



Brussels, 3 February 2022
(OR. en)

5971/22

INTER-REP 16
RECH 62

COVER NOTE

Subject: Mission-oriented policy: governance and portfolio strategies -
Powerpoint presentation (Research WP meeting 03.02.2022)

This document contains a presentation by an external stakeholder and the views expressed therein are solely those of the third party it originates from. This document cannot be regarded as stating an official position of the Council. It does not reflect the views of the Council or of its members.



MISSION-ORIENTED POLICY: GOVERNANCE AND PORTFOLIO STRATEGIES

Réunion du Groupe de travail Recherche du Conseil de l'UE

3 Février 2022

Philippe Larrue,
OECD Directorate for Science, Technology and Innovation





Content

1. The mission basics (reminder)
2. The governance of missions
3. Portfolio strategies to implement missions





What are Mission-oriented innovation policies?

A co-ordinated package of initiatives (policy, regulatory, platforms,...) tailored specifically to mobilise science, technology and innovation in order to address a societal challenge.

This co-ordinated package :

- ⌚ is aimed towards ambitious and concrete goals...
- ⌚ ... to be met in a defined time-frame
- ⌚ spans several stages of the innovation cycle from research to demonstration and market launch
- ⌚ crosses various policy fields (interministerial, cross-agency, etc.)
- ⌚ uses various instruments (supply-side and demand-side; top-down and bottom-up)

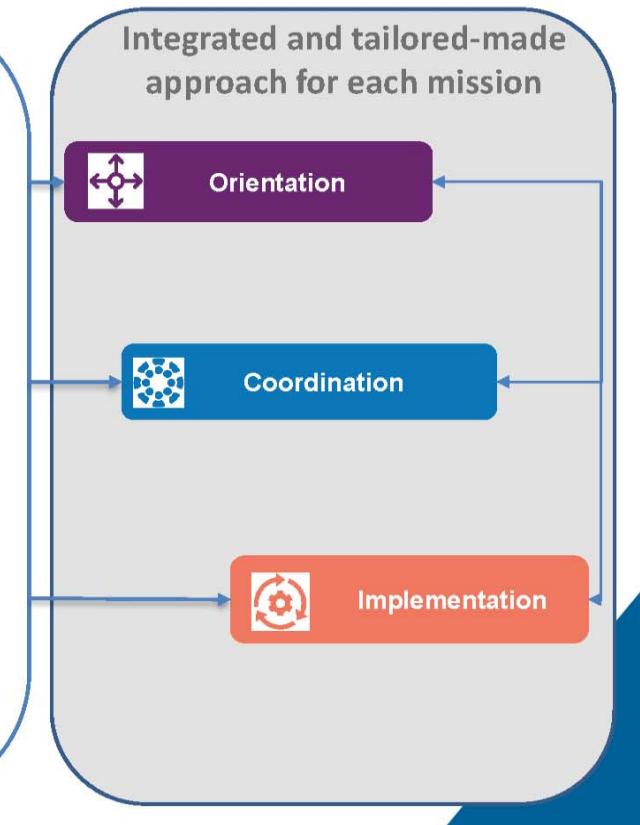


What are Mission-oriented innovation policies?

A co-ordinated package of initiatives (policy, regulatory, platforms,...) tailored specifically to mobilise science, technology and innovation in order to address a societal challenge.

This co-ordinated package :

- ⌚ is aimed towards ambitious and concrete goals...
- ⌚ ... to be met in a defined time-frame
- ⌚ spans several stages of the innovation cycle from research to demonstration and market launch
- ⌚ crosses various policy fields (interministerial, cross-agency, etc.)
- ⌚ uses various instruments (supply-side and demand-side; top-down and bottom-up)





GOVERNANCE OF MISSIONS



Why a specific governance of mission? What should be coordinated?



Strategic orientation

Governance to achieve a broad consensus on selected societal challenges, their transcription in clear and bold objectives and the way to address them?



Co-creation of the mission (and derived roadmaps, strategic innovation agendas, etc)



Policy coordination

Governance to align the plans and commitments of public and private actors beyond disciplinary, sectoral and policy silos around the commonly agreed missions?



Setting of a dedicated structure of coordination and leadership
(e.g. interdepartmental coordination group, steering group, etc.)



Policy implementation

Governance to implement bundles of complementary policy and regulatory instruments to achieve the commonly agreed mission?



Implementation of a tailor-made policy mix
(dedicated mission manager, drawing on / using various instruments, funding streams,..)





Why a specific governance of mission? What should be coordinated?



Strategic orientation

- Setting of commonly agreed and ambitious objectives
- Higher and broader engagement (policy makers + stakeholders + citizen)

Dedicated High level groups (Visionary Council in JP, Mission Boards EU, ..)



Policy coordination

- Less unnecessary overlaps
- Collective action and consistent plans across silos
- Coordinated exploration of the potential options

Dedicated governance bodies at different levels (Programme Board, Governing Board, Steering group etc.)



Policy implementation

- Combination of complementary tools policy tools (including supply-side and demand-side instruments)
- Pooling of resources / funding synergies
- Monitoring and evaluation

Dedicated operational groups in implementing bodies



Different levels of governance with different functions

Mission-oriented policy
initiative

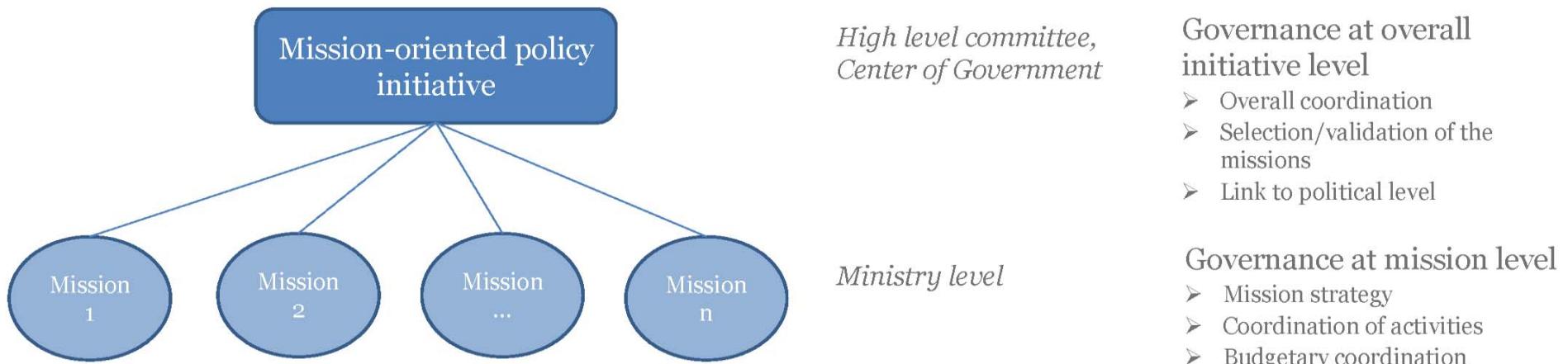
*High level committee,
Center of Government*

Governance at overall
initiative level

- Overall coordination
- Selection/validation of the missions
- Link to political level

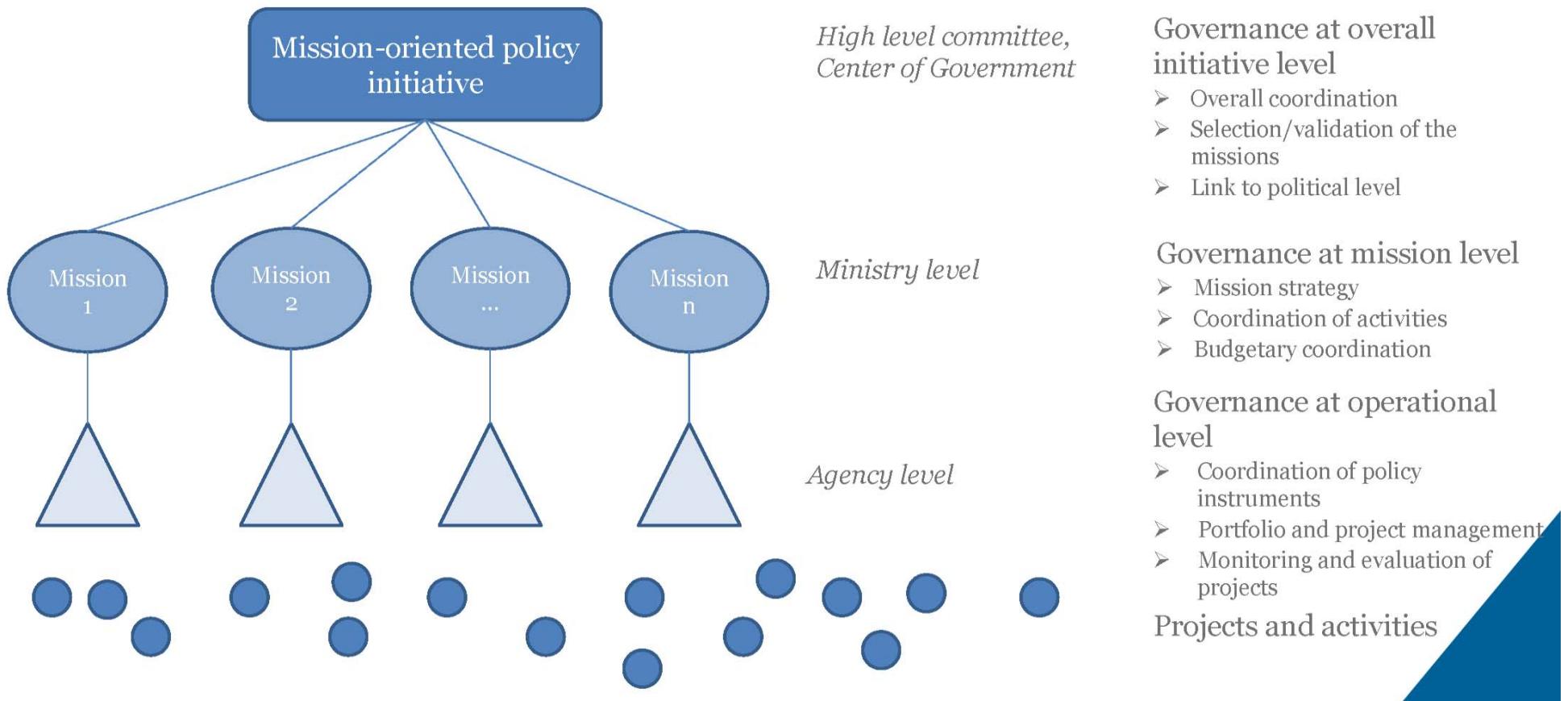


Different levels of governance with different functions





Different levels of governance with different functions



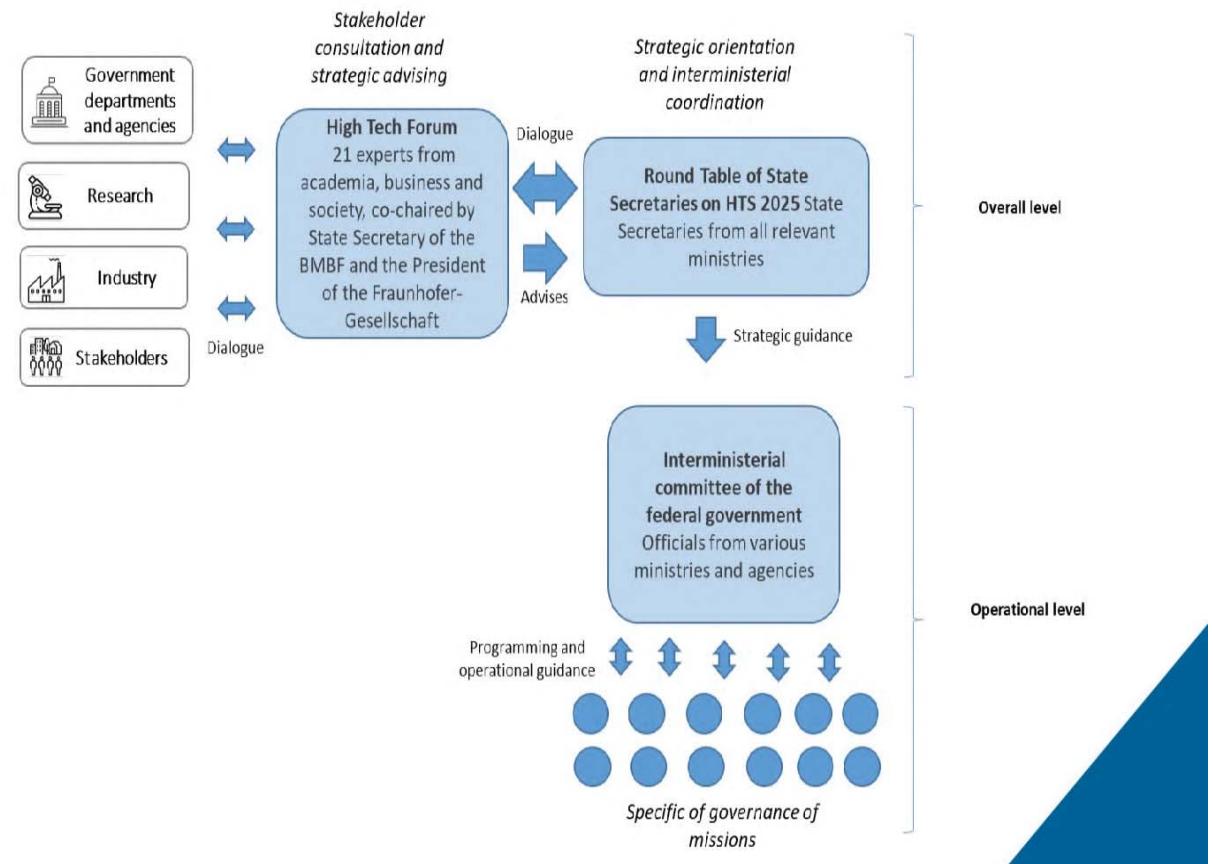


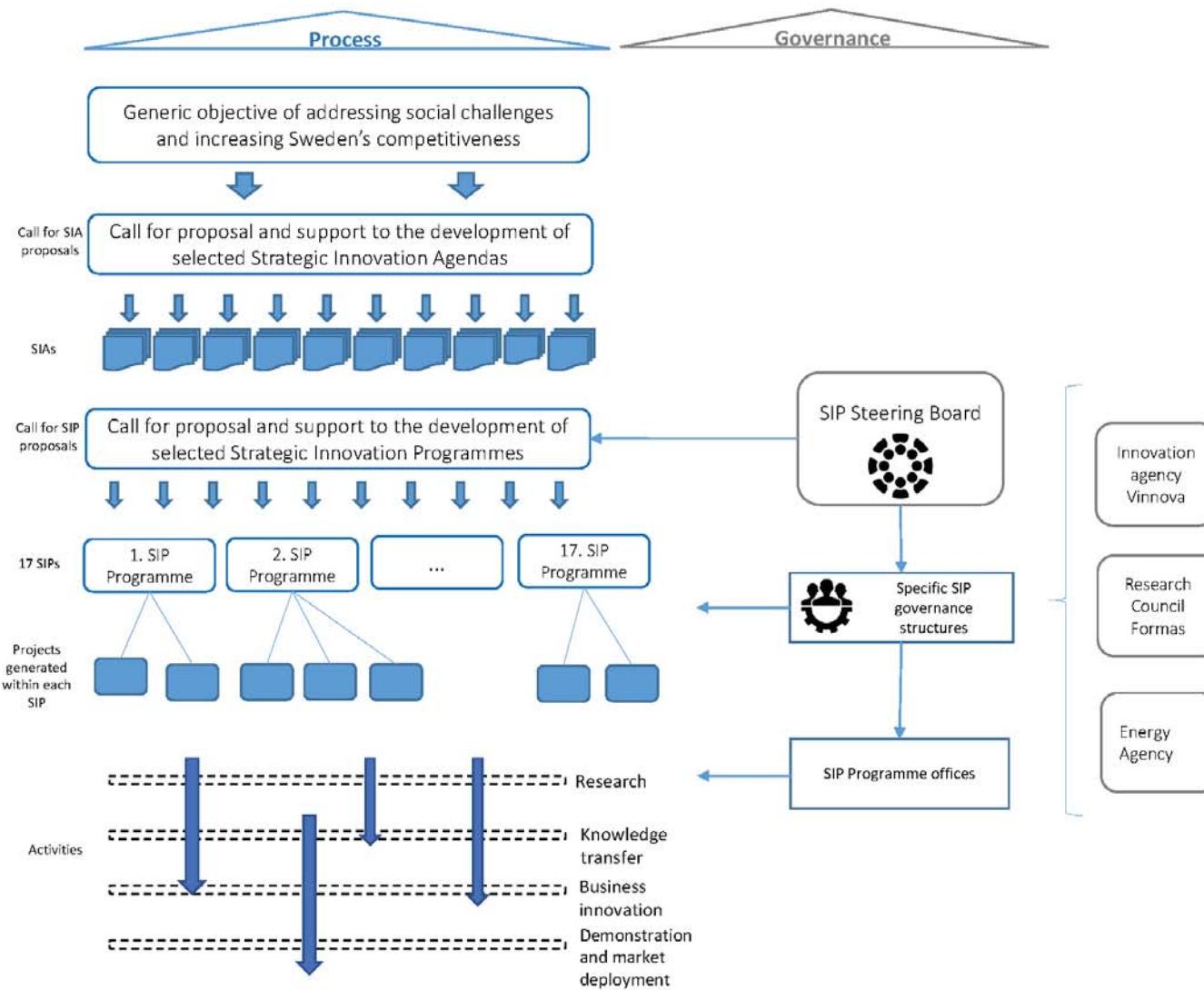
Different levels of governance with different functions

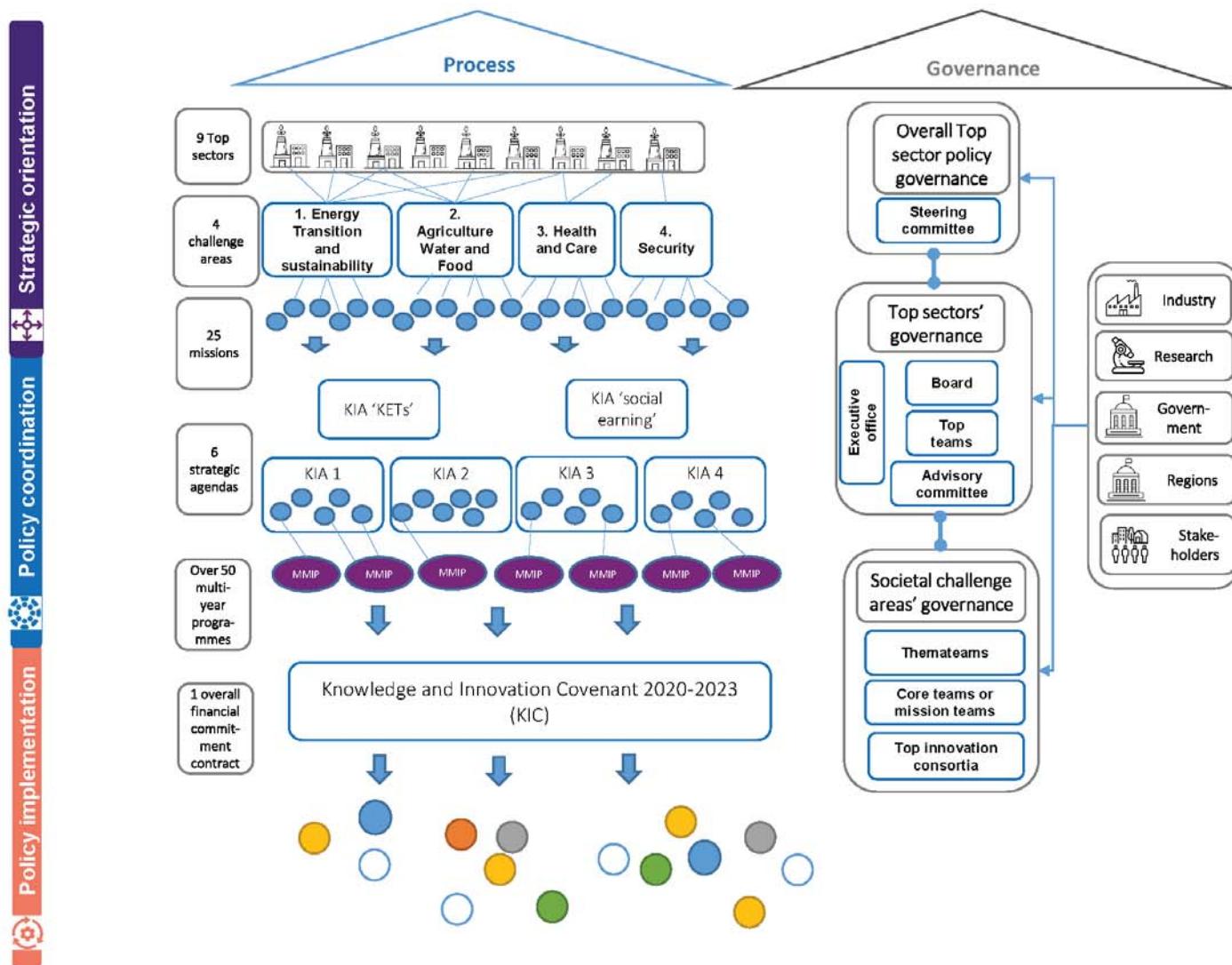
	Options	Examples of co-ordination mechanisms in MOIPs
Governance at overall initiative level	High-level committee composed on various policies bodies and experts/stakeholders	<ul style="list-style-type: none">• MTIP – Steering Committee, gathering about 40 policy makers and partners• CLIMIT – Programme Board reporting to two agencies• SIP-SE – Steering group with three agencies• SIP-JP – CSTI (headed by PM, with various ministers) and SIP Governing Board (with CSTI executive members)• UKIS and ISCF – Economic and Industrial Committee (10 Secretaries of State, headed by PM)
	Other formal co-ordination mechanisms	<ul style="list-style-type: none">• HTS2025 – Roundtable of State Secretaries for HTS2025• LTP – Ministerial Cabinet Meeting
Governance at mission level	Various governance bodies in the initiatives' thematic components	<ul style="list-style-type: none">• MTIP – Top Teams and Themateams (stakeholders mainly but meet with relevant policy bodies)• HTS2025 – Specific governance bodies in missions (strategy committee etc.) with relevant policy makers and stakeholders• PilotE – Steering Board gathering representatives of the three agencies• SIP-SE – Dedicated governance bodies in each SIP• KIRAS – Steering Committee with all relevant ministries and agencies• LTP – Interdepartmental groups in each of the Plan's thematic priorities
Governance at operational level	Various operational committees and working groups	<ul style="list-style-type: none">• MTIP – Coreteams• HTS2025 – Interministerial committee of the federal government and regular interministerial meetings• PilotE – Working Group (with representatives of three agencies)• SIP-SE – Programme Office in each SIP
	Decision maker with strong leadership	<ul style="list-style-type: none">• PilotE – Programme Secretary (paid by the three agencies)• SIP-JP – Programme Director in each SIP• Moonshot – Programme Director responsible for each Moonshot goal and project manager for each project• UKIS and ISCF – Challenge Director



Multi-level governance in the High-Tech Strategy 2025

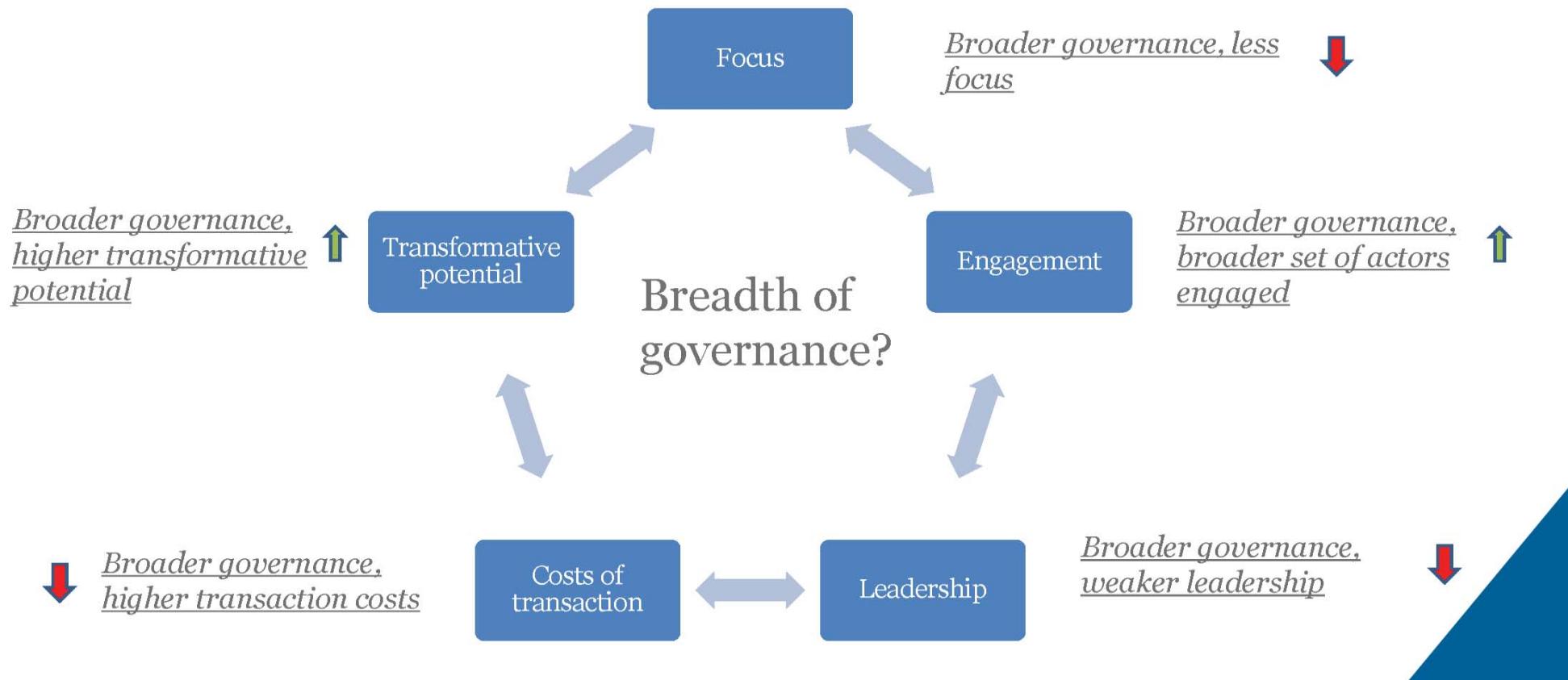








Governance is at the core of the main mission tradeoffs





Challenges of mission governance

- Broad governance and dilution of the mission
- Broad governance and lack of leadership
- Complex multi-level ('nested') and cross-ministerial / cross-agency governance structure
- Transaction costs and 'mission fatigue'
- Engagement of non-STI stakeholders and possible transfer of leadership





PORTFOLIO STRATEGIES



What are portfolio strategies and management

- Definition of portfolio practices
 - systematic and systemic approach to steer and manage activities contributing to the same objectives / missions
 - activities are not considered in isolation from each other but as consistent groups that contribute to the objectives / missions
- Expected benefits of portfolio practices
 - avoid “projectivisation” of innovation activities (focus on isolated, time-bound, single-point solutions and efforts)
 - leverage potential synergies among different innovation activities (knowledge exchange, interdependencies in innovation chain and value chains, etc.)
 - manage/spread risk
 - coordinated exploration of different potential solutions
 - avoid innovation lock-in to ineffective or unsuitable strategies





Portfolio strategies in MOIPs

Options	Examples of portfolio strategies in MOIPs
Systematic R&D on competing technological options to achieve the same goals	<ul style="list-style-type: none">• PilotE – funding of various consortia, covering different low-emission technologies for the same goal (including battery-powered and hybrid hydrogen/battery ferries) and different market segments, from different types of passenger vessels (urban water vessels and others) to cargos and ferries of different sizes.• Moonshot – The initiative has formalised and reflected in its management structure a dedicated portfolio strategy• Horizon - Non-prescriptive 'mission calls' and dual assessment of project proposals, at the level of the intrinsic quality of individual project (e.g. excellence and expected impact) and at the level of the portfolio (portfolio fit)
Experimentation of different socio-technical options (including usage patterns, acceptance, etc.)	<ul style="list-style-type: none">• MoF - Five Mobility Labs located in four urban areas search for new mobility solutions by combining ideas of users, citizen and local innovators with new methodologies and tools like design thinking or co-creation.
Coverage of different components of the value-chain	<ul style="list-style-type: none">• SIP-SE and Vision-Driven health – MOIPs that aim to support the emergence of ecosystems to address societal challenge provide seed funding for the development of collective strategic agendas or visions that cover different value chain segments
Experimentation of different generations of technologies, with increasing level of ambition	<ul style="list-style-type: none">• CLIMIT – The Programme Plan developed by the Programme Board and two cooperating agencies include performance goals corresponding to three 'focus areas' with different time horizons (short, mid and long term): Early full-scale CCS value chain in Europe (demonstration, until 2022); Large-scale storage of CO₂ on the Norwegian shelf in the North Sea (dissemination until 2025); Future solutions for CCS (until 2035 and beyond).• PilotE – The successive (annual) calls for proposal have set increasingly ambitious goals, calling for more elaborated technology solutions

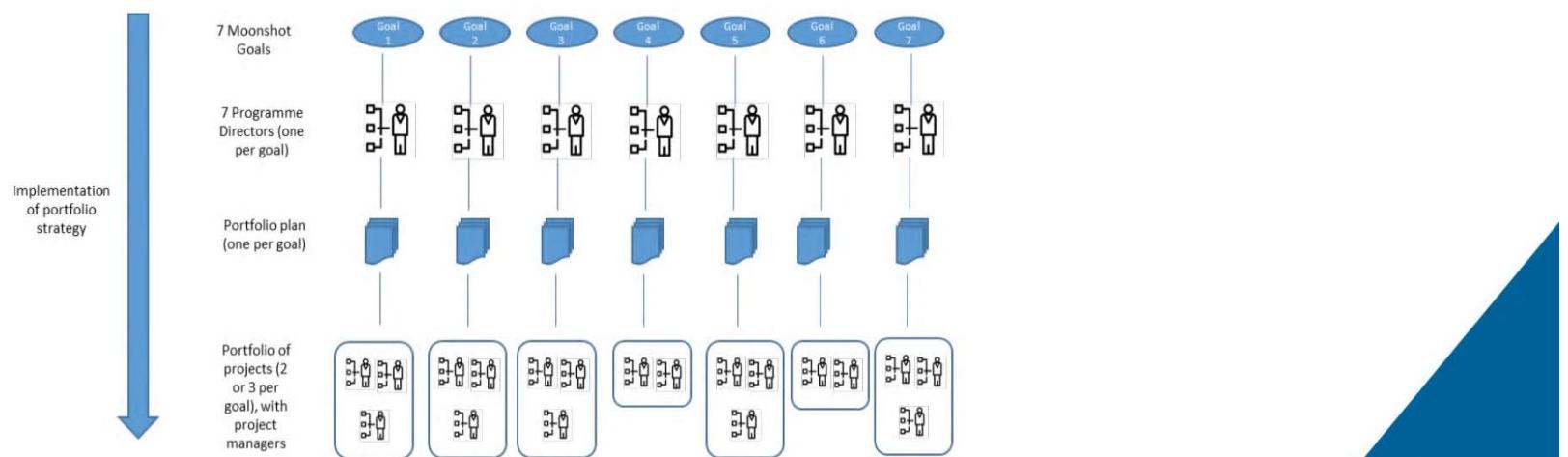
Portfolio integration rationale	Definition	Examples
Scale and scope	The mission attracts and pools together financial resources (public and private; synergies between different public funding streams) and policy instruments. This allows greater scale of intervention, i.e a greater number, scope and ambition of activities	Pilot-E (NOR) allows the funding of larger consortia. Building on the cooperation between different Directorate Generals and countries, the Horizon Europe Climate-neutral and smart cities can aim to support, promote and showcase 100 European smart cities
Cross-sectoral integration	The mission aims specifically at bringing together different industries to address a complex and systemic societal challenge	The Future flight challenge (UK) aims to bring together industries developing new technologies in electrification, aviation systems and autonomy to achieve together more sustainable ways to fly, such as all-electric aircraft and deliveries by drone
Industrial-scale research and demonstration activities	The mission allows wide-scale and highly visible demonstration and scale up activities which would not be possible for any of the individual actors (issues of financial resources, infrastructure, as well as knowledge and data sharing between demonstration projects)	The collaborative partnerships within CSIRO's Hydrogen Industry Mission (AU) is expected to help validate hydrogen value chains and de-risk enabling technologies to inform investment and deployment decisions
Holistic integration	The mission covers several dimensions of a societal challenges (scientific, technological, social, legal, behavioural, educational)	The mission 'Driving the electric revolution' challenge (UK) covers a wide range of activities, including talent and skill development The top sector mission 'an entirely carbon-free electricity system by 2050' (NL) integrates the technical, social, economic, ecological, spatial and legal challenges to the transition towards sustainable electricity production.

Portfolio integration rationale	Definition	Examples
Integration of ecosystem	The mission brings together different actors of an ecosystem.	The Finnish Compensate Growth Engine aims to establish an ecosystem that facilitates compensation of carbon dioxide emissions at the international scale.
Integration of value chain	The mission allows covering the different components of a value chain	The HTS2025 mission 'Build up a battery cell production in Germany' aims to cover the value chain of battery technology in Germany and Europe – from the efficient use of raw materials to the manufacture of electrodes and other components, from mastery of electrochemistry and cell production to complete battery systems and their re-use and recycling
Integration of innovation chain	The mission allows covering and coordinating the different stages of the innovation chain from research to commercialisation	The green Mission (DK) 'Construction and Building Sector's Transition to Circular Resource Economy' aims to strengthen the entire innovation chain to support the transition of the construction sector to a circular economy.
Integration of option portfolio	The mission allows a coordinated exploration of the solution space, supporting in parallel different projects competing against each other or complementing each other.	In NRC's Materials for clean fuels challenge (CAN) the 7 years (2019-2026) program follows a 'funnel approach' whereby the number of projects in the program decreases and the amount of investment per project increases over time.
Integration of disciplines	The mission strengthens cooperation between different research teams beyond disciplinary silos (including between natural and social sciences)	The French 'Ocean and Climate' Priority Research Programme (PRP) supports interdisciplinary research teams around major challenges related to the main sustainable development issues concerning the ocean. The AI for Societal Good Challenge managed by SFI (IRL) aims to support interdisciplinary teams to develop novel, potentially disruptive AI-based solutions that address significant national and global societal challenges.



Portfolio strategy in the Japanese Moonshot R&D Programme

- 7 long term and ambitious goals
 - Goal 4. Realisation of AI robots that autonomously learn, adapt to their environment, evolve in intelligence and act alongside human beings, by 2050
- 1 Programme director at the level of each goal
 - Responsible for the portfolio plan and management





IMPLICATIONS FOR EU MISSIONS



Portfolio strategies in Horizon Europe missions

- The selection process in 'mission calls' will combine an assessment of
 - the intrinsic quality of individual proposals
 - their potential contribution to a consistent portfolio of activities geared towards the achievement of the mission objectives.
- One potential option - two-stage calls:
 - an evaluation of the intrinsic quality of each proposal submitted;
 - the identification of high-quality proposals that go together in a way that maximises the expected impact of the portfolio as a whole.
- The evaluation committees will be provided with more flexibility to adapt to a mission-oriented approach
 - *the evaluation committee may rank the proposals having passed the applicable thresholds according to their contribution to the achievement of specific policy objectives, and may also propose any substantial adjustments to the proposals in as far as needed for the consistency of the portfolio* (Article 26 of the Regulation)



Implications for EU missions

- Not the first time the EC tries to go beyond project (FP5 clusters, FP6 NoEs and IPs,...)
- Need to adapt the selection and evaluation of projects
- Need capacity to steer portfolio of activities (mission plan/roadmap)
- Need resources to manage the portfolio of activities (hands-on approach, exchanges between activities)
- Need to change mindsets?





OECD and missions

Le 'Toolkit MOIP' en ligne
<https://stip-pp.oecd.org/stip/moip>

 MISSION-ORIENTED INNOVATION POLICIES

Welcome to the OECD Mission-Oriented Innovation policies online toolkit

This exploratory guide helps policy makers design and implement Mission-oriented innovation policies. With the support of policy makers and building on partnerships with selected institutions, this toolkit aims to become the reference platform for all those who set up, implement or research and advise on mission-oriented innovation policies.

Explorable dashboards Policy learning hub



Ongoing work:



OECD publishing

THE DESIGN AND IMPLEMENTATION OF MISSION-ORIENTED INNOVATION POLICIES
A NEW SYSTEMIC POLICY APPROACH TO ADDRESS SOCIETAL CHALLENGES

OECD SCIENCE, TECHNOLOGY AND INDUSTRY POLICY PAPERS
February 2021 No. 109



OECD publishing

MISSION-ORIENTED INNOVATION POLICY IN NORWAY
CHALLENGES, OPPORTUNITIES AND FUTURE OPTIONS

OECD SCIENCE, TECHNOLOGY AND INDUSTRY POLICY PAPERS
April 2021 No. 104



Publications

OECD publishing

MISSION-ORIENTED INNOVATION POLICY IN JAPAN
CHALLENGES, OPPORTUNITIES AND FUTURE OPTIONS

OECD SCIENCE, TECHNOLOGY AND INDUSTRY POLICY PAPERS
April 2021 No. 106



OECD
Organisation for Economic Co-operation and Development

26

Forthcoming MOIP national studies: Austria, Korea, Lithuania



Merci de votre intérêt pour nos travaux!

- *Pour plus d'information, merci de contacter: Philippe.larrue@oecd.org*



