

Towards next generation Smart Specialisation for sustainable territorial development

**Rethinking conceptual and theoretical framework
of Smart Specialisation to address the SDGs**

**Smart Specialisation for Sustainable Development Goals
E-talks webinar series**

JRC, 4 October 2021

Objectives and scope of the paper

Objectives

- Develop a conceptual framework and guidelines for the design and implementation of Smart Specialisation strategies (S3) for the achievement of the Sustainable Development Goals (SDGs)
- Prepare an outline of a self-assessment questionnaire for regions to support their capabilities for designing and implementing S3 for the SDGs

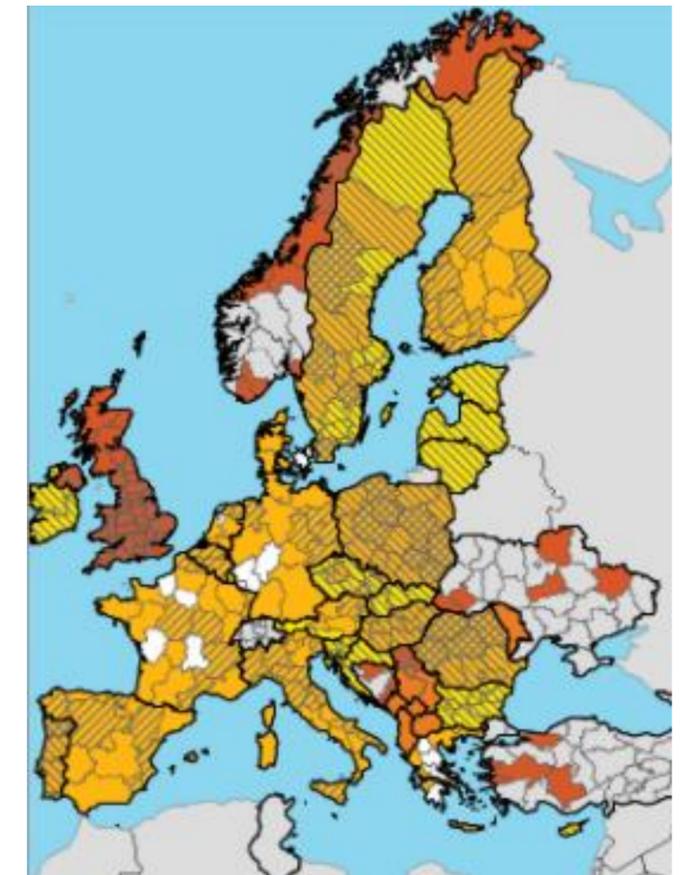
Methodological approach

- Literature review
- Expert consultations

Team

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Please see the full report for the detailed methodology and findings.



This eTalk

- Why aligning Smart Specialisation with the SDGs is a challenge?
- What can S3 community learn from research on sustainability transitions?
- Towards principles and theoretical foundations for S3 for the SDGs





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

SUSTAINABLE DEVELOPMENT GOALS





Hebei province, China

Source: The Guardian (2016) Bad Earth: the human cost of pollution in China – in pictures; photo by Souvid Datta, an Abigail Cohen Fellow, for ChinaFile;
<https://www.theguardian.com/environment/gallery/2016/apr/12/china-beijing-air-pollution-cancer-villages-toxic-lakes>



Normative turn in innovation studies & policies

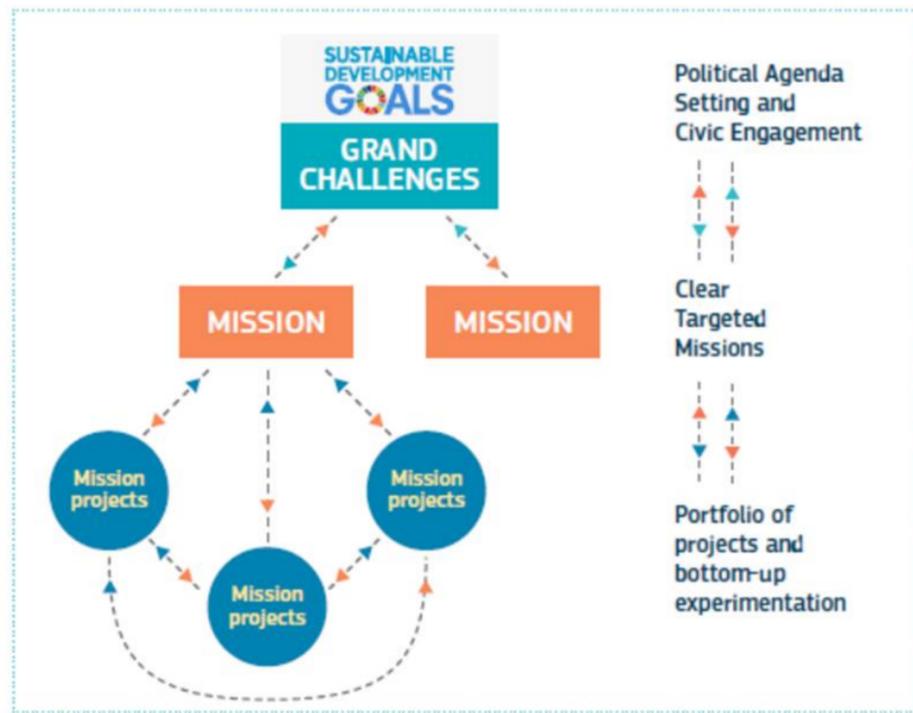


Figure 1. From Challenges to Missions Image: RTD - A.1 based on Mazzucato (2017)

**‘All innovation has both a rate and direction’
Mazzucato**



*“We only have two demands!
Why don't people just give us what we want?”*

What's new?

- Beyond growth poles & towards alternative rationales for regional development (e.g. foundational economy)
- Extending the triple helix towards citizen inclusion and responsible innovation (Fitjar et al., 2019)
- Experimentation in the face of wicked problems (Wanzenböck et al., 2020)
- Greater diversity in types of innovation (Coenen & Morgan, 2020)

Challenges for aligning S3 with the SDGs

Political challenges

- Economic growth and territorial competitiveness dominate political and policy discourse, often at the expense of a more decisive action for sustainability goals
- Few positive (or negative) policy incentives to align S3 with the SDGs

Conceptual challenges

- Tensions between the key principles of the Agenda 2030 and the SDGs and the goals underlying the current S3 framework
- Extending the S3 framework to embrace challenges of a whole-system transition and to consider synergies and trade-offs between multiple goals

Implementation challenges

- Significant implementation bottlenecks, especially in institutionally and structurally weaker regions
- Limited evidence of impact of S3 on structural change
- Communication and “translation” issues with the S3 concept

Drawing lessons for S3 from research on sustainability transitions

We focused on three research areas:

- Sociotechnical transitions
- Socio-ecological resilience
- Challenge-led innovation policy

The report offers a comprehensive review and focused reflection on concrete lessons these areas of research offer for revising the S3 framework and process to better align with the SDGs and the transformative ambition of the 2030 Agenda.

Perspectives	Core concepts	Examples of papers combining place-based innovation, transition and sustainability
<i>Sociotechnical transitions</i>	Sociotechnical system Multi-level perspective (MLP) Transition pathways Experimentation	Truffer and Coenen (2012) Coenen et al. (2012) Wieczorek et al. (2015) Hansen and Coenen (2015) Kivimaa et al. (2017) Sengers et al. (2019) Veldhuizen (2020) Binz et al. (2020)
<i>Social-ecological resilience</i>	Social-ecological system Transformational resilience Social learning	Eriksen et al. (2011) Brown (2014) Biggs et al. (2012, 2015) Colvin et al. (2014) Wamsler et al. (2014) Elmqvist et al. (2019) Bevilacqua et al. (2020) Castro-Arce and Vanclay (2020)
<i>Challenge-led innovation policy</i>	Transformational failures Transformative innovation policy Mission-oriented innovation policy Responsible research and innovation Policy mix for sustainability transitions	Weber and Rohracher (2012) Foray (2018) Tödtling and Trippel (2018) Magro and Wilson (2019) Fitjar et al. (2019) Uyarra et al. (2019) Thapa et al. (2019) Wanzenböck and Frenken (2020) Panciroli et al. (2020)

Drawing lessons for S3 from research on sustainability transitions

Lessons for S3: Setting out the S3 process and governance

Limitations of the S3 model	Insights from sociotechnical transitions	Insights from social-ecological resilience	Insights from challenge-led innovation policy
<p>Limited inclusion of civil society and vulnerable groups</p> <p>Insufficient arrangements for the continuous discovery, experimentation and learning</p> <p>Insufficient interregional coordination to address sustainability challenges</p>	<p>Ensure inclusivity of the process</p> <p>Reflect on the roles, interests and expectations of incumbent and niche actors in S3 governance (e.g., to anticipate and manage capture of the process by incumbents)</p>	<p>Ensure inclusivity of the process, especially to include previously excluded or underrepresented groups</p> <p>Engage local actors to develop shared ownership of S3 and localise the SDGs</p>	<p>Inclusive governance, ensuring the participation of civil society and citizens</p> <p>Facilitate interregional challenge- or mission-led collaboration for the SDGs</p>

Suggestions on how to align the S3 process and governance with the SDGs

- Encourage participation of actors and institutions whose missions align with the SDGs
- Include marginalised groups and those vulnerable to societal challenges and sustainability transitions
- Embed a challenge- or mission-oriented approaches in the discovery process to harness bottom-up experimentation
- Encourage interregional collaboration towards shared sustainability challenges and goals
- Develop governance mechanisms enabling ongoing policy learning and reflexivity in the S3 process

Towards new foundations for Smart Specialisation for the SDGs

Guiding principles of S3 for the SDGs

Shared direction towards the SDGs	SDGs as an overarching strategic framework of Smart Specialisation giving a shared direction and the sense of urgency to the discovery process and the selection of S3 priorities
Whole-system transformation towards sustainability	S3 to foster innovations contributing to wider sociotechnical and social-ecological transitions needed to accomplish the SDGs. S3 to embrace complex, multi-actor, multi-scalar and often uncertain nature of sustainability transitions
Responsibility and reflexivity	SDGs as a compass helping S3 to navigate difficult ethical and moral choices while considering short- and long-term sustainability impacts of its priorities and actions. S3 to nurture learning and reflexivity about possible impacts of transition on vulnerable groups and territories ('just transitions')

Towards new foundations for Smart Specialisation for the SDGs

S3 principles	Shared direction towards the SDGs	Whole-system transformation	Responsibility and reflexivity
Choices and critical mass	<ul style="list-style-type: none"> The choice of S3 priority areas, including the discovery process, to consider the SDGs and how to localise them The S3 priorities to build and harness the 'critical mass' to address the sustainability challenges and the SDGs 	<ul style="list-style-type: none"> Prioritisation of innovation areas with a potential to foster sustainability transitions of key functional systems (e.g. food, health, energy, mobility) 	<ul style="list-style-type: none"> Choices of priorities and transition pathways to be based on assessment of their sustainability impacts inside and outside region Reflection on how to ensure that transitions away from established unsustainable systems and practices do not lead to lasting exclusion and marginalisation ('just transitions')
Competitive advantage	<ul style="list-style-type: none"> Stronger collaboration with other territories focused on similar challenges. Ensuring that developing a regional advantage does not come at external societal and environmental costs 	<ul style="list-style-type: none"> Focus on developing systemic foundations for future regional resilience. 	<ul style="list-style-type: none"> Reflection on the potential implications of strategic choices driven by building competitive advantages of the region for social groups and a natural environment in regions potentially adversely affected by these decisions
Connectivity and clusters	<ul style="list-style-type: none"> Providing incentives for partnerships, clusters and networks to develop shared visions and alignment towards the SDGs 	<ul style="list-style-type: none"> Developing and supporting challenge- or mission-oriented partnerships, clusters and networks nurturing niches and scaling up transformative innovations addressing sustainability goals 	<ul style="list-style-type: none"> Ensuring that new challenge- or mission-oriented cross-sectoral partnerships, clusters and networks are inclusive and avoid capture by incumbents
Collaborative leadership	<ul style="list-style-type: none"> Ensuring that leaders of the process subscribe to and embrace the sustainability orientation and the SDGs 	<ul style="list-style-type: none"> Experimenting with new forms of collaborative leadership and governance to orchestrate long-lasting multi-actor and multi-level processes of change 	<ul style="list-style-type: none"> Ensuring that decisions on priorities and transition pathways as well as the forms of leadership and governance of transitions have a broader social mandate and ownership

Key messages

The S3 framework can enable innovative actions to contribute to the SDGs, but it needs to be revisited and extended if it is to foster transformative system innovation for sustainability.

- Consider three guiding principles to revisit and extend the S3 framework
 - Add an overarching orientation towards sustainability and the SDGs to S3
 - Refocus S3 on a whole-system change rather than mainly industrial transformation
 - Build a culture of reflexivity and responsible innovation in S3
- Engage stakeholders to co-create the new approach and better understand capacity needs
 - Co-design, test and experiment with the new framework with regional and national stakeholders and experts
 - Think ahead and invest in capacity and capability building to support regions and countries with less developed institutional capacity
- Strengthen the S3 framework by diversifying its theoretical and conceptual foundations
 - Sustainability transitions research and emerging practice offers many insights on how to address complex and often uncertain challenges
 - Need for a transdisciplinary approach to building foundations of sustainable S3.

Thank you