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Parallel session 3:

S3 Monitoring and Evaluation

Parallel session 3: S3 Monitoring and Evaluation

Moderator
Karel Haegerman, JRC

Giorgio Moretti, ART-ER, Emilia-Romagna, Italy

Marco Sacco, Research, Innovation & Energy Competitiveness Department, Veneto, Italy

Tomas Holinka, Ministry of Industry and Trade, Czech Republic

Harri Kuusela, Regional Council of Päijät-Häme, Finland

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Enhanced S3 Monitoring System for Emilia-Romagna: Tracking Innovation and Research Progress

Giorgio Moretti, ART-ER, Emilia-Romagna, Italy

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Are we sure about indicators?

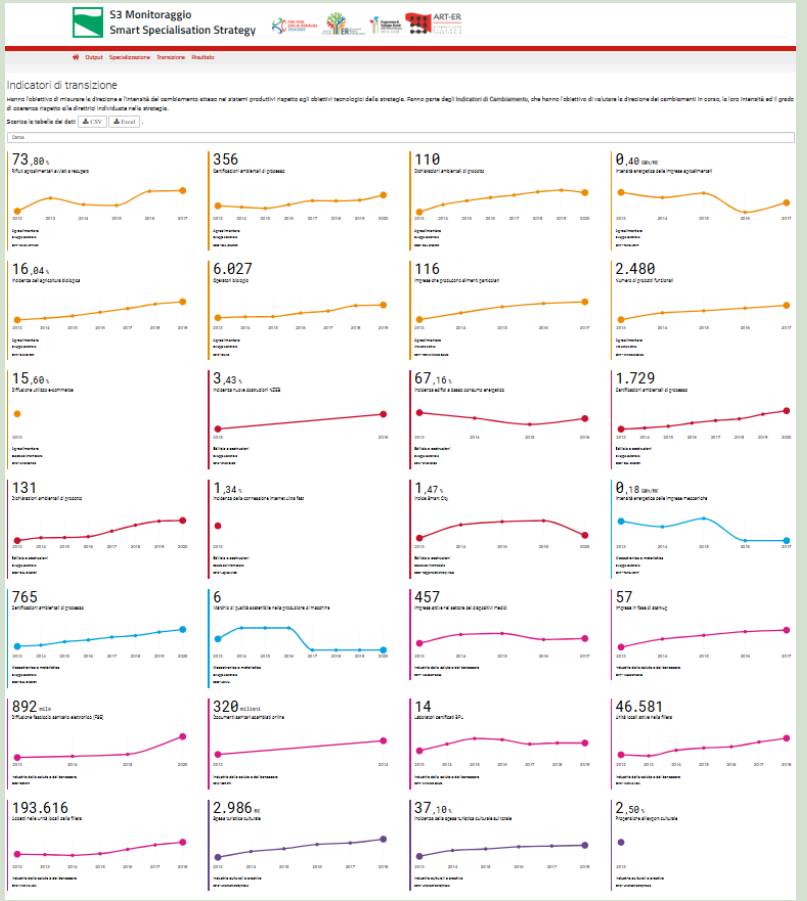
A generic definition:

The three main purposes of monitoring are:

- To **measure** performance against established **targets** and **standards**.
- To identify **deviations** from **expected results** and to make necessary **adjustments**.
- To provide feedback on the **effectiveness** of processes and on areas for improvement

S3 Emilia-Romagna Monitoring Platform 2014-2020

61 indicators



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Measuring vs Tracking

A new approach for 2021-2027 S3 Monitoring, based on a co-design process with regional stakeholders:

- who are the potential users?
- which are their needs?
- what do they expect to learn from data?
- which are their questions?

how much
how many

⇨

who
what
where

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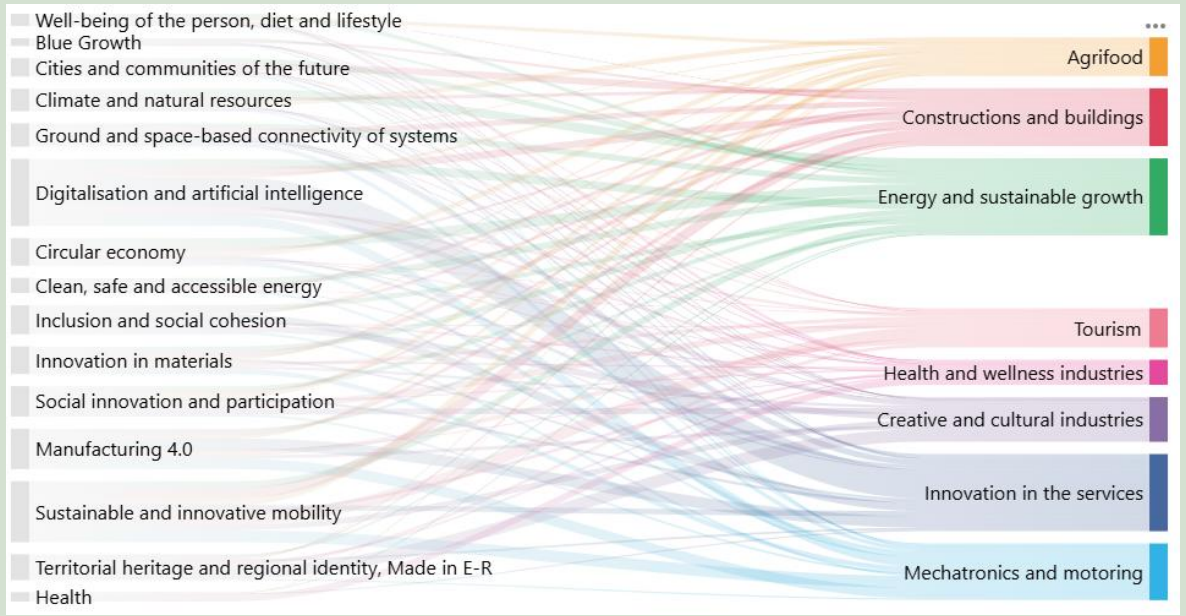
S3 monitoring platform 2021-27



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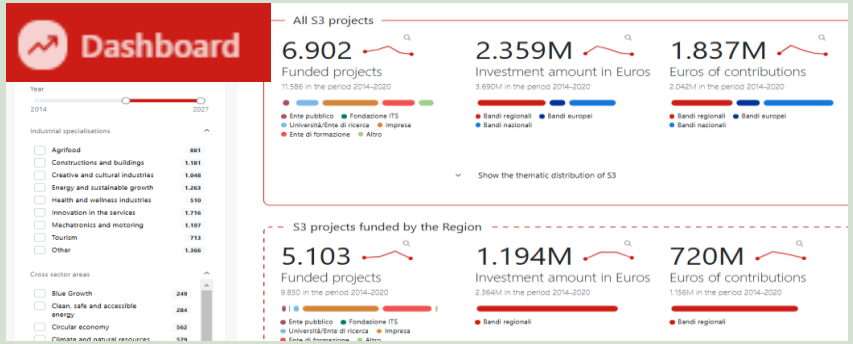
Different products for different users and needs

Overview | Dashboard | Repository | Open Data | Documents



Advocacy: overview of R&I projects financed according to the S3 specialisation of the regional ecosystem

target: policy makers, S3 E-R Committee, general public

Accountability & Analysis: detailed distribution of R&I projects financed and output indicators of projects financed by the region

target: S3 E-R Committee, policy technicians and experts, innovation agents

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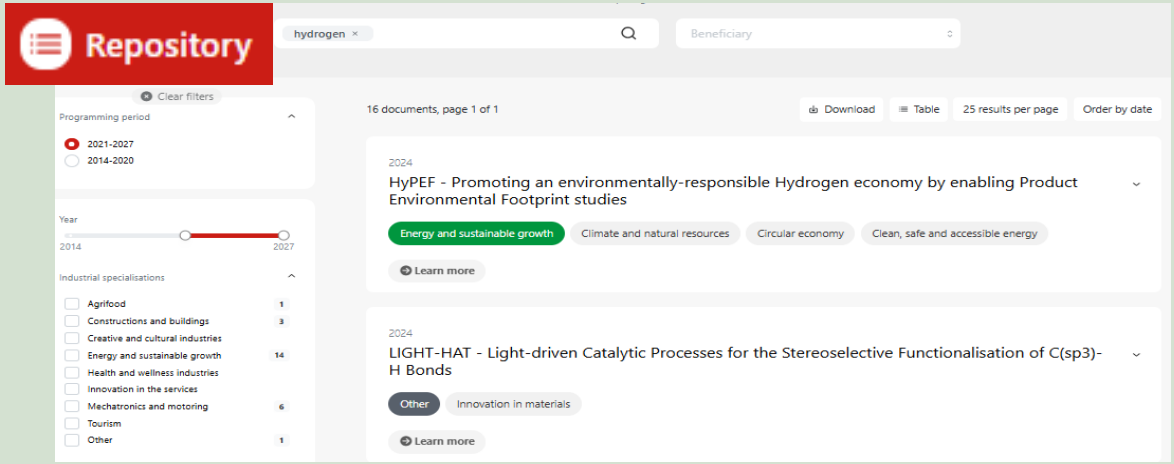
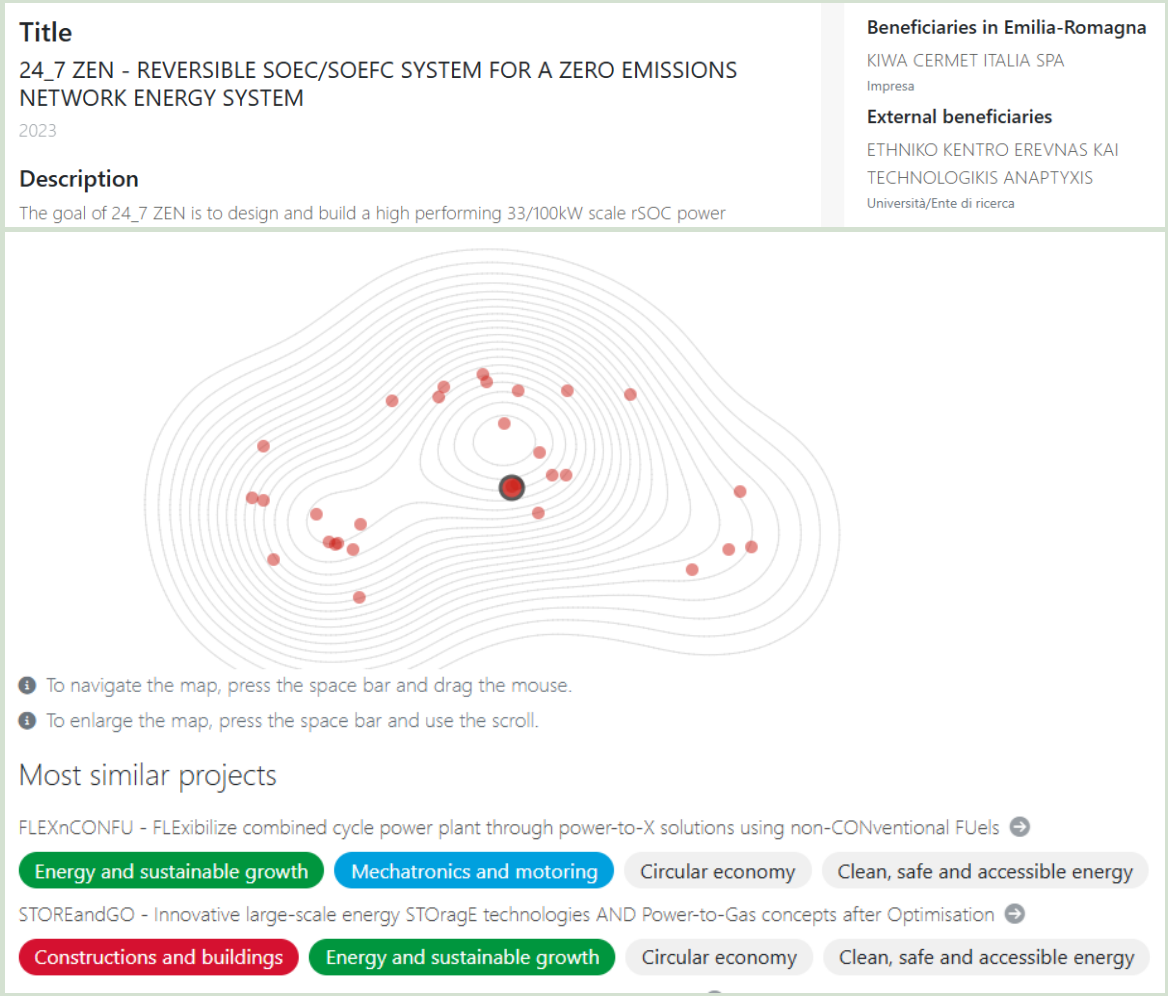
Different products for different users and needs





Analysis: searchable registry and open database of R&I projects, actors and collaboration networks

target: innovation agents, cluster, universities, companies, researchers

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Next steps

Strengthening S3 Monitoring as knowledge tool for the research capacity of our region:

- growing availability of **open data**: integrating data about patents, scientific publications, …
- improving search **functionality based on AI**: generating personalized analysis, use of chatbot for interact with database

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Thank you for your attention!

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Marco Sacco
Veneto Region, Director of Research, Districts and Clusters Unit

InnovatiVE
SMART SPECIALISATION STRATEGY
VENETO

REGIONE DEL VENETO

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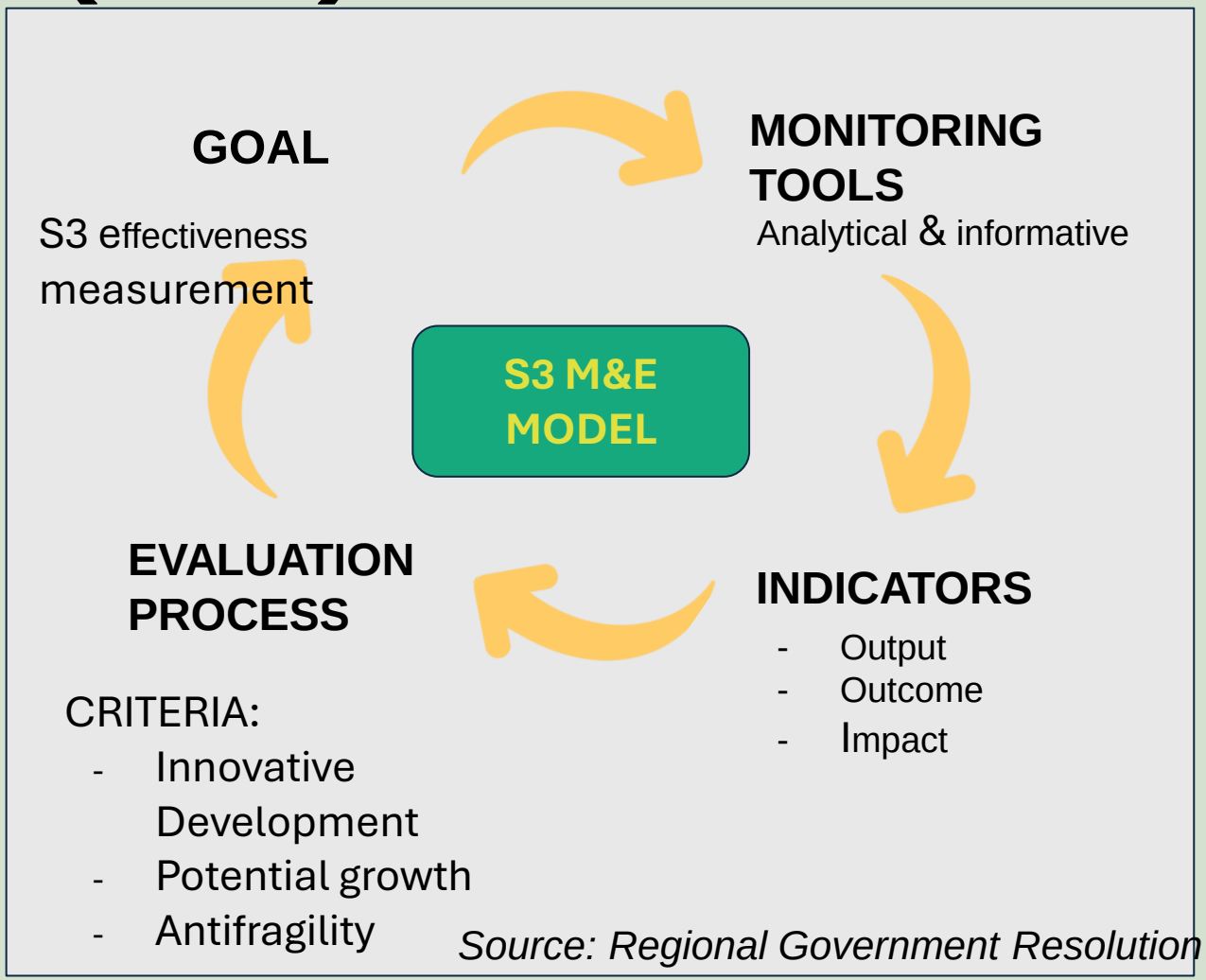
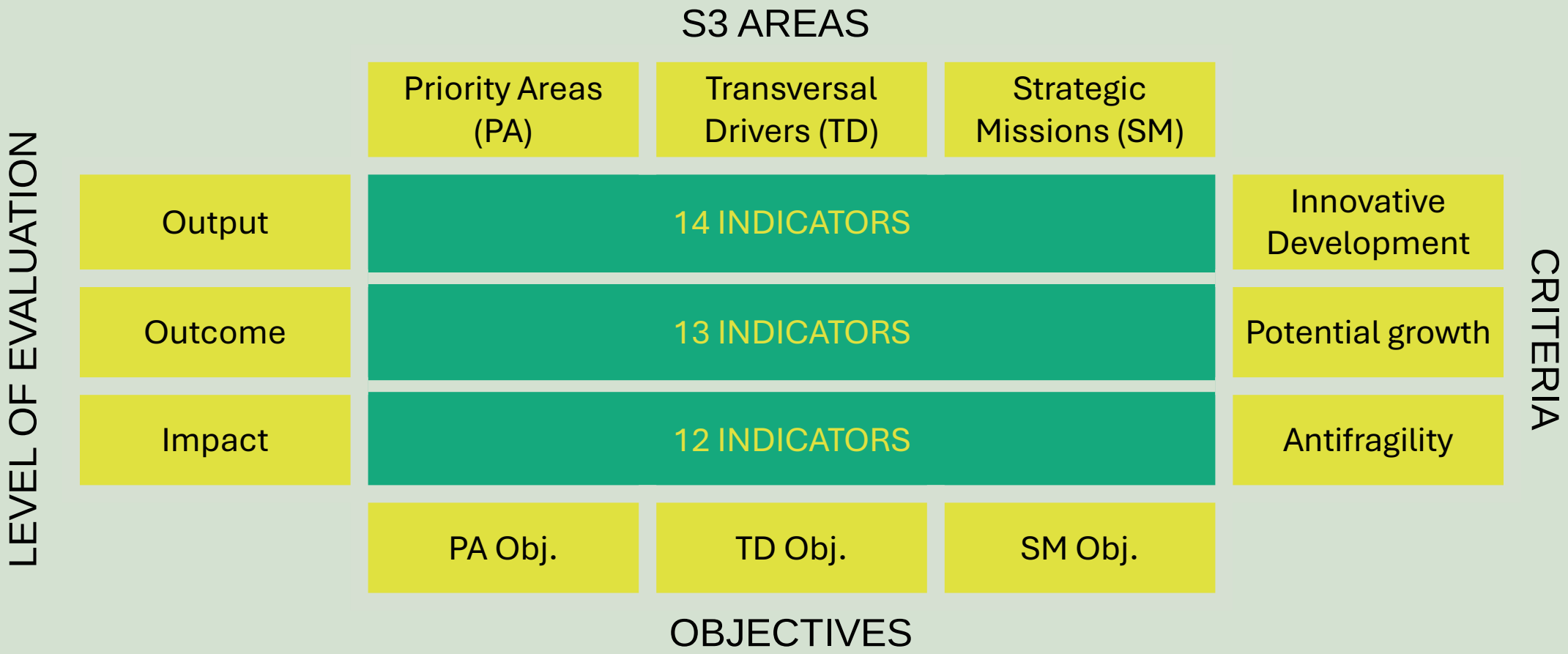
Veneto Region Monitoring & Evaluation system (M&E)



Source: Regional Government Resolution No. 474/2022

- Act passed in 2022 -> 2021-2027
- Goal: acquire solid information base to support informed policy decision along all EDP process cycle
- Focus: regional ecosystem competitiveness
- “Matrix structure” based on the intersection of different evaluation levels, priority criteria, objectives and areas of specialization

A matrix structure to thrive in complexity



The evolution of S3 role...

2014- 2020

from a policy tool to guide **industrial transformation**, **digitalization** and innovation to increase regional **competitiveness**...

2021- 2027

to a policy tool to address global challenges, including the **sustainability** and **social inclusion** goals.

... determines new monitoring needs:

from monitoring project managed by Veneto Region (ERDF/ESF+ indirect funding)
from competitiveness indicators...

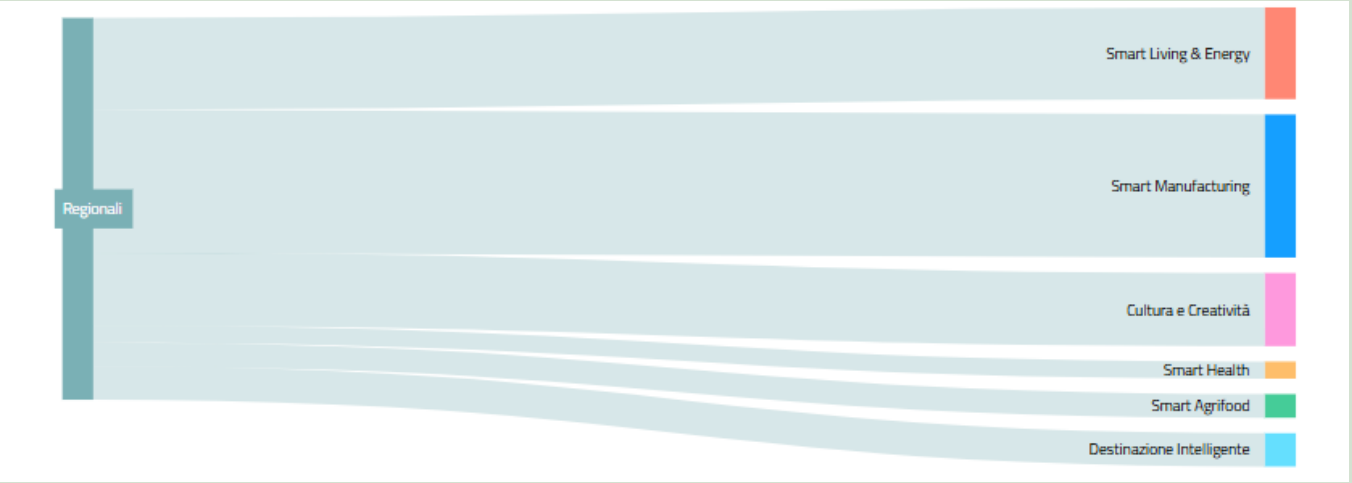
...to include EU direct funded projects (Horizon, Interreg...)
...to include environmental & social effects

Veneto S3 monitoring platform

Section "Projects managed by Regional Government":

- distribution of projects and resources data per S3 Priority areas, Transversal drivers and Programme (ERDF, ESF+, National funds...)
- details of S3 development trajectories
- output indicators

- distribution of projects and public resources allocated on regional territory (provinces)



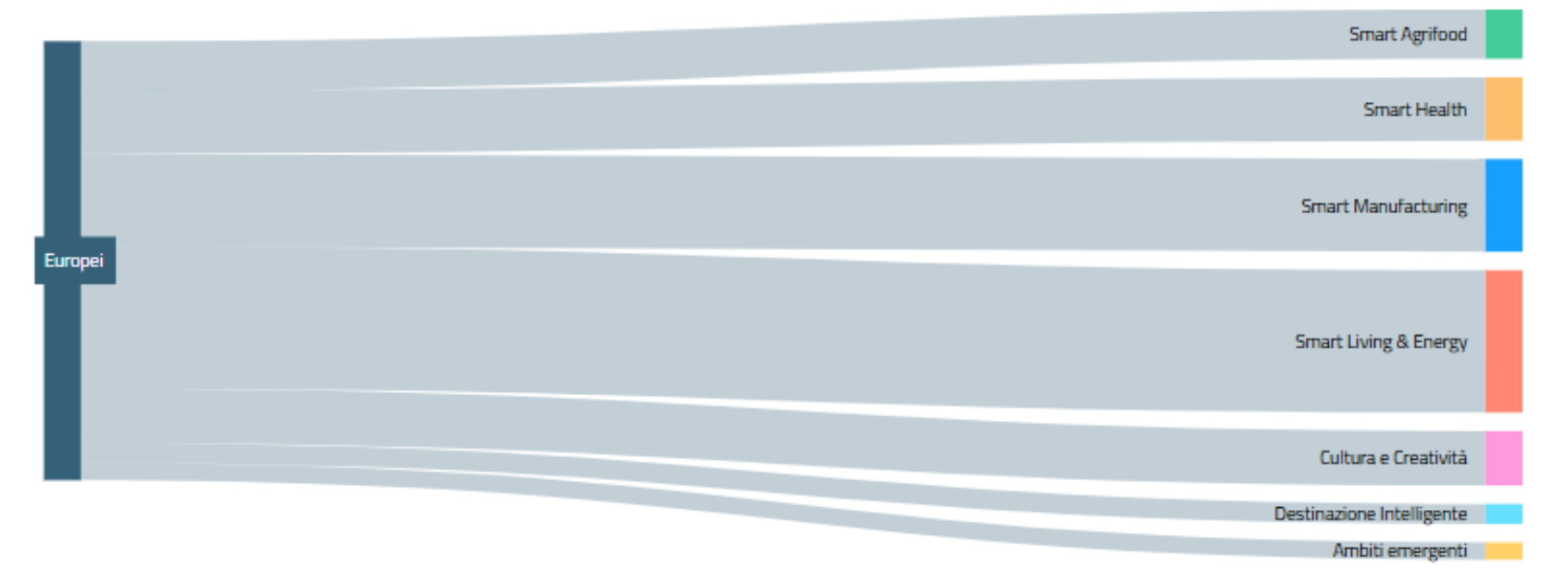
- focus on projects by type of actors involved

Section “EU direct funded projects (Horizon and Interreg)”:

Done: cataloguing of EU projects on the basis of S3 priority areas

WORK IN PROGRESS

To be done: details of S3 development trajectories
Hurdles: difficulty in cataloguing data from different and heterogeneous sources



Monitoring the NEIA challenges: pilot on "achieving circularity"

SMART AGRIFOOD	3 Optimization of nutritional status and eco-sustainable phytosanitary defense of crops	4 Recovery of by-products deriving from the production/processing activities of the agri-food supply chains	5 Innovative and more sustainable packaging for agri-food products	6 Development of innovative systems for food processing	9 Microbiome for improving agricultural production
SMART MANUFACTURING	13 Innovative processes for the treatment and/or reuse of industrial waste	15 Sustainable supply chain tools and green energy solutions for manufacturing processes and product life renewal	17 Development and production of innovative materials		
SMART LIVING & ENERGY	37	43	47		

Identification of S3 regional development trajectories supporting the EU challenge on "achieving circularity"

Transversal driver "Green transition"

Strategic Mission "Bioeconomy"

Pilot analysis on data about projects managed by Regional Government

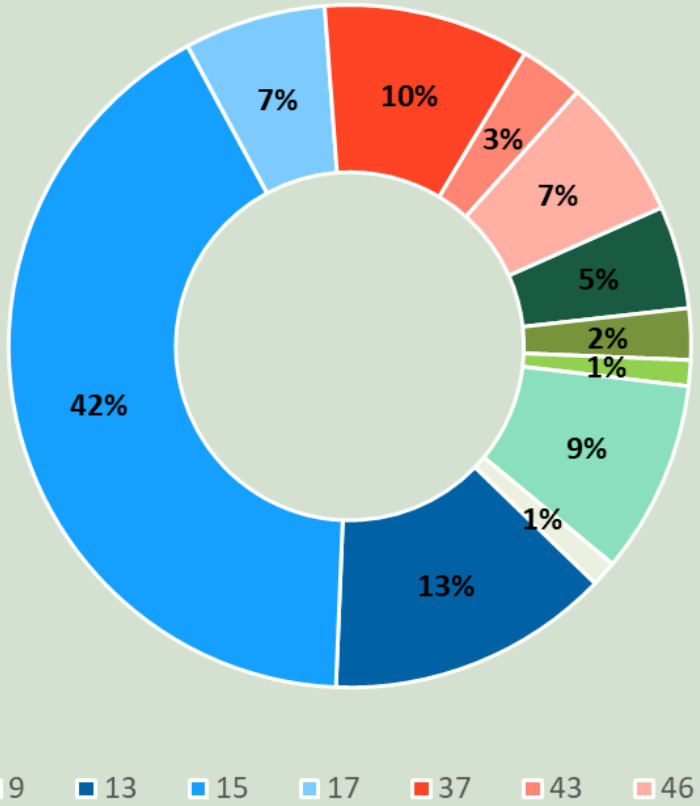
164 projects out of 752 addressing **circular economy**

€ 17,7 MLN of public resources out of € 82 MLN

Green transition driven by projects addressed to the **industrial sector**, and in particular aimed at developing technologies:

- for the innovation of manufacturing processes with a view to self-sustainability;
- for the renewal of product life;
- for the reduction of waste, the increase of energy and production efficiency.

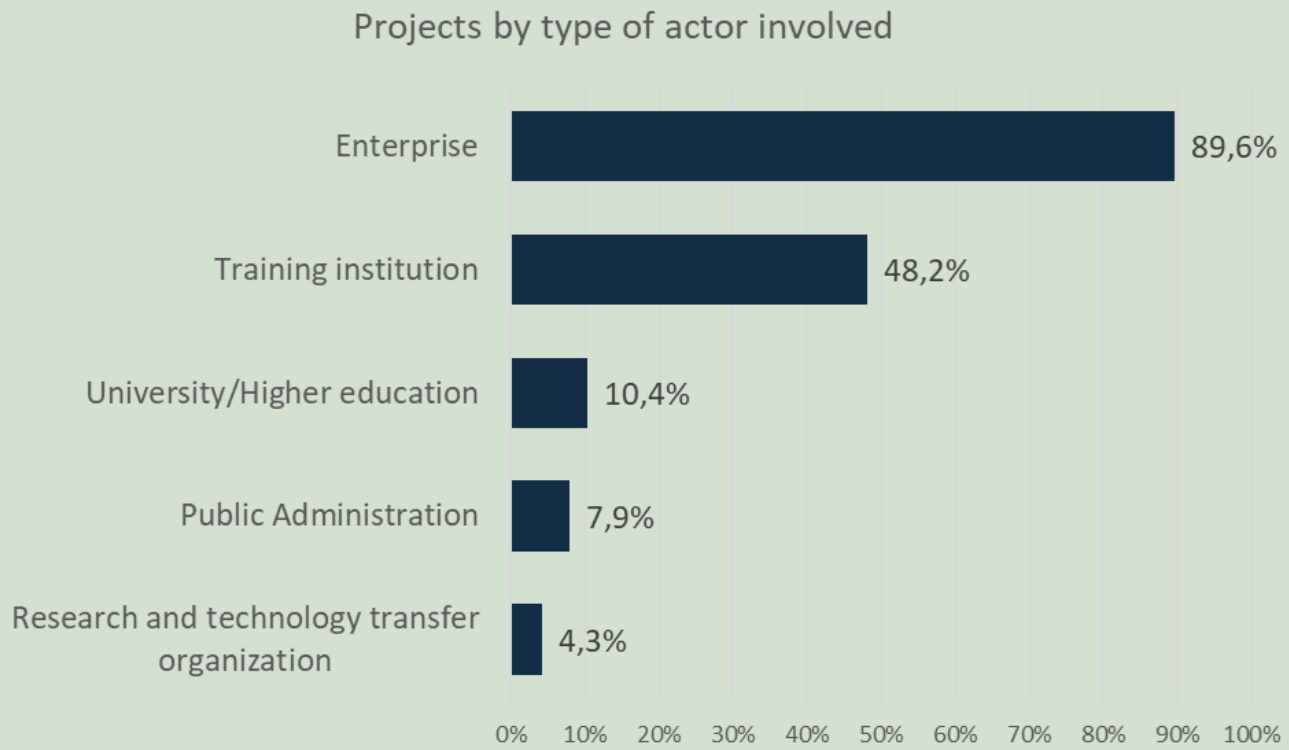
Graph 1. Number of project by S3 development trajectory



Source: Elaboration of Research, Innovation and Energy Competitiveness Department on data from the Veneto Region - October 2024

Focus on projects by type of actor involved

- 1106 total involved actors
- almost 90% of the projects involves enterprises, followed by training institutions (48% of the projects)

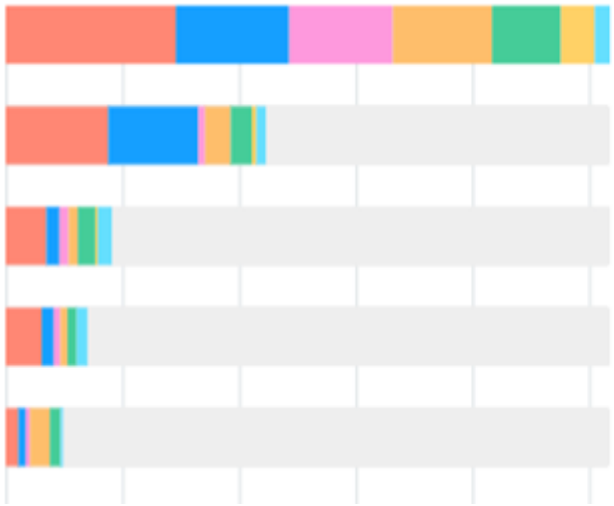


Source: Elaboration of Research, Innovation and Energy Competitiveness Department on data from the Veneto Region - October 2024

Interregional cooperation

Data on projects by types of actors involved in European projects can be a useful indication to identify the privileged actors to start interregional cooperation activities (e.g. Universities on Horizon Programmes, Public entities on Interreg).
Number of projects/actors involved and priority area

Type of actor	Number of project	Resources
University/Higher education	376	170 M
Enterprise	139	59 M
Public Administration	54	27 M
Other	39	19 M
Research and technology transfer organization	34	11 M



Source: Elaboration of Research, Innovation and Energy Competitiveness Department on data from CORDIS - October 2024

Next steps

1

Acquiring and including in S3 Veneto monitoring platform more detailed data from further sources

2

Processing
EU data through a classifier to link projects and actors to regional S3 trajectories

3

Developing new indicators to include sustainability & societal well being in S3 monitoring

4

Monitoring specific phenomena, such as the pursuit of STEP technologies, policies for reducing emissions or interregional cooperation

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From domains of specialisation to S3 missions

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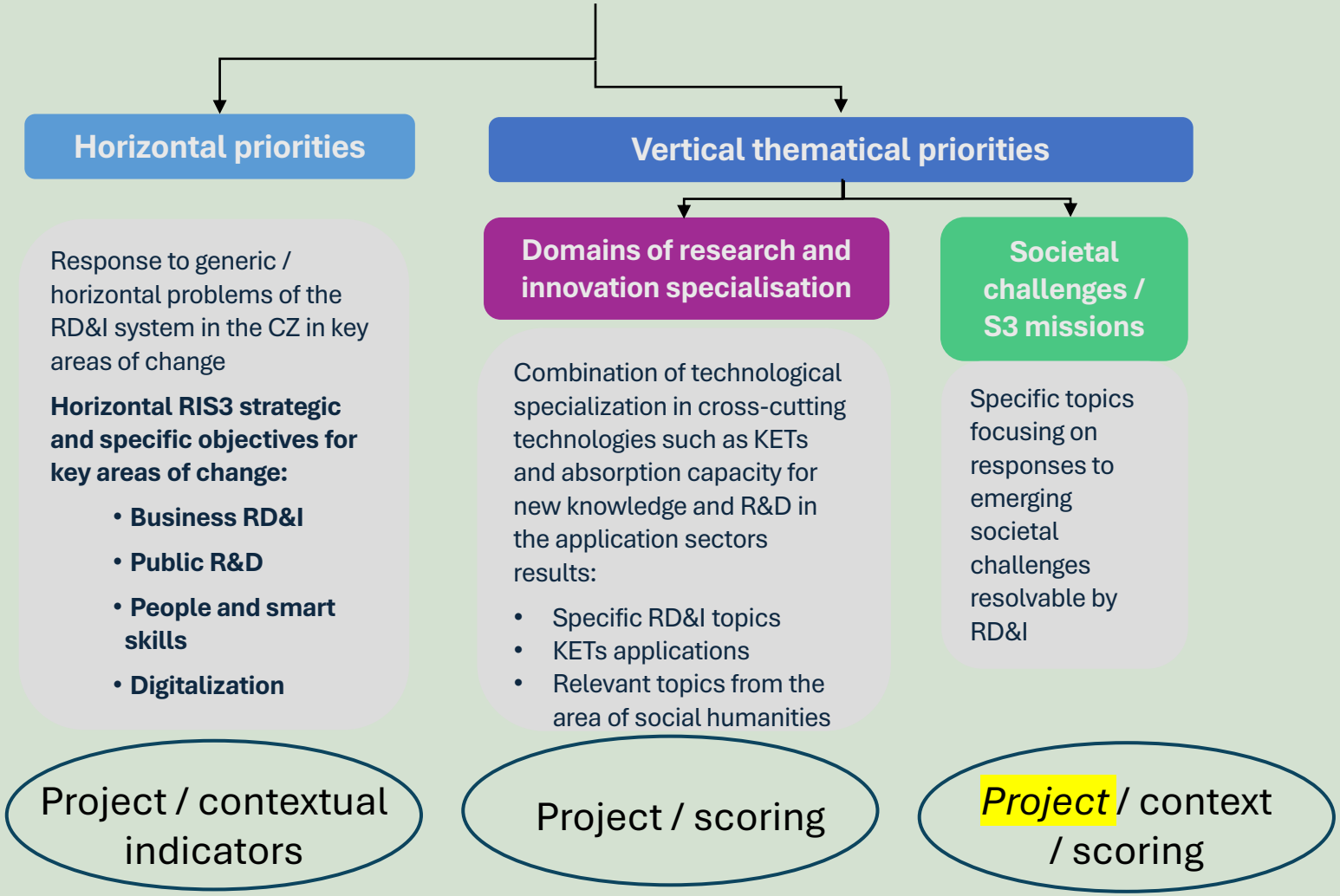
S3 Highlights in Czechia

- S3 is the main document for targeting the EU cohesion and domestic (from Czech budget) funds to perspective RD&I areas
- S3 is the starting document for the content definition of other strategies (e.g. National Strategy of Artificial Intelligence, Czech Semiconductors Strategy)
- The S3 RD&I topics are part of investment incentives criteria
- S3 seeks to address major societal challenges through MOIP (developed in cooperation with the EU Joint Research Centre and further elaborated with the OECD)
- S3 indicators are available at www.ris3.cz/monitoring

Czech National RIS3 Strategy priorities



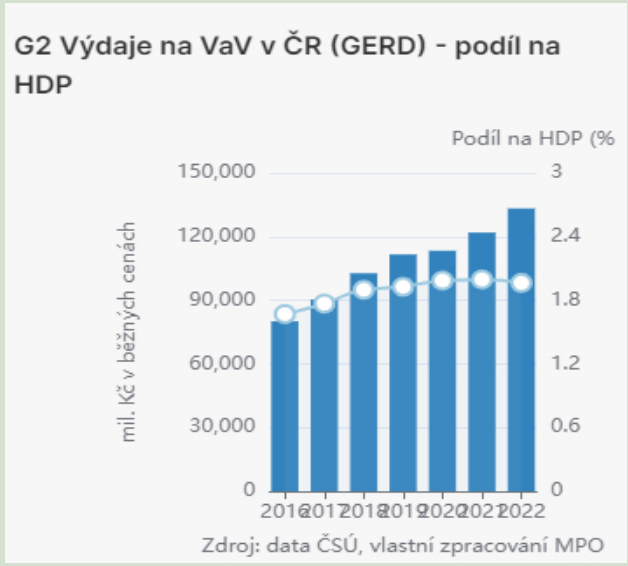
The principle of RIS3 monitoring

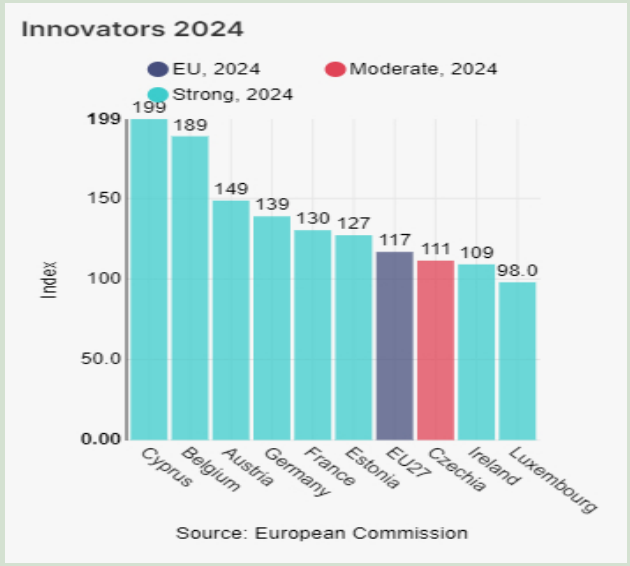
MONITORING NATIONAL RIS3

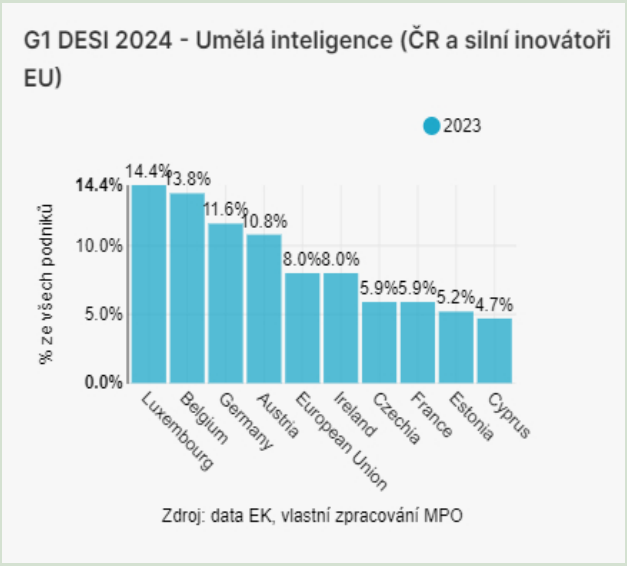
STRUCTURE	ENTITY R&DAI	TOOLS	SOURCES
RIS3 Vision	• knowledge potential • technological potential • Infrastructure	DATASET3.1a- VIZE • 10 selected contextual indicators (composite, composite)	• CSO • EURST • EC, WEF
Strategic objectives	• R&D&I - enterprises • R&D - research organisations • human resources • High technology - digitalisation	DATASET3.1a- STRATEGIC OBJECTIVES • 43 selected contextual indicators (composite, composite) PROJECT FACILITIES - financial resources; programmes	• CZSO, EC • EUROSTAT • MS2021+ • IS R&DaI
Specific objectives	• Enterprises: R&D&I, new companies; infrastructure • EQ: R&D quality; infrastructure • People: education; skills; motivation • Digitisation: business; public sphere	DATASET3.1b- SPECIFIC OBJECTIVES PROJECT KITS • financial resources; programmes • Substantive (project) indicators (outputs, results)	• MS2021+ • IS R&DaI
Research specialisation	• domains of specialisation (sectors; industries) • technologies • research topics	PROJECT KITS • financial resources; programmes; • Recipients	• MS2021+ • IS R&DaI
Regional dimension	• KRIS3 objectives • regional domains of specialization • research topics • funding	• structured text information about KRIS3 - MAP • structured FINANCIAL TABLE • selected indicators from the DATA SET • aggregated INKA data (TA CR); map layers (CI) • selected data from the PROJECT SETS	• KRIS3 • MS2021+ • IS R&DaI • CZSO, EURST

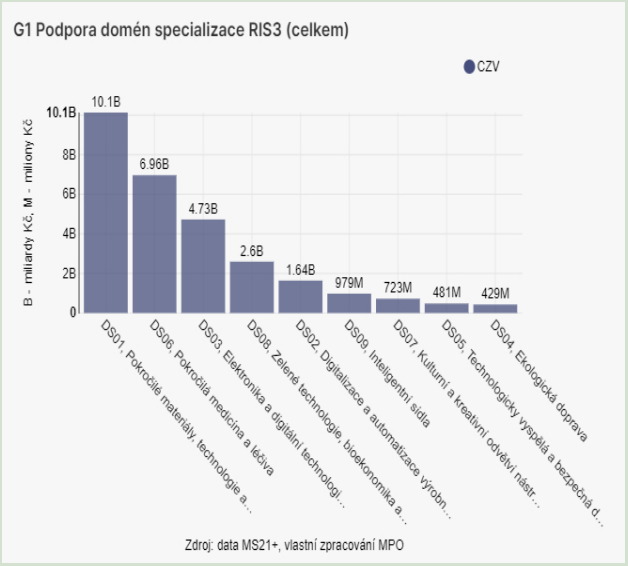
- Around **100 indicators** from the ESIF (4), departmental (13) and national (9) programmes
- Context indicators (DATASET 3.1 a) are used for monitoring the **substantive impacts,** poject indicators (DATASET 3.1 b) are used for monitoring the **results and outputs**
- **Target value 2029** was set for around 40 specific objectives.
- Achievement of targets is also reflected in annual RIS3 Execution and Implementation
- Around 40 indicators are monitored **online at RIS3 portal**

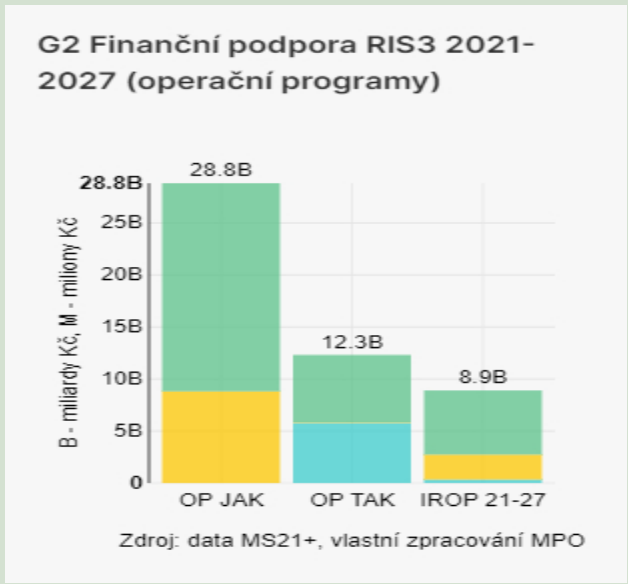
Selected context (impacts) and project (results)

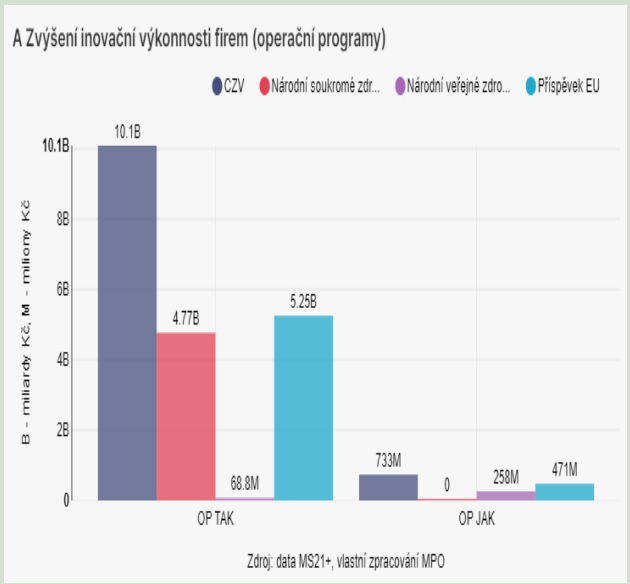


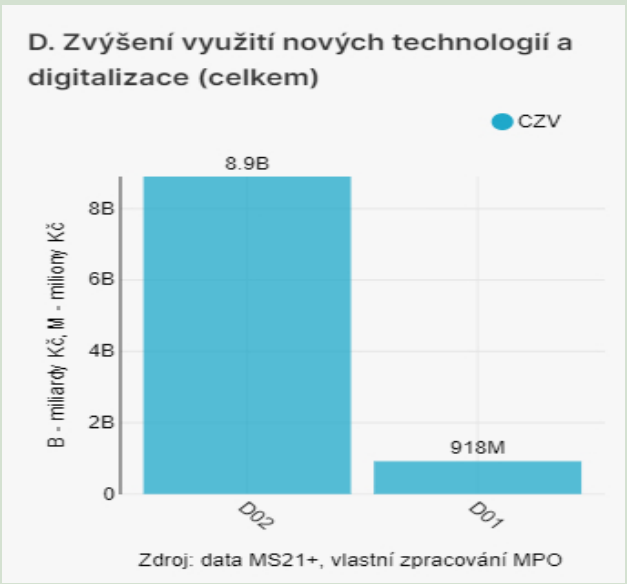


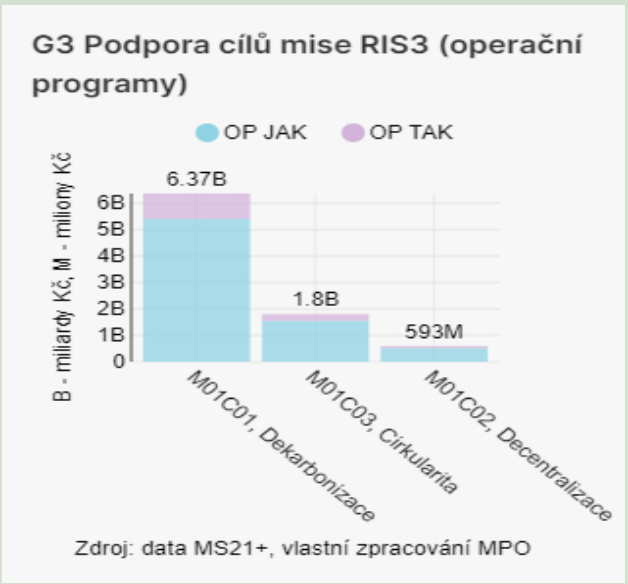






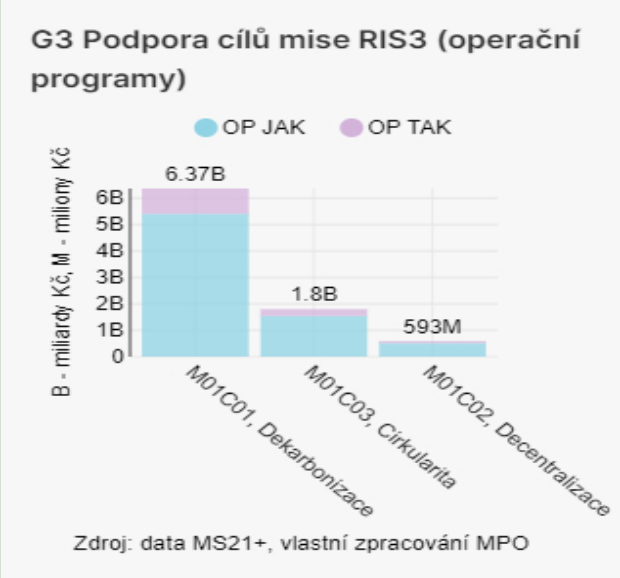


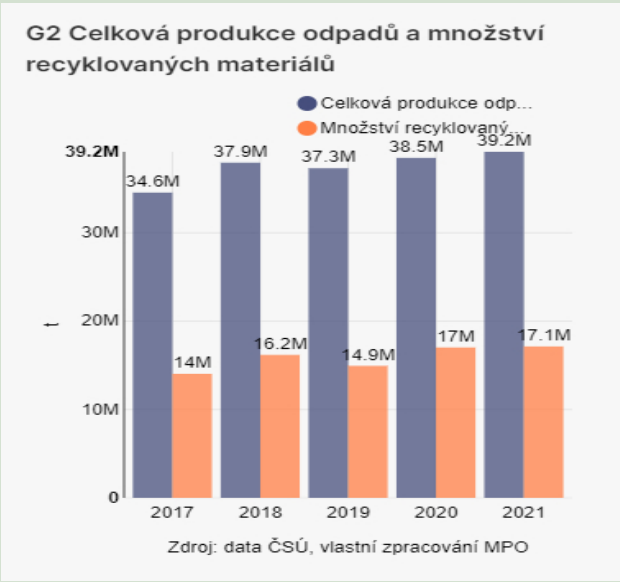




S3 missions

- Resources used in implementation (using financial monitoring, e.g. how much money has been invested)
- Activities and projects that meet the objectives of the mission (e.g., how many activities were implemented)
- Outcomes and impacts: the objectives set must not be divorced from the focus of the mission, they have a causal link to outputs and outcomes





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Portfolio of targets, tools and indicators

MISSION M01: STREAMLINING MATERIAL, ENERGY AND EMISSION EFFICIENCY OF THE ECONOMY

CONTEXT	EXPECTED IMPACT	RESOURCES NEEDED FOR IMPLEMENTATION	IMPLEMENTATION: ACTIVITIES	IMPLEMENTATION: ACTORS TARGETED / BENEFICIARIES	EFFECT: SHORT TERM (Output Indicators)	EFFECT: MEDIUM TERM (Result Indicators)	EFFECT: LONG TERM (Context Indicators)	SET TARGETS
Global demand for materials, energy and water are increasing beyond sustainable limits. Waste produced is forecast to grow significantly with impact on biodiversity and health. Risk of disruption to critical raw materials value chains – need to ensure security of supply for competitiveness. Relatively low material and energy efficiency of the Czech economy and society *(2018 compared to the EU average)*.	Transformation of the Czech economy towards efficient production and use of raw material and energy resources, optimisation of production processes and a reduced dependence on external raw material sources. Contribution to SDGs 7, 9 a 12	Funding from the Czech budget and ESIF OPs. (Public-private) investment and equity finance for deployment and upgrading *(energy, recycling, re-use, etc.)*. Multi-actor partnerships/consortia providing expertise required for system change. New skills in line with material and energy transition.	R&D projects at various TRL levels. Feasibility studies and investment support for demonstration and pilot facilities *(OP JAK)*. Education and training courses (upskilling), communication with businesses and citizens, awareness-raising *(e.g. assistance to municipalities wishing to implement circular solutions; energy consultants´ project; the Circular Arena Project; Circular Safari; ICOK ENVI Consultation Programme; human resources support; hydrogen projects on energy storage, etc.)*	Universities, research infrastructure, research centres *(e.g. VŠCHT, VŠTE, JČU, VŠB, UPOL, VC Řež, ZČU, UNICre, Institute of the Circular Economy…)* Agriculture and mining industry. Manufacturing industry *(e.g. ŠKODA GROUP, HONEYWELL, PRE, SPACE, Plastic cluster, etc.)* Recycling and waste companies. Nuclear, hydrogen and renewable energy producers; local energy communities; energy network managers *(e.g. nuclear power stations Temelín and Dukovany)*	Portfolio of R&D results addressing specific goals for decarbonisation, decentralisation and circularity *(number of implemented innovations; enterprises supported by grants; enterprises cooperating with research organizations; nominal value of R&I facilities, etc.)*. Development of (national) consortia in thematic areas *(number)*. Roadmaps (regional) for the development of innovative solutions and systems. Launch of place-based tests / demonstrators at regional level. Number of MAs (managing authorities) obtained for cooperation in financing the mission.	Patent applications submitted by supported entities. Trademarks and industrial designs. Research jobs created in supported entities.	Total greenhouse gas emissions; economic benefit from air and climate protection activities – revenue from the sale of environment protection services; conversion factors for gross production of electricity. The RES share in gross electricity production; the share of the population primarily relying on clean fuels; the share of RES energy in total final energy consumption. Material footprint per capita; waste production; the national level of recycling; economic benefit from waste management activities.	**Reduction of CO_2 emissions by 44 Mt CO_2 eq. (compared to 2005).** **Increasing the share of decentralised energy sources to 25 % in 2030.** **Triple the rate of material reuse by 2040 (compared to 2017).**

ASSUMPTIONS

The current mission card provides for funding for R&D through the ESIF OPs, there is an implicit assumption that other ministries/stakeholders will mobilise other instruments – in particular those building on the implementation.

EXTERNAL INFLUENCES (FACTORS)

Energy and resource-related targets, regulations and measures; regional wars / tensions and impact on energy and material supplies; security, etc.

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Monitoring: What is ahead of us?

- Developing a new monitoring framework
  - Systematic monitoring and assessment of intervention outcomes from research programs
  - Focus on measurable benefits (RIS3 missions and program goals)
  - Promoting synergies between program goals and RIS3 mission goals.
- Introduce a minimum standard for monitoring regional RIS3 strategies
- Further improve the www.ris3.cz portal with new tools

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Breakout session I

Parallel 3: S3 Monitoring and Evaluation

You already know what to do. Or do you? - Targeted Support as a personal trainer for S3 actors

11 December 2024

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Regional Council of Päijät-Häme, Finland

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Introducing Region of Päijät-Häme

- In Southern Finland
- 200 000 inhabitants, main city Lahti
- Industrial background -> transition -> Lahti: European Green Capital 2021
- Low GDP & structural challenges
- S3 priorities
  - Sport
  - Food & Beverage
  - Manufacturing
  - Sustainability (cross-cutting)

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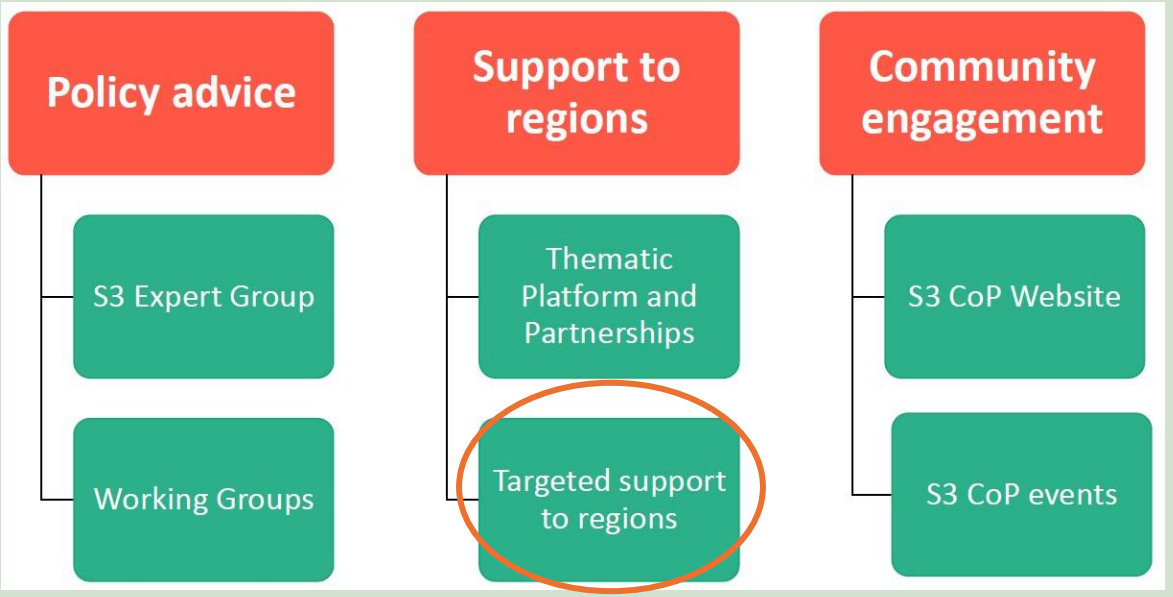
Targeted Support?

- One of services provided by S3 CoP
- Co-design and collaboration between **DG REGIO**, the beneficiary **region**, the **S3 CoP** Secretariat, and a designated **expert**
- Preparation -> desk research -> on-site focus group interviews -> analysis -> final report
- Non-stop application, cut-off assessment every 3 months
- Whole process from application to final report about 1 year



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Why Targeted Support - to us?

- Needed to revamp our regional S3 operational structure and impact loops
- Small region in small remote country: look for experiences to
  - learn from successful practices
  - avoid same mistakes
- Inspiration from Interreg Europe PLP Peer Review in Autumn 2023: regional innovation governance
- Together we decided to focus on indicators, monitoring, and evaluation

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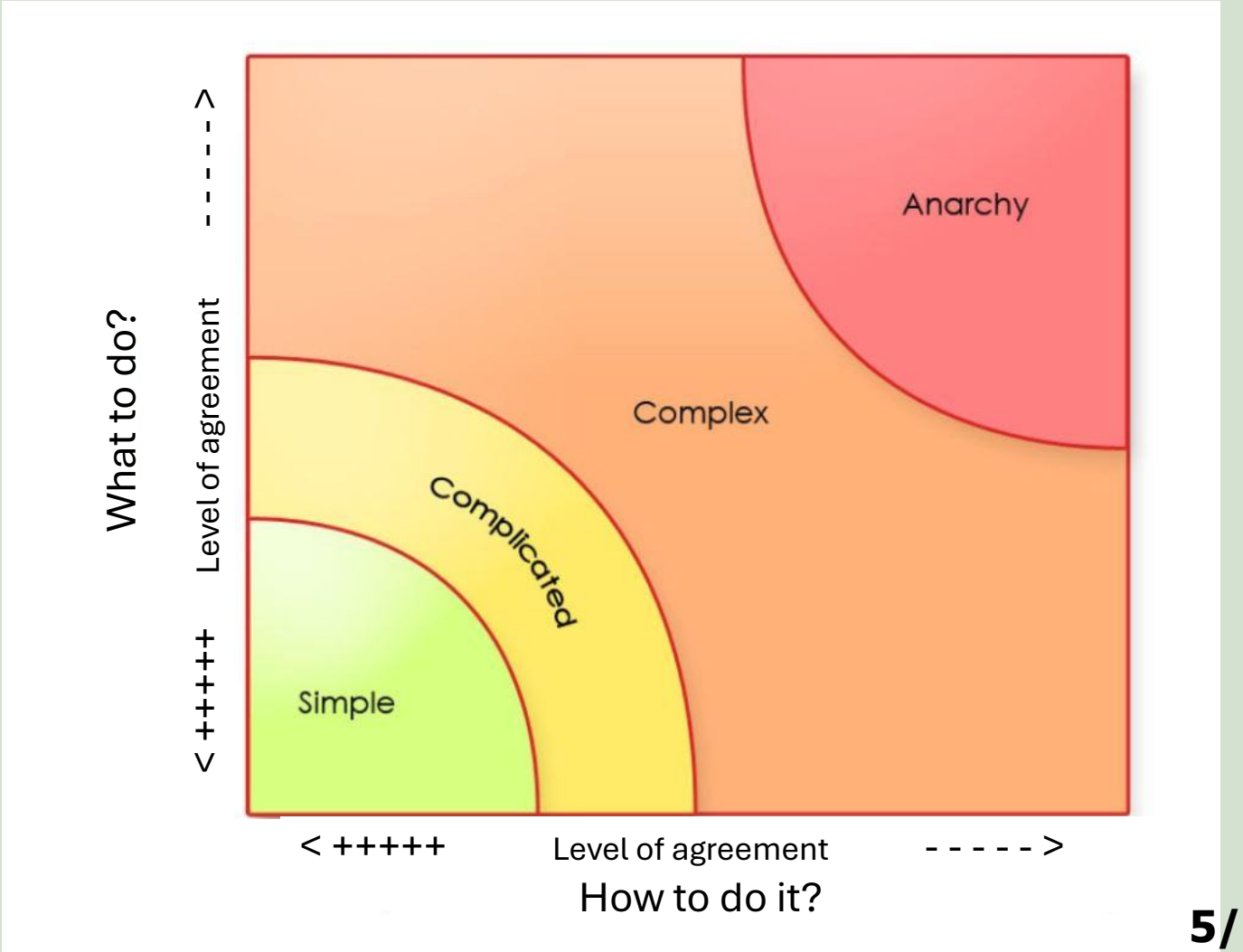
Why Targeted Support - in general?

- “Tbh, we already knew…”
- Use targeted support as a decoy or "middleperson" to deliver the message
- To map the regional situation, to build desired mindset and shared vision
- To find the sweet spots in the what / how matrix
- A monitoring and evaluation measure in itself



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Conclusions

- For whom: regions that know that they do not know enough
- Who are "stuck"; who know what to do, but lack the how, who, and when
- Use to lubricate local decision-making bottlenecks and to create shared understanding & motivational vibes
- Don’t be content with status quo, but air-blow your own inside-the-box thoughts and put them into perspective with the help of external expertise

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