EFIS CENTRE

UNIVERSITY OF WESTMINSTER

Designing a policy framework to support challenge-led transformative innovation

Implementing Smart Specialisation Strategies for Sustainable Development Goals

Fred Steward & Alasdair Reid

ESPON Seminar: Entrepreneurial Regional Governance. Societal Innovation in the Regions Part A.
Prague 7/8 December 2022

Overview

- The new features of smart specialisation to address sustainability
- Policy design

  framing missions and challenges
  making SDGs meaningful
  building bottom up capabilities
  implementation through policy mix
  multilevel alignment
  systemic monitoring and evaluation

- S3 for SDGs and agenda for transformative challenge led and mission oriented innovation policy
-


JRC SCIENCE FOR POLICY REPORT
Addressing sustainability challenges and Sustainable Development Goals via Smart Specialisation
Towards a theoretical and conceptual framework

Sustainability broadens the scope of smart specialisation

Smart specialisation	Traditional orientation	Broader scope
End	competitive economic advantage	sustainability goals
Means	a differentiated technical capability	a transformed sociotechnical system
Dynamics	sectoral change	a multilevel and multiactor transition
Process	strategic focus combined with actor initiatives	directionality combined with with experimentation
Context	place based	glocal

Implications for innovation policy design

- Sustainability goals and system focus require new **policy framings**
- Multi actor and multi level processes need enhanced **capabilities** and enriched **policy mix**
- Innovative **policy design & implementation** to address:
- **Directionality -** more systemic, explicit, normative and globally relevant (Sustainable Development Goals)
- **Diversity** - much wider in scope in the variety of innovators (from business to citizens) and the range of innovation (social and technical)
- **Capabilities –** new competences for top-down/bottom-up interaction are essential
- **Dynamics** - requires a broader policy mix and the navigation of more transformative change
- **Place** – regional and local remain a key focus with extra attention to multilevel processes

Key design principles

- Sustainability system framing of a mission or challenge
- Innovation portfolio guidance – top down or bottom up
- A hybrid problem-solution space
- Making SDGs meaningful
- Building bottom-up soft system capabilities
- Coordinating a policy mix
- Multilevel implementation
- Systemic monitoring
- Formative evaluation

System framing of challenges and missions

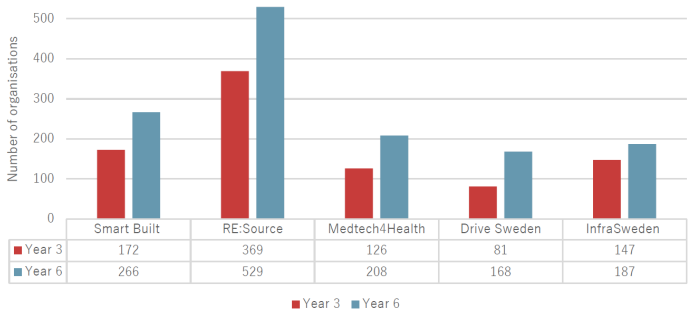
- Ensuring the diversity of innovation actors needs a mission framing which is not just technical specialisation or an industrial sector
- Missions or challenges address a societal sustainability outcome
- Innovation actions need to be situated in a specific sociotechnical system of everyday provision with a clear ‘end-use’
- Such system framing facilitates a wider inclusion of different types of innovation and actors
- The systems identified need to be used more explicitly as a policy tool to enable effective concertation of different actors
- This entails an innovation portfolio approach at a system not just from the view of an individual organisation

Innovation portfolios

Top-down national ‘ex ante’ calls

- System oriented calls for RDI projects
- Requirements for portfolio interaction
- Sweden Strategic Innovation Programme

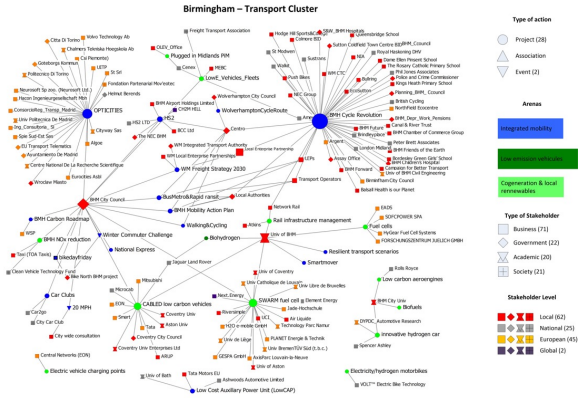
Figure 2 Number of unique organisations in the SIPs' networks after years 3 and 6.



	Smart Built	RE:Source	Medtech4Health	Drive Sweden	InfraSweden
Year 3	172	369	126	81	147
Year 6	266	529	208	168	187

Bottom-up local ‘ex post’ maps

- Place based mapping of ongoing RDI projects
- Incentives for portfolio interaction
- Climate-KIC Transition Cities



Problems & solutions

Solutions seeking problem

Singapore Blockchain Innovation Programme

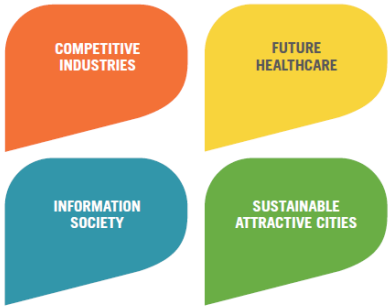
NATIONAL RESEARCH FOUNDATION

2020 $12m programme aims to align blockchain technology research with the needs of the industry

amazon web services

2016 VP Tim Bray “There are many among Amazon’s senior engineers who think blockchain is a solution looking for a problem.”

Problems seeking solution



Navigating a hybrid between convergence and divergence

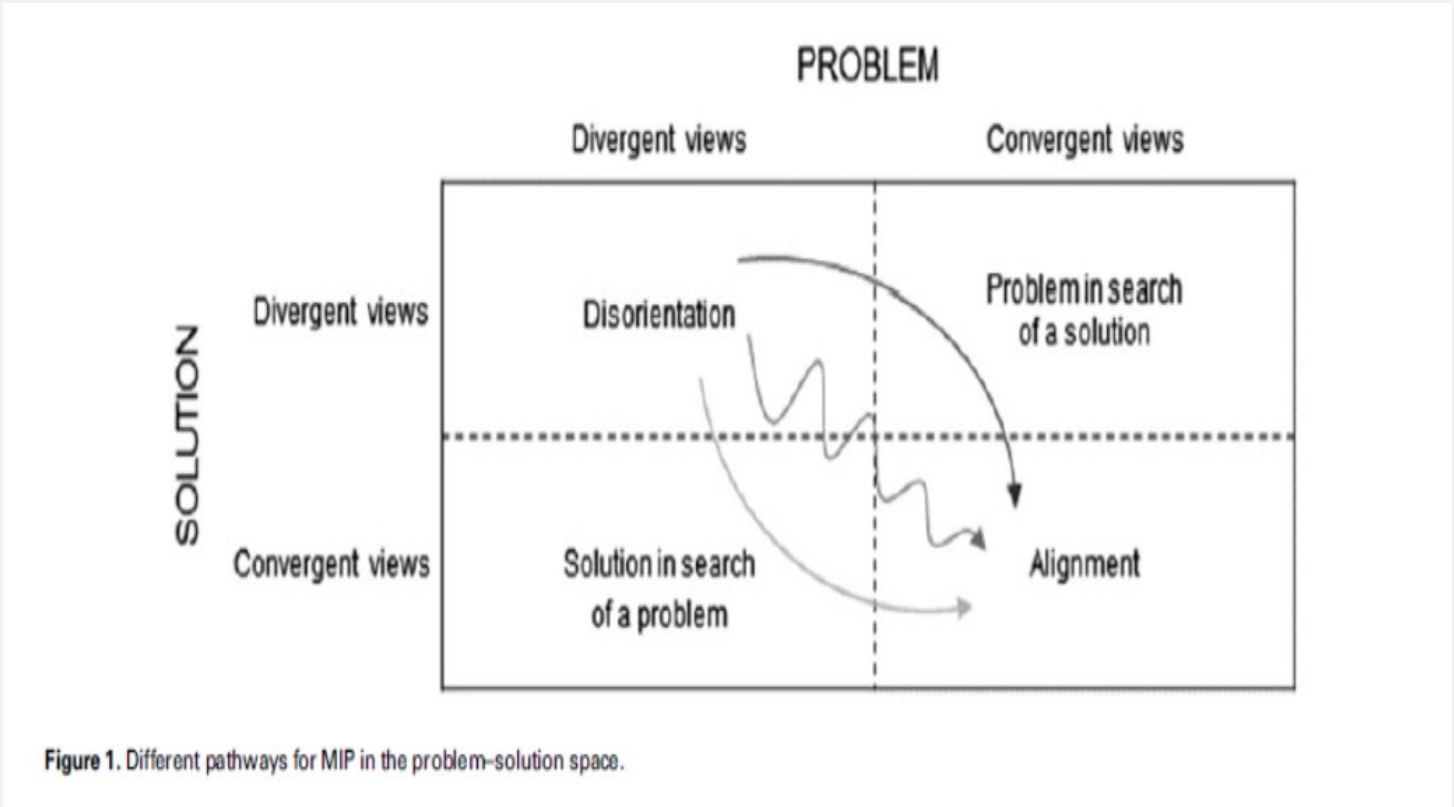


Figure 1. Different pathways for MIP in the problem-solution space.

Making SDGs meaningful

Indivisible yet different

Positioning in relation to SDGs aimed at social foundations (SDG10 ‘Reduced inequalities’) and those addressing ecological ceilings (SDG13 ‘Climate Action’)

A clear awareness of this can assist the achievement of a co-benefit balance of the range of projects within a specific system

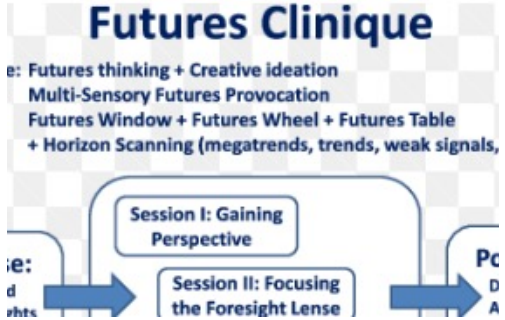
The ‘doughnut’ model provides a visual tool for this

Bottom-up ‘soft’ system support measures

- Experience with challenge-led and mission-oriented policy initiatives shows that there are often inadequate bottom-up capabilities of innovation actors to meet top-down aspirations
- These bottom-up capabilities for systemic interaction include:
  - cross-disciplinary conversations
  - social/technological innovation
  - participative foresight beyond project
  - Practitioner competence building
- Policy measures are needed with near-term impact to build these capabilities through direct involvement of innovation actors (as well as longer term educational changes)
- They can also give greater local visibility and meaning to a national mission

Innovative instruments

- Sandpits
- Transition labs
- Participative foresight
- Situated learning



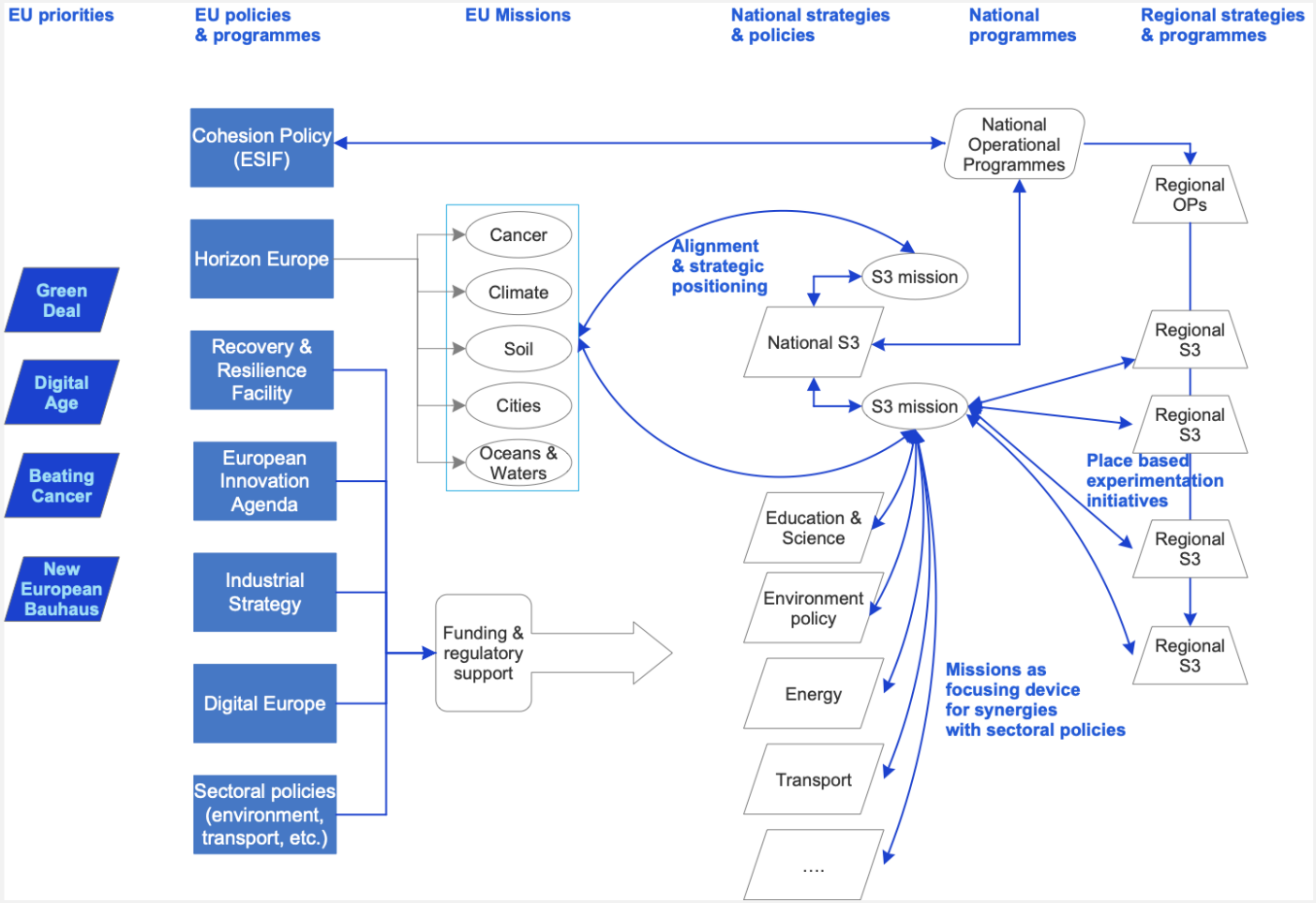
Coordination and implementation

1. Need to set **objectives and actions** to develop on short-, medium- and long-term
2. Requires **political commitment** and involvement of **multiple stakeholders**
3. Identify clear **niches that will push the change** – understand how change can operate across the value chain (domino effect)
4. Must count with a **monitoring system**, capable to inform progress, changes and barriers and allow to anticipate and manoeuvre
5. It should be **communicated and disseminated**, with aim to increase engagement and legitimacy

Implementation

- The approach to S3 missions sets ambitious targets that are difficult to directly relate to the identified support measures (R&I projects under ESIF Ops) – see theory of change (below).
- The policy mix as presented in the mission cards **remains focused on 'emergence'** of (specific) solutions rather than the deployment and reconfiguration of systems:
  - **Emergence**: during which policy can help provide 'directionality' and credibility for companies, researchers and innovators to engage with societal groups and users to develop a shared vision and develop and test new solutions. R&D and innovation funding support (at various TRL) is critical at this stage but other support measures can ensure R&I investments are not discouraged/hindered;
  - **Diffusion (deployment)**: in this phase sectoral (energy, transport, etc.) and environmental policies may be used to foster the uptake of the new solution, this can be combined with industrial policy type measures that ensure investment finance is available and adapted to needs;
  - **Reconfiguration**: when an old 'regime' is replaced this requires policies (e.g. Just Transition initiative) that provide compensation (social protection) and retraining of people displaced from old systems (e.g. fossil fuel-based system to renewables) as well as accelerating market grow (e.g. export support).
- **Core question : how will/can 'S3 mission consortia'** be developed around specific 'thematic areas' to develop roadmaps and policy mixes that enable going beyond R&I results and early testing of solutions to ensure deployment.

S3 mission – roles in multilevel policy alignment



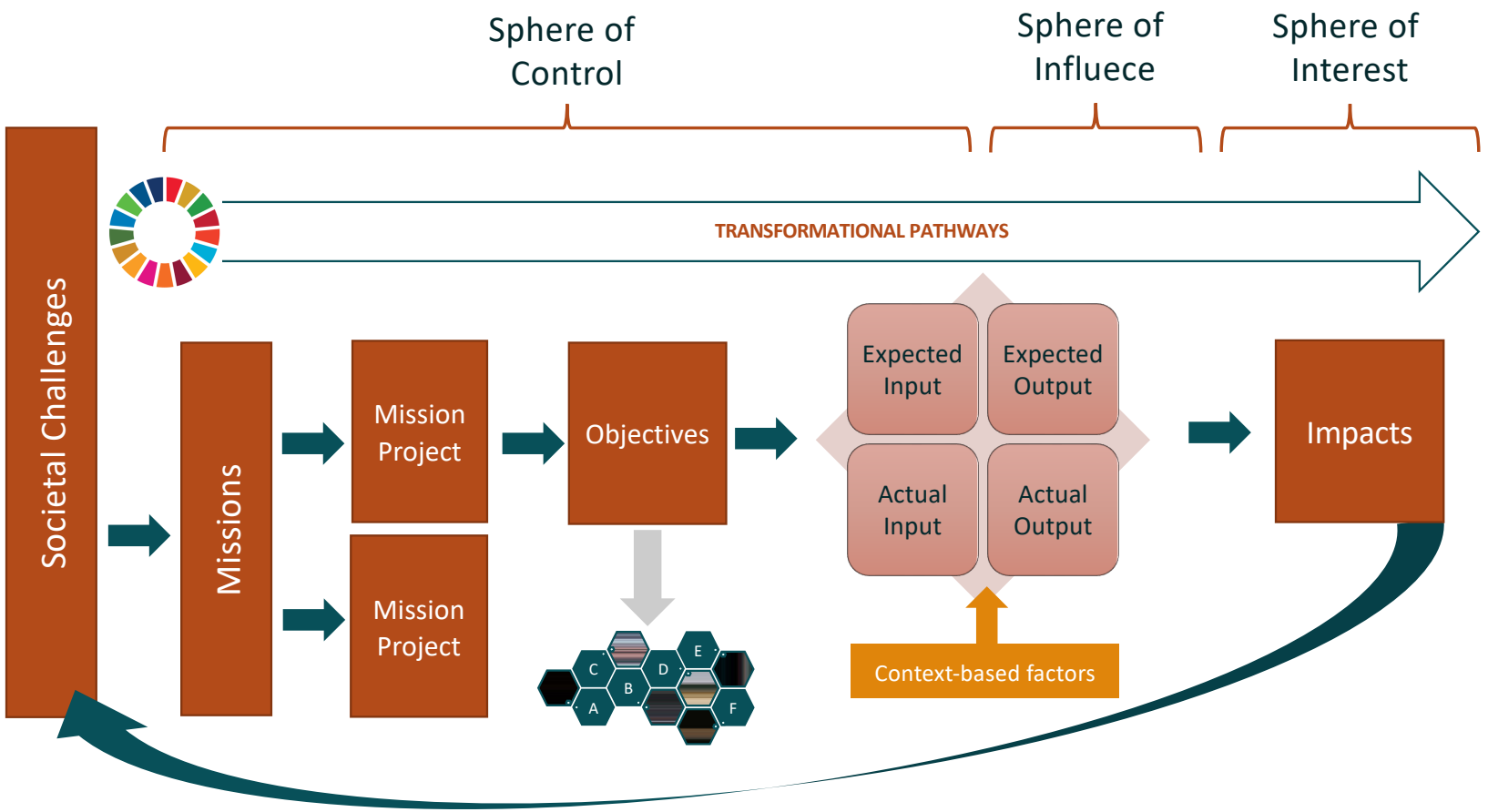
Monitoring & evaluation

- The RIS3 monitoring system provides a set of context and project indicators, some of which can be applicable to the missions

- a need for additional ‘process’ type indicators that measure engagement : of key organisations, of the broader society, etc. in the implementation of the missions.

- a more structured theory of change (intervention logic) that chart pathways to impact via a set of short-, medium- and long-term outcomes (effects) for which specific quantitative and qualitative indicators can be identified.

Intervention logic



Summary

- Smart specialisation needs to broaden to address the global sustainability challenge
- This requires a new blend of directionality and diversity
- New innovation policy design is necessary for its transformative and systemic requirements
- This includes new approaches to framing, capacity building, policy mix, multilevel alignment and systemic monitoring and evaluation
- ‘Policy as usual’ with new words attached will not work

Thank you

With special thanks to support from JRC, invaluable inputs from Michal Miedzinsky and creative feedback from Czech RIS3 colleagues.