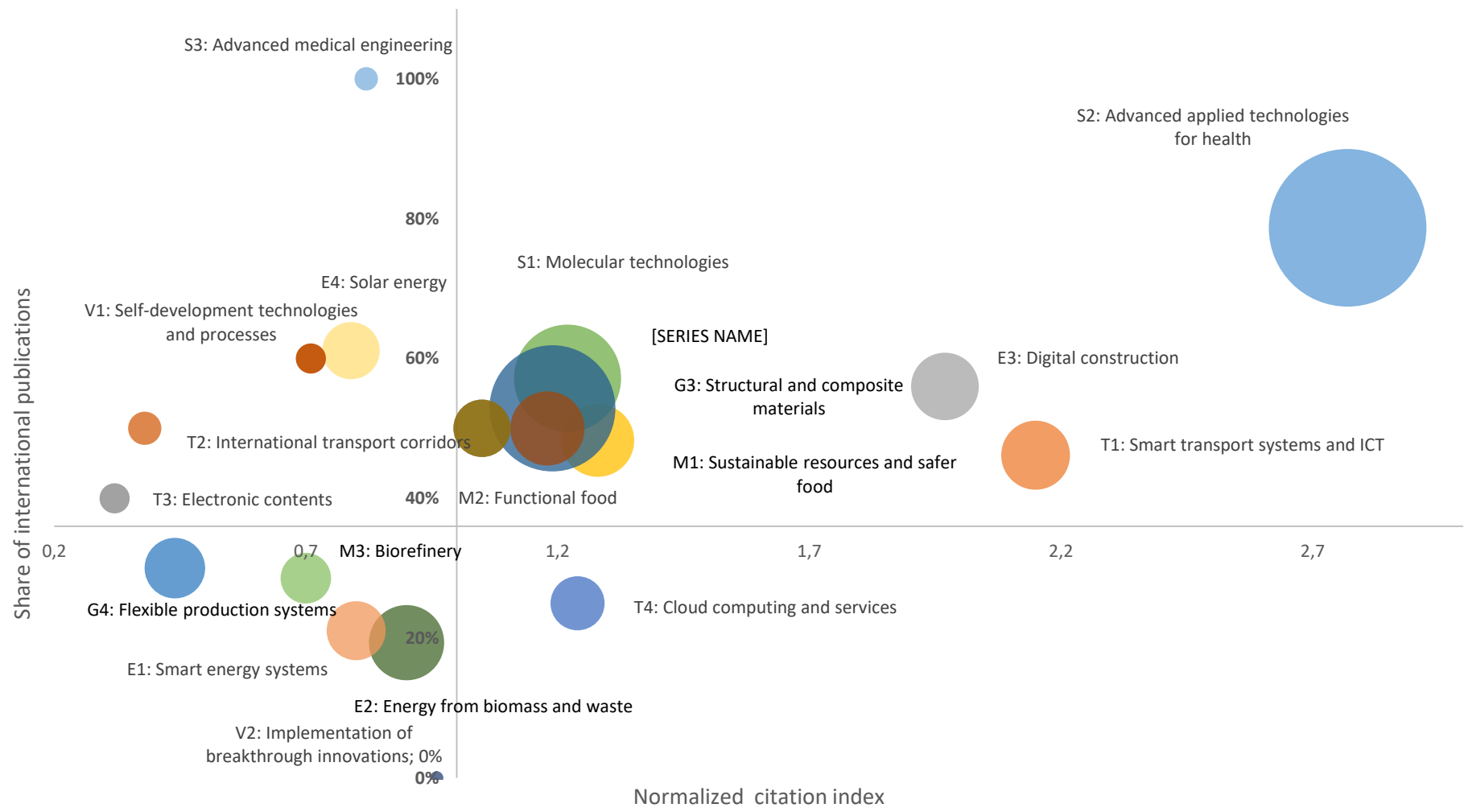
## Novel production processes, materials and technologies

- Photonic and laser technologies
- Functional materials and coatings
- Structural and composite materials
- Flexible production systems

## Transport, logistics and information and communication technologies

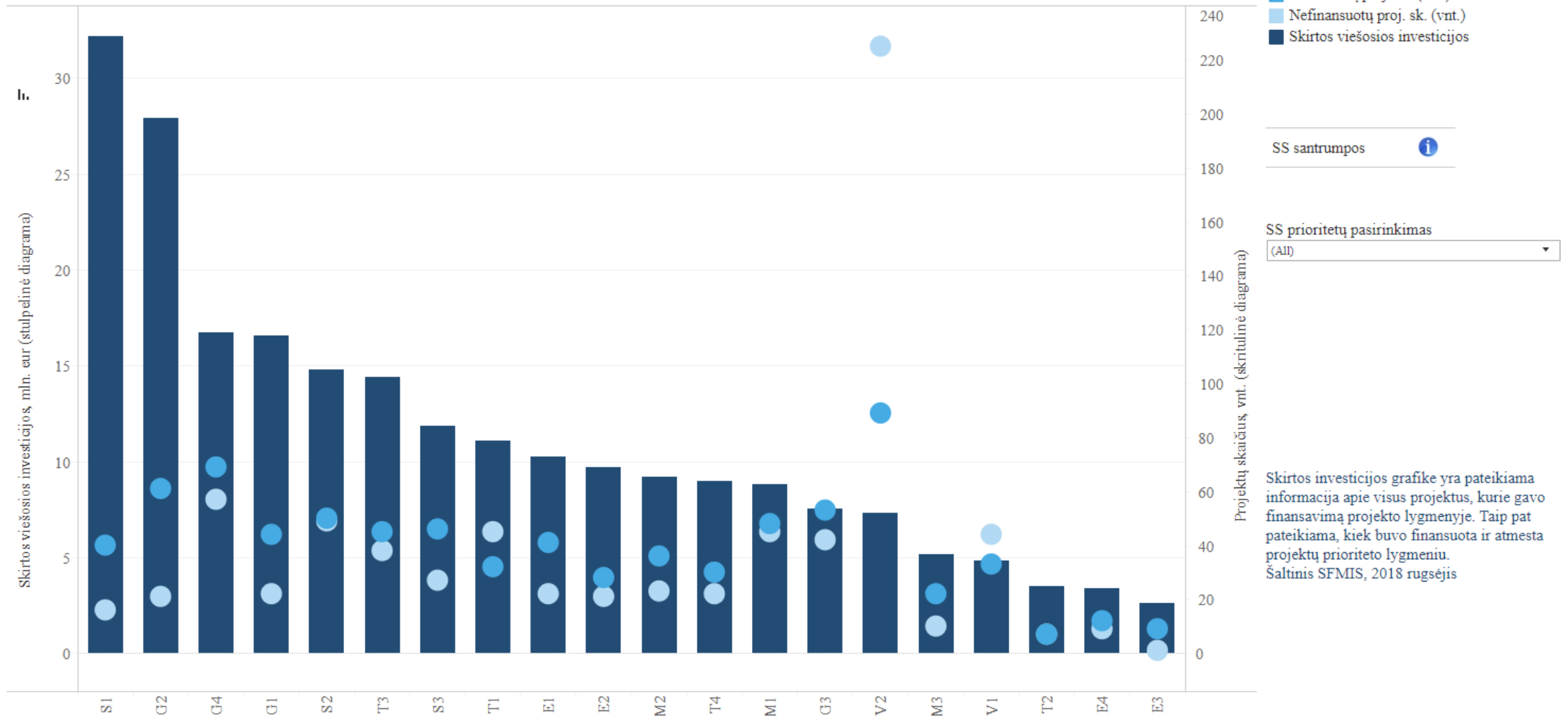
- Smart transport systems and ICT
- International transport corridors
- Digital content
- Cloud computing and services

# Examples of monitoring



# Example of interactive monitoring tool

Skirtos viešos investicijos, mln. Eur

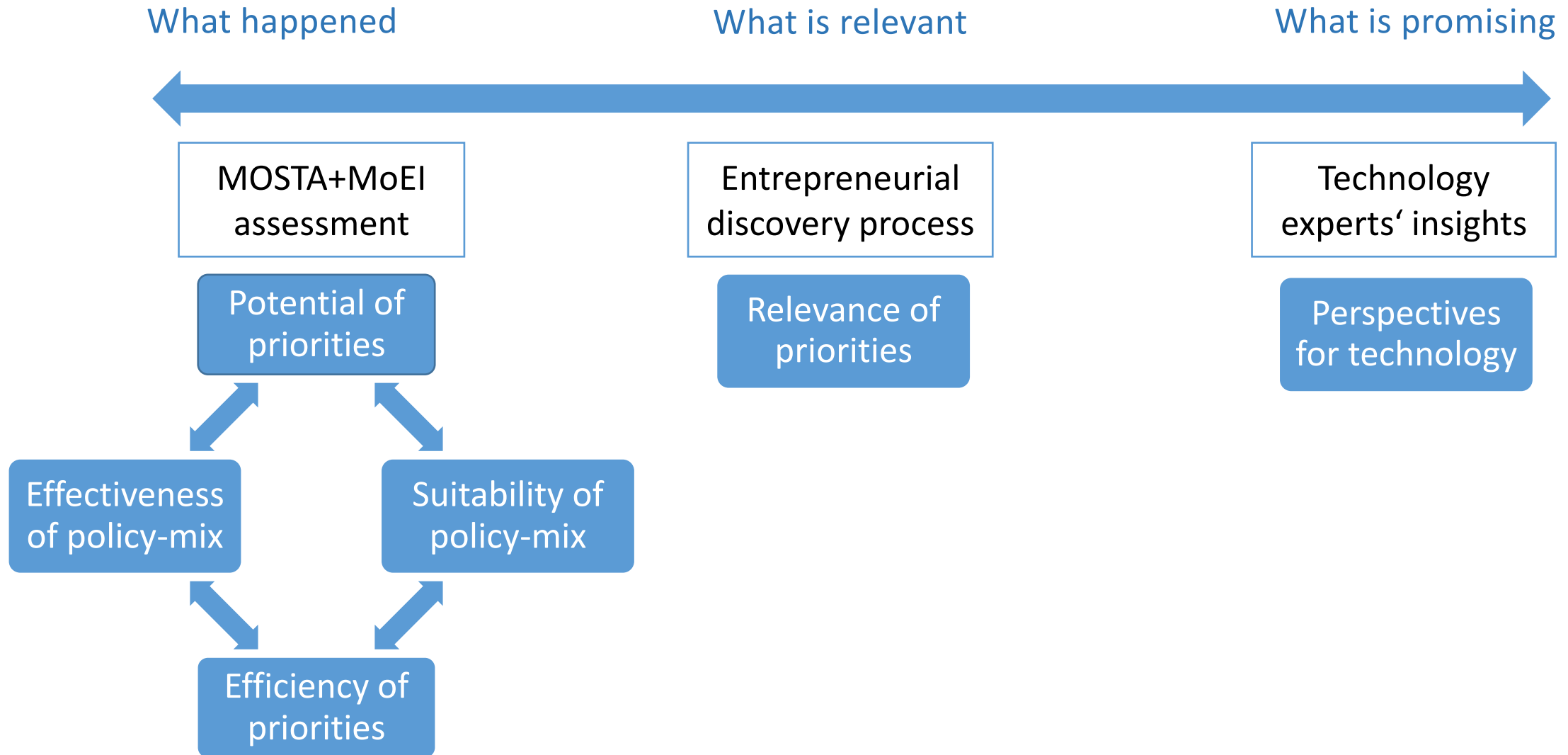


## Challenges with data

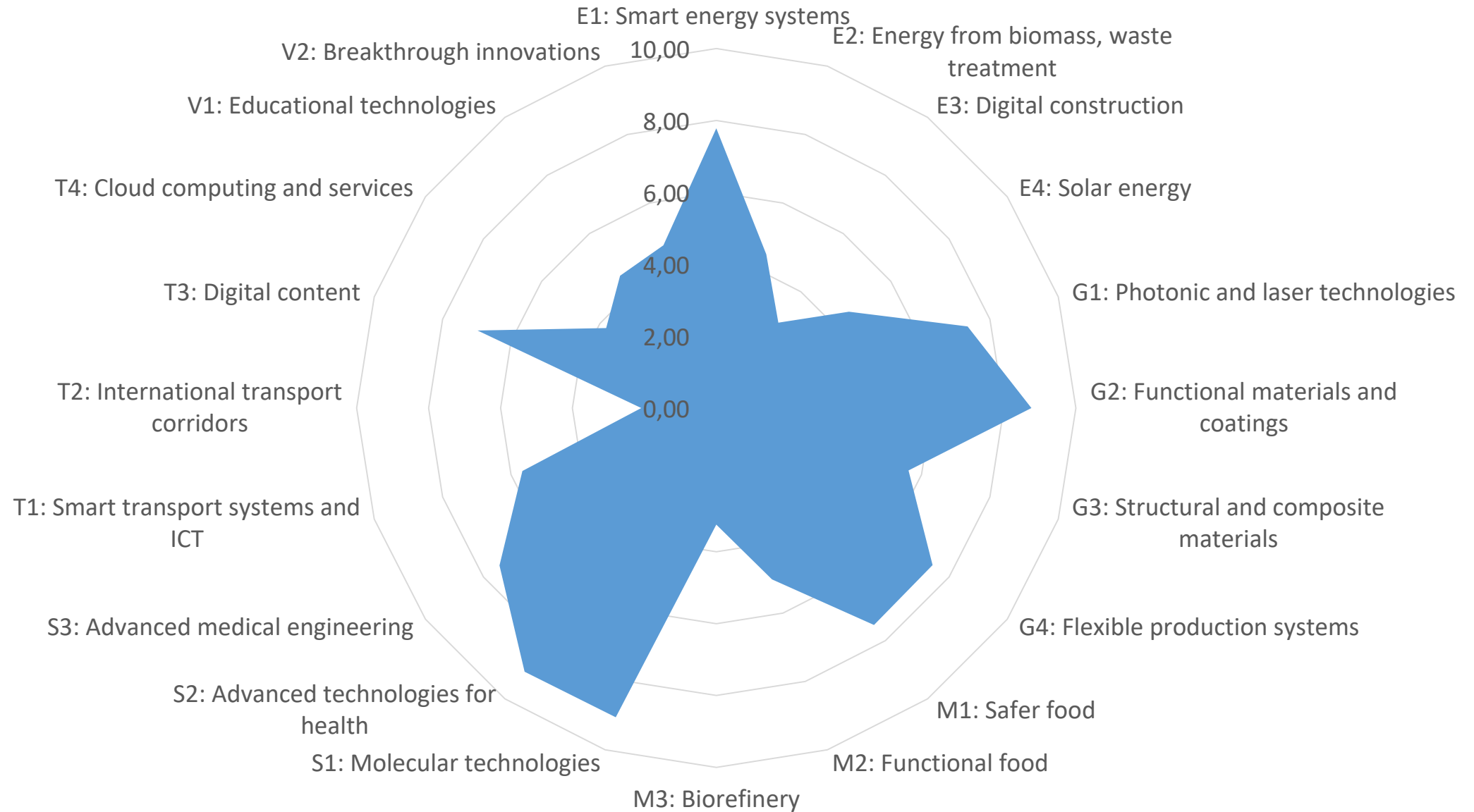
- Some errors in the national ERDF management and information system
- Institutions are relatively autonomous in terms of interpretation of RIS3 priorities
- Institutions are reluctant to share the data, the process for coordinating data transfers takes a lot of time
- Not all data collection is digitized: correcting and encoding the data provided is a time-consuming procedure
- Main RIS3 indicators, such as business spending on R&D, are impossible to attribute to the priority level



# Concept of interim evaluation



# Evaluation results: potential and effectiveness of priorities



# Key discoveries and recommendations

- **RIS3 is implemented slowly:** currently, only 272.71 million are allocated, most RIS3 products and performance indicators have "0" values or values close to "0"
- **A detailed thematic description of the specificity of priorities in the documents is an obstacle** to the submission of applications for projects that are geared towards innovation breakthroughs
- **There are no super priorities,** the distribution of the actual funding does not allow assuming redeployment and focusing on a smaller number of priorities, technologies could be expected to have a greater impact
- Better engage / include target groups in RIS3
- Update RIS3 technology list
- Update RIS3 priorities
- Invite applicants to compete for Specific Challenge, Scope and Expected Impact
- Return to the concept of priority axes/areas

## What to do next?

- Further concentration?



- Better access to funding?

- More inclusive priorities?

# Smart specialization priorities after mid-term review

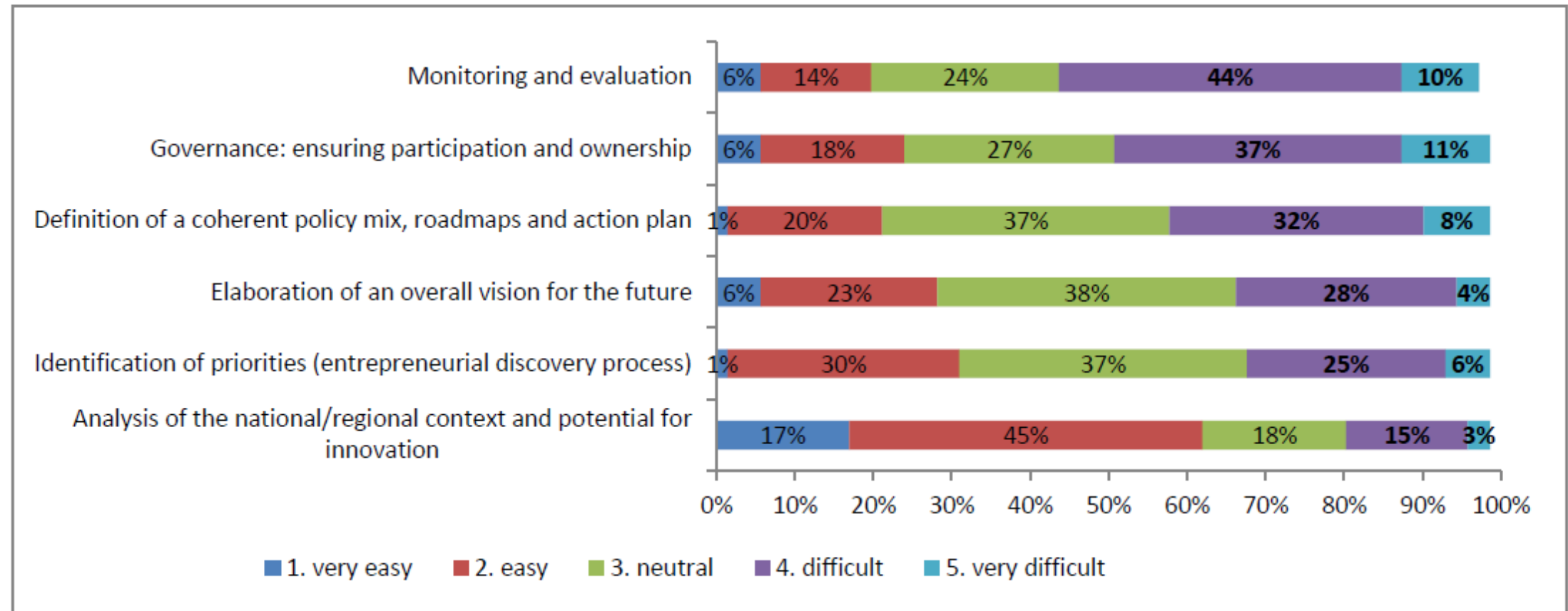
Priority	Themes
Energy and a sustainable environment	Strengthening interoperability among diversified and centralized energy generation, distribution grid and efficient energy use systems
	Meeting the needs of existing and new end-users, strengthening efficient and smart energy use
	Development of exploitation of renewable biomass, solar energy resources and waste recycling for energy
Health technologies and biotechnologies	Molecular technology for medicine and biopharmacy
	Advanced applied technologies for personal and public health
	Advanced medical engineering for early diagnosis and treatment
Agro-innovation and food technologies	Sustainable agro-biological resources and safe food
	Waste recycling of bio-raw materials into valuable components
New production processes, materials and technologies	Photonic and laser technologies
	Advanced materials and structures
	Flexible product development and production technologies
Smart, clean, integrated (linked) transport	Intelligent transport systems
	International corridor management and intermodal technologies (models)
Information and communication technologies	Artificial intelligence, big and distributed data
	Internet of things
	Multimodal analysis, processing and deployment
	Cyber security
Inclusive and creative society	Modern educational technologies and processes
	Design and audio-visual media technologies and products
	Social and cultural innovation to develop public development products and services; innovative business models
	Flexible and applied process control technologies

# Main monitoring and evaluation challenges

- The general **absence of evidence** and result based policy in the innovation policy field
- Systematic data collection and meaningful data aggregation at RIS3 **priority level**
- The **complexity and limitations** of methods for impact assessment of large-scale policy-mix
- **Inclusion of stakeholders** in the evaluation process, when it is important to ensure impartiality
- How to **deliver timely** and meaningful, actionable evidence?

## Monitoring and evaluation paradox

**Figure 4. Level of difficulty encountered with respect to the six steps of the RIS3 design process**

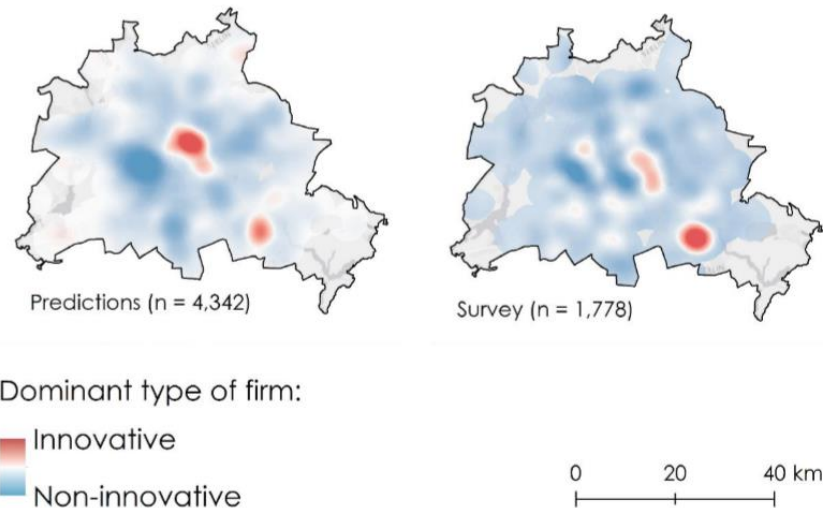


Source: authors' elaboration based on survey data.

# New tools and methods are already here



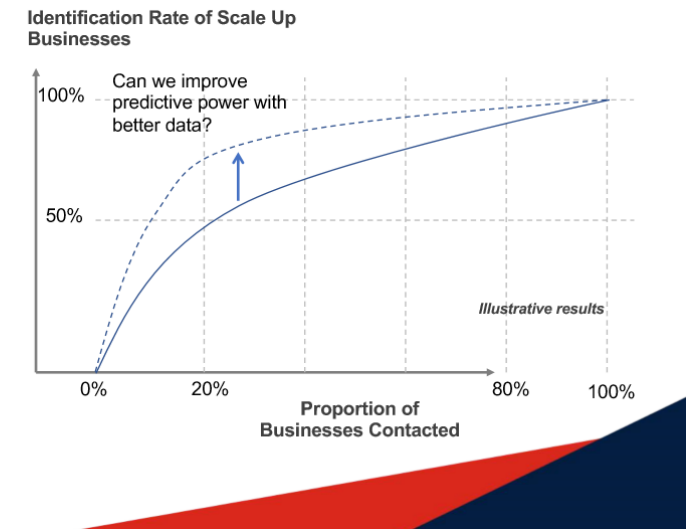
## NEURAL NETWORK PREDICTIONS: MICROGEOGRAPHIC PATTERN



## Data Enabled Change Accelerator (DECA)

Using data science and government data to effectively target government support to businesses

- Developed an **algorithm** that can **identify potential high growth firms of the future**
- Working with BIT to test targeted messages in 3 UK regions
- Initial **business response has been very encouraging** and indicates **we have targeted high quality firms**





## Thoughts from S3 meeting 3 years ago by 3 countries

### Future Baltic States R&I collaboration: WIIFM?

- **Better allocation of resources:**
  - ☐ Less support for weak projects
  - ☐ Less competition for strong projects
- **Better disposition of infrastructure:**
  - ☐ Coordinated approach to new Baltic research infrastructure development
  - ☐ Better employment of existing infrastructure
- **Better circulation of social and financial capital:**
  - ☐ Easier access to finance for innovation
  - ☐ More convenient support for researchers/research teams
- **Better global appearance:**
  - ☐ Stronger visibility through collaboration
  - ☐ Wider list of what to offer

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