

# **Smart Specialisation for the SDGs: a journey from practice to theory and back again**

## **Revisiting theoretical and conceptual foundations of S3 to align them with the SDGs**

SMARTER 2020 Conference

Smart Specialisation for the Sustainable Development Goals

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# Few words about the project

# PROJECT OBJECTIVES AND APPROACH

## Objectives

- Develop an evidence-based conceptual framework and guidelines on the design and implementation of S3 for the achievement of the SDGs;
- Prepare an outline of a self-assessment tool for regions to support their capabilities for designing and implementing S3 for achieving sustainable transformation.

## Methodological approach

- Literature review
- Analysis of empirical evidence collected from regions and thematic networks by JRC
- Expert interviews.

**This presentation introduces preliminary outputs of the project developed for EC JRC based on an ongoing literature review and previous work on the subject. The framework and conclusions are tentative. Your feedback is welcome!**

# **New challenges and expectations towards (regional) innovation policy**



# SUSTAINABLE DEVELOPMENT GOALS

17 GOALS TO TRANSFORM OUR WORLD

**1** NO POVERTY



**2** ZERO HUNGER



**3** GOOD HEALTH AND WELL-BEING



**4** QUALITY EDUCATION



**5** GENDER EQUALITY



**6** CLEAN WATER AND SANITATION



**7** AFFORDABLE AND CLEAN ENERGY



**8** DECENT WORK AND ECONOMIC GROWTH



**9** INDUSTRY, INNOVATION AND INFRASTRUCTURE



**10** REDUCED INEQUALITIES



**11** SUSTAINABLE CITIES AND COMMUNITIES



**12** RESPONSIBLE CONSUMPTION AND PRODUCTION



**13** CLIMATE ACTION



**14** LIFE BELOW WATER



**15** LIFE ON LAND



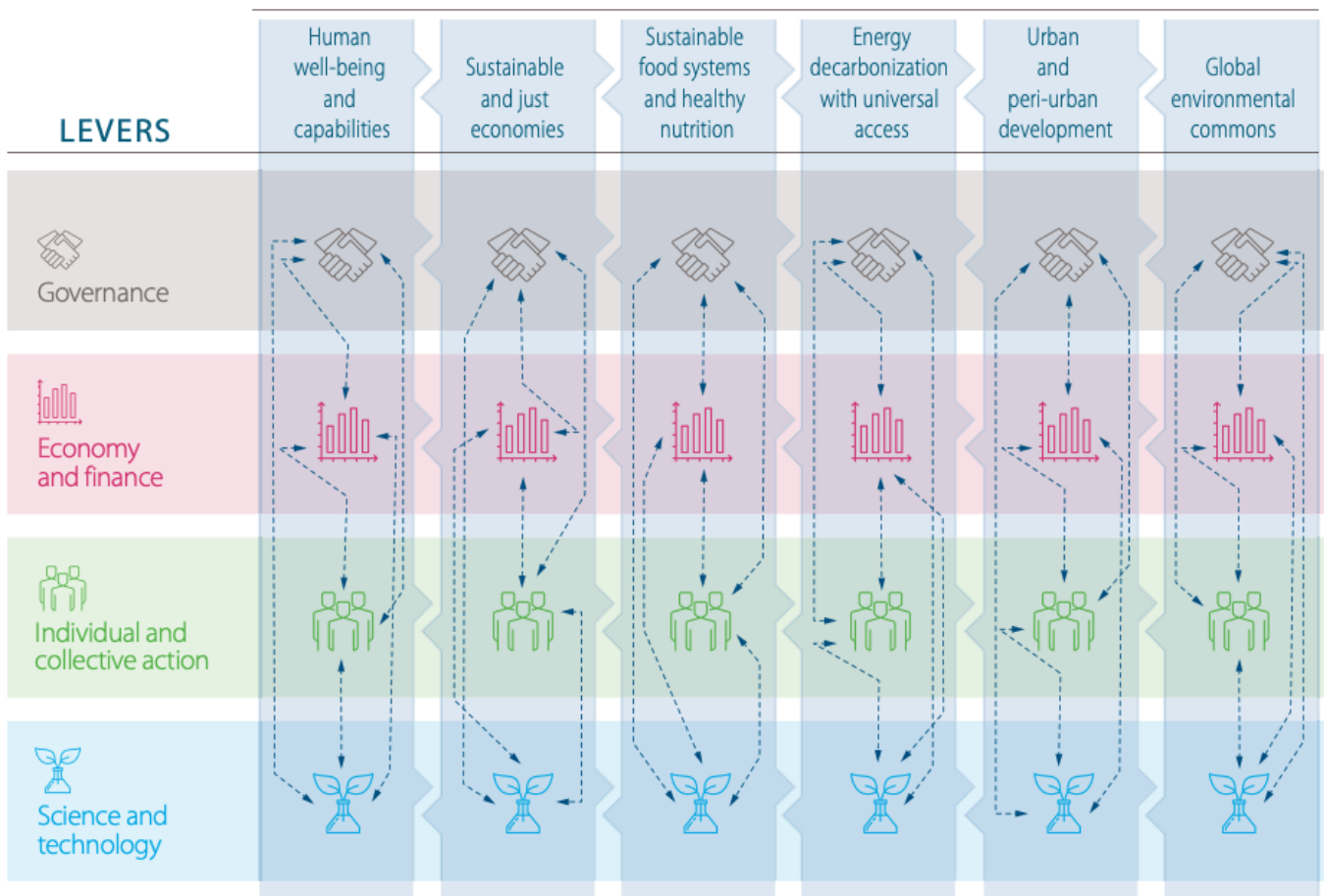
**16** PEACE, JUSTICE AND STRONG INSTITUTIONS



**17** PARTNERSHIPS FOR THE GOALS



## ENTRY POINTS FOR TRANSFORMATION





## Transforming the EU's economy for a sustainable future

### The European Green Deal

Mobilising research  
and fostering innovation

A zero pollution ambition  
for a toxic-free environment

Preserving and restoring  
ecosystems and biodiversity

From 'Farm to Fork': a fair, healthy  
and environmentally friendly food  
system

Accelerating the shift to  
sustainable and smart mobility

Leave no one behind  
(Just Transition)

Financing the transition

Building and renovating in an  
energy and resource efficient way

Mobilising industry  
for a clean and circular economy

Supplying clean, affordable  
and secure energy

Increasing the EU's Climate  
ambition for 2030 and 2050

The EU as a  
global leader

A European  
Climate Pact

# NEW EXPECTATIONS TOWARDS EU COHESION POLICY



Strasbourg, 29.5.2018  
COM(2018) 375 final  
2018/0196(COD)

Proposal for a

## REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, and the European Maritime and Fisheries Fund and financial rules for those and for the Asylum and Migration Fund, the Internal Security Fund and the Border Management and Visa Instrument

### **Title II: Strategic approach**

Eleven thematic objectives used in 2014-2020 have been simplified to five clear policy objectives in this regulation:

1. A smarter Europe - innovative and smart economic transformation.
2. A greener, low-carbon Europe.
3. A more connected Europe - mobility and regional ICT connectivity.
4. A more social Europe - implementing the European Pillar of Social Rights.
5. Europe closer to citizens – sustainable and integrated development of urban, rural and coastal areas through local initiatives.



# NEW EXPECTATIONS TOWARDS EU COHESION POLICY AND SMART SPECIALISATION

## S3 TO PROMOTE “INNOVATIVE AND SMART ECONOMIC TRANSFORMATION” AND “INDUSTRIAL TRANSITION”

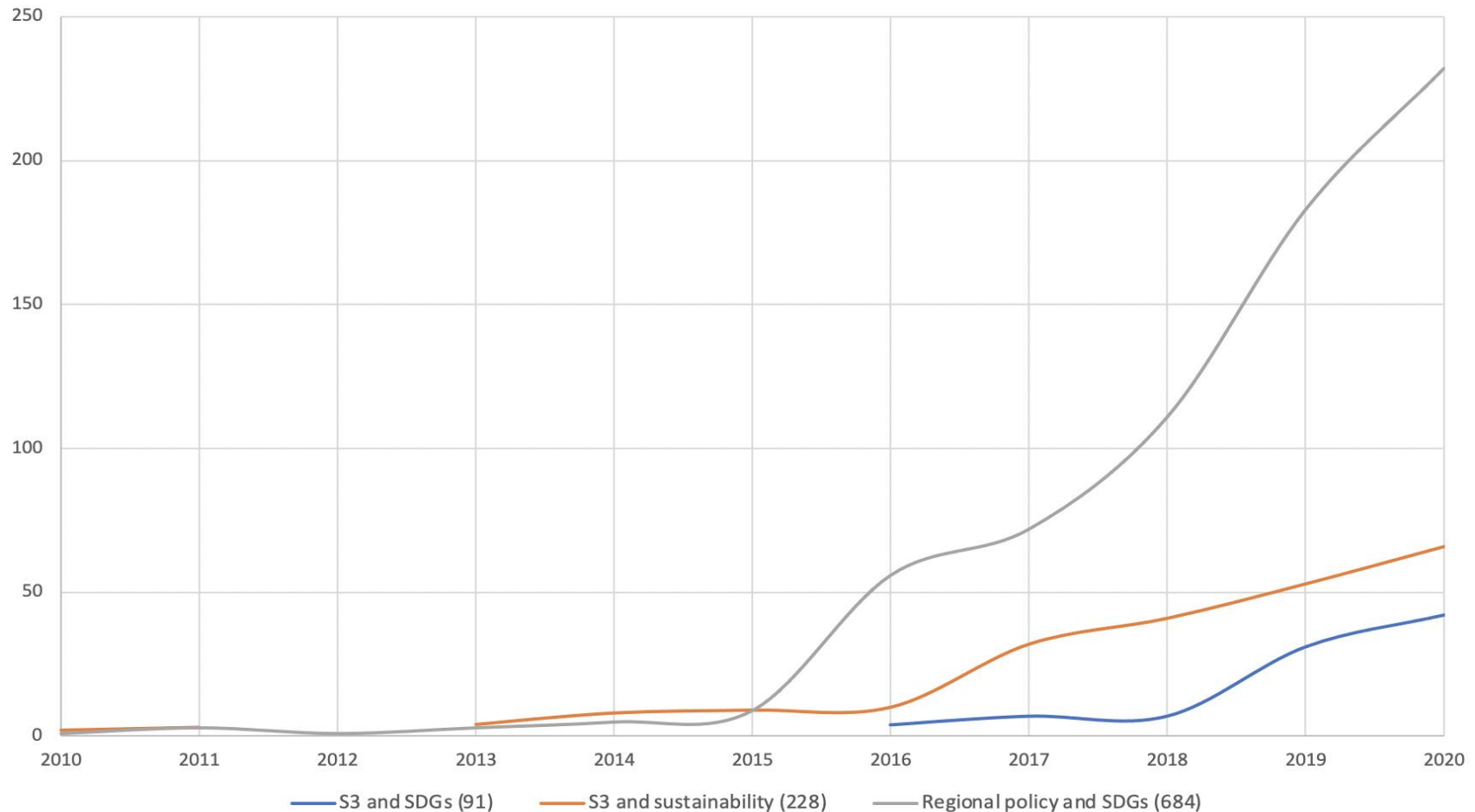
### ANNEX IV

**Thematic enabling conditions applicable to ERDF, ESF+ and the Cohesion Fund – Article 11(1)**

Policy objective	Specific objective	Name of enabling condition	Fulfilment criteria for the enabling condition
<b>1. A smarter Europe by promoting innovative and smart economic transformation</b>	ERDF: All specific objectives under this policy objectives	Good governance of national or regional smart specialisation strategy	Smart specialisation strategy(ies) shall be supported by: <ol style="list-style-type: none"> <li>1. Up-to-date analysis of bottlenecks for innovation diffusion, including digitalisation</li> <li>2. Existence of competent regional / national institution or body, responsible for the management of the smart specialisation strategy</li> <li>3. Monitoring and evaluation tools to measure performance towards the objectives of the strategy</li> <li>4. Effective functioning of entrepreneurial discovery process</li> <li>5. Actions necessary to improve national or regional research and innovation systems</li> <li>6. Actions to manage industrial transition</li> <li>7. Measures for international collaboration</li> </ol>

# **Theoretical perspectives and insights from the literature review**

# A GLANCE AT THE PUBLICATION TRENDS ON REGIONAL INNOVATION POLICY AND THE SDGs



Scopus queries conducted on 30 October 2020 (documents published 2010-2020):

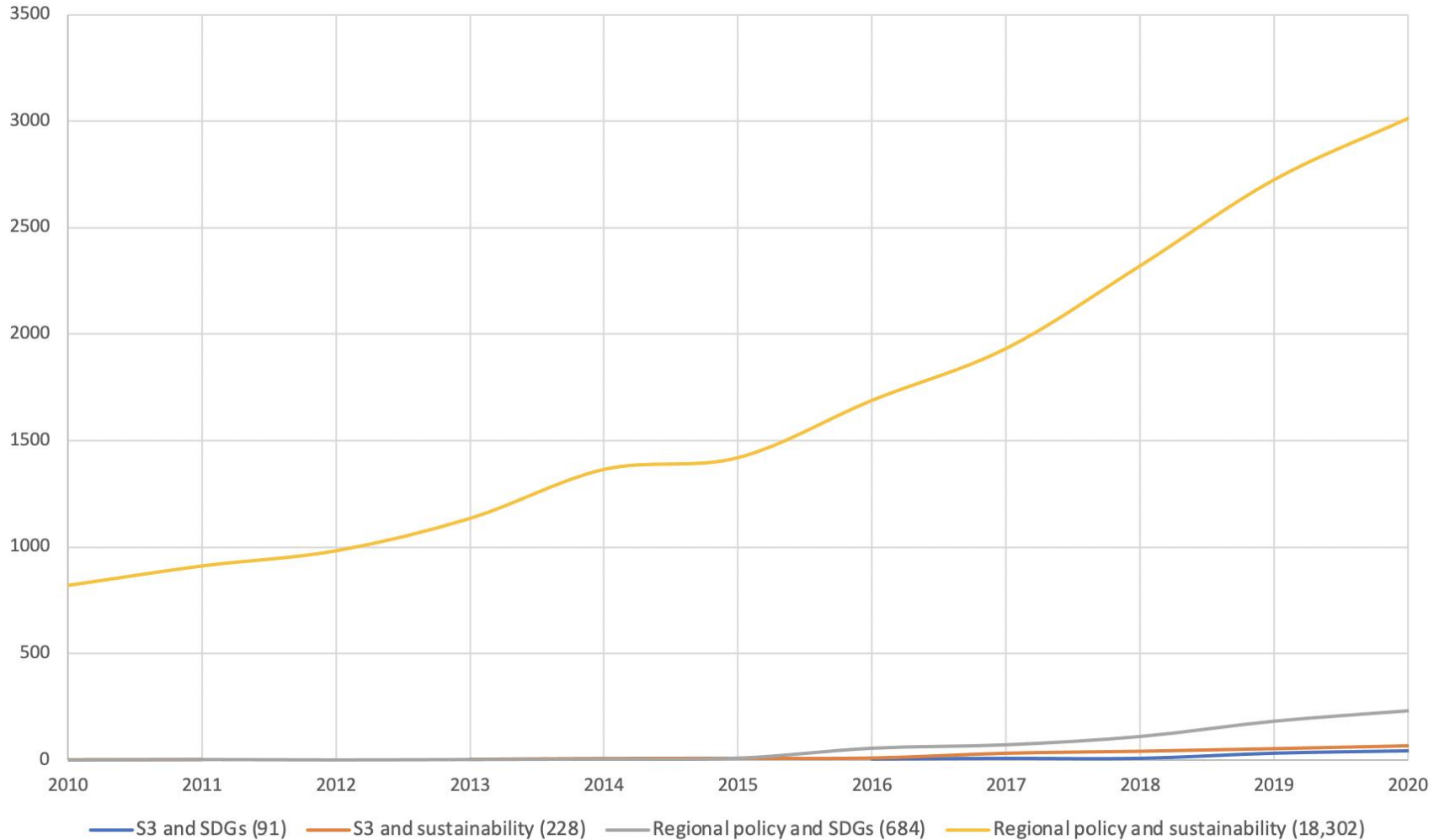
S3 and SDGs: ALL("smart speciali\*ation" OR "regional innovation strategy" OR "regional innovation policy") AND ("sustainable development goals" OR SDGs)

S3 and sustainability: ALL("smart speciali\*ation" OR "regional innovation strategy" OR "regional innovation policy") AND (sustainable OR sustainability)

Regional policy and SDGs: TITLE-ABS-KEY(regional OR spatial OR local) AND (strategy OR policy) AND ("sustainable development goals" OR SDGs)

Note additional filters were applied to the searches (e.g. results are shown for journal articles and reviews in selected subject areas).

# TO PUT IN A PERSPECTIVE...



Scopus queries conducted on 30 October 2020 (documents published 2010-2020):

S3 and SDGs, S3 and sustainability, Regional policy and SDGs (ibid)

Regional policy and sustainability: TITLE-ABS-KEY((regional OR spatial OR local) AND (strategy OR policy) AND (sustainable OR sustainability))

Note additional filters were applied to the searches.

# FIRST INSIGHTS FROM A LITERATURE REVIEW

**Researchers draw from a variety of theoretical perspectives and concepts to interrogate questions linking regional innovation policy and sustainability:**

- Economic geography, evolutionary and institutional perspectives
- Innovation policy studies, notably work on challenge-driven innovation policy (e.g. transformative innovation policy, mission-oriented policy)
- Sustainability transitions, notably multi-level perspective, transitions management, strategic niche management
- Policy studies, including policy mix literature in the context of transitions
- Governance, notably multi-level and polycentric governance
- Spatial planning
- Climate adaptation and resilience theory
- Political ecology
- Social learning

# ACADEMIC DEBATE ON THE FUTURE OF S3

## **Sustainability orientation**

- How to embed and localise strategic orientation towards the SDGs in S3 *and* in innovation policy across regions and at different governance levels?
- How to reconcile seeking competitive advantage with contributing to the SDGs?

## **Transformative potential**

- How relevant is S3 as a concept and as an instrument for the structural transformation needed to achieve the SDGs?
- What are transformative outcomes one can *realistically* expect from the current S3, especially in institutionally weaker and leading regions?
- Is S3 scalable to foster structural transformation needed for the SDGs at varying spatial scales and on multiple governance levels?

## **Innovation projects**

- How to shift the focus from conventional, R&D-driven technological innovation in many regions to include support system innovation and other forms of innovation relevant for sustainability (e.g. eco-innovation, social innovation)?
- How can S3 foster ambitious challenge-driven system innovation projects in weaker regions?

## ACADEMIC DEBATE ON THE FUTURE OF S3 (2)

### **Self-discovery process**

- Can self-discovery process become a challenge-led process exploring alternative transition pathways towards sustainability goals?
- What would be key features and enabling environment of such a process?

### **Governance and policy mix**

- What are relevant policy instruments and governance mechanisms to support system innovation?
- How to improve horizontal and vertical policy coherence to foster transformation towards the SDGs?
- What are institutional designs and capacities on the regional level needed to foster system innovation?

### **Policy learning and evidence base**

- How to consolidate open access evidence base to inform robust diagnosis of global and local sustainability challenges?
- How to strengthen EU's and regional capacity to continuously monitor, evaluate and reflect about possible and actual (beneficial and adverse!) effects of innovation on sustainability transitions and the SDGs?

# **S3 for the SDGs: Towards a conceptual framework**



## S3 FOR SDGS: TOWARDS A FRAMEWORK

Key issues	Advantages of S3	Limitations of S3
<b>Sustainability orientation</b>	<ul style="list-style-type: none"> <li>- Focus on selecting priorities in the planning phase (intentional directionality)</li> <li>- Emerging examples of regions focusing on sustainability challenges</li> </ul>	<ul style="list-style-type: none"> <li>- Tension between the focus on economic competitiveness and the fundamental principles of the Agenda 2030 (e.g. indivisibility and the 'leave no one behind' principle)</li> </ul>
<b>Transformative potential</b>	<ul style="list-style-type: none"> <li>- Strong focus on fostering structural transformation</li> <li>- Cross-sectoral approach</li> <li>- Central role of innovation as a driver of transformation</li> </ul>	<ul style="list-style-type: none"> <li>- Focus on economic sectors as subject of transformation</li> <li>- Limited reflection on how to envision and deliberate alternative transition pathways</li> <li>- Insufficient reflection the scalability of S3 as an approach to address societal challenges on varying spatial scales</li> <li>- In practice limited capacity to foster transformation, especially in the most advanced and weakest regions (hence not universal)</li> </ul>
<b>Innovation projects</b>	<ul style="list-style-type: none"> <li>- Focus on innovation as a key driver of structural transformation</li> </ul>	<ul style="list-style-type: none"> <li>- Predominant focus on R&amp;D and technological innovation in many regions</li> <li>- Limited attention to system innovation</li> </ul>

## S3 FOR SDGS: TOWARDS A FRAMEWORK (2)

Key issues	Advantages of S3	Limitations of S3
<b>Self-discovery process</b>	<ul style="list-style-type: none"> <li>- Combination of strategic planning and bottom-up entrepreneurial discovery process</li> <li>- Inclusive and open multi-stakeholder (quadruple helix)</li> <li>- Open to experimentation of alternative solutions</li> </ul>	<ul style="list-style-type: none"> <li>- Insufficient conceptualisation of self-discovery as a process to collectively envision transition pathways (e.g. alternative ways to scale niche actions)</li> <li>- In practice, predominant focus on actors from R&amp;D and high-tech sectors and limited participation of civil society</li> <li>- In practice, insufficient use of foresight to develop shared visions and scenarios</li> </ul>
<b>Governance and policy mix</b>	<ul style="list-style-type: none"> <li>- Emphasis on using a variety of instruments and embedding S3 in a wider innovation policy mix</li> </ul>	<ul style="list-style-type: none"> <li>- In practice, weak coordination and insufficient links with wider regional and national policy mix</li> <li>- In practice, weak capacity in some regions and countries reduces the transformative potential of S3</li> </ul>
<b>Policy learning and evidence base</b>	<ul style="list-style-type: none"> <li>- Strong emphasis on diagnostic tools, monitoring and evaluation as an integral part of S3</li> </ul>	<ul style="list-style-type: none"> <li>- In practice, insufficient development of monitoring and evaluation capacity of S3</li> </ul>

## S3 FOR SDGS: TOWARDS A FRAMEWORK (3)

### **Sustainability orientation**

- Direction: Align priorities of S3 with sustainability goals in line with scientific evidence and relevant strategic frameworks (e.g. SDGs and the EGD in the EU);

### **Transformative ambition**

- Ambition: Focus on transforming socio-technical systems rather than economic sectors;
- Subsidiarity: Mobilise action and resources at the scale appropriate to effectively tackle specific challenges;

### **Type of innovation projects**

- Focus on projects (or mini-programmes) supporting experimentation and scaling up of system innovation;
- Support a variety of technological and non-technological innovations needed to foster transitions towards sustainability goals in the local context;

### **Self-discovery process**

- Self-discovery as a social learning and co-creation process to localise the SDGs, deliberate local transition pathways and co-design system innovation projects;

### **Governance and policy mix**

- Flexible governance mechanisms to support changes needed to address the SDGs at appropriate scales;
- Focus on horizontal and vertical policy coherence to better address the SDGs
- Design comprehensive challenge-oriented policy portfolios;

### **Policy learning**

- Policy monitoring and evaluation as a reflexive social learning system;
- Diagnosis based on scientific evidence and foresight for deliberating alternative transition pathways for transformation.

## NEXT STEPS: FROM THEORY TO REALITY

**The (evolving) concept of S3 has a potential to align with the new generation of challenge-led innovation policies focused on sustainability goals.**

**But how to align S3 with the SDGs in practice in absence of a strong formal requirement to do so?**

- Strive for vertical coherence with the European Green Deal and new thematic objectives of EU Cohesion Policy, notably a greener, low-carbon economy;
- Promote S3 as a framework to design and implement challenge-led innovation policy approaches on the regional level in Europe and beyond;
- Use S3 to build and foster new international innovation collaborations, especially in the context of the recent UN IATT's initiative on STI for SDGs roadmaps.

Thank you for your attention!

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