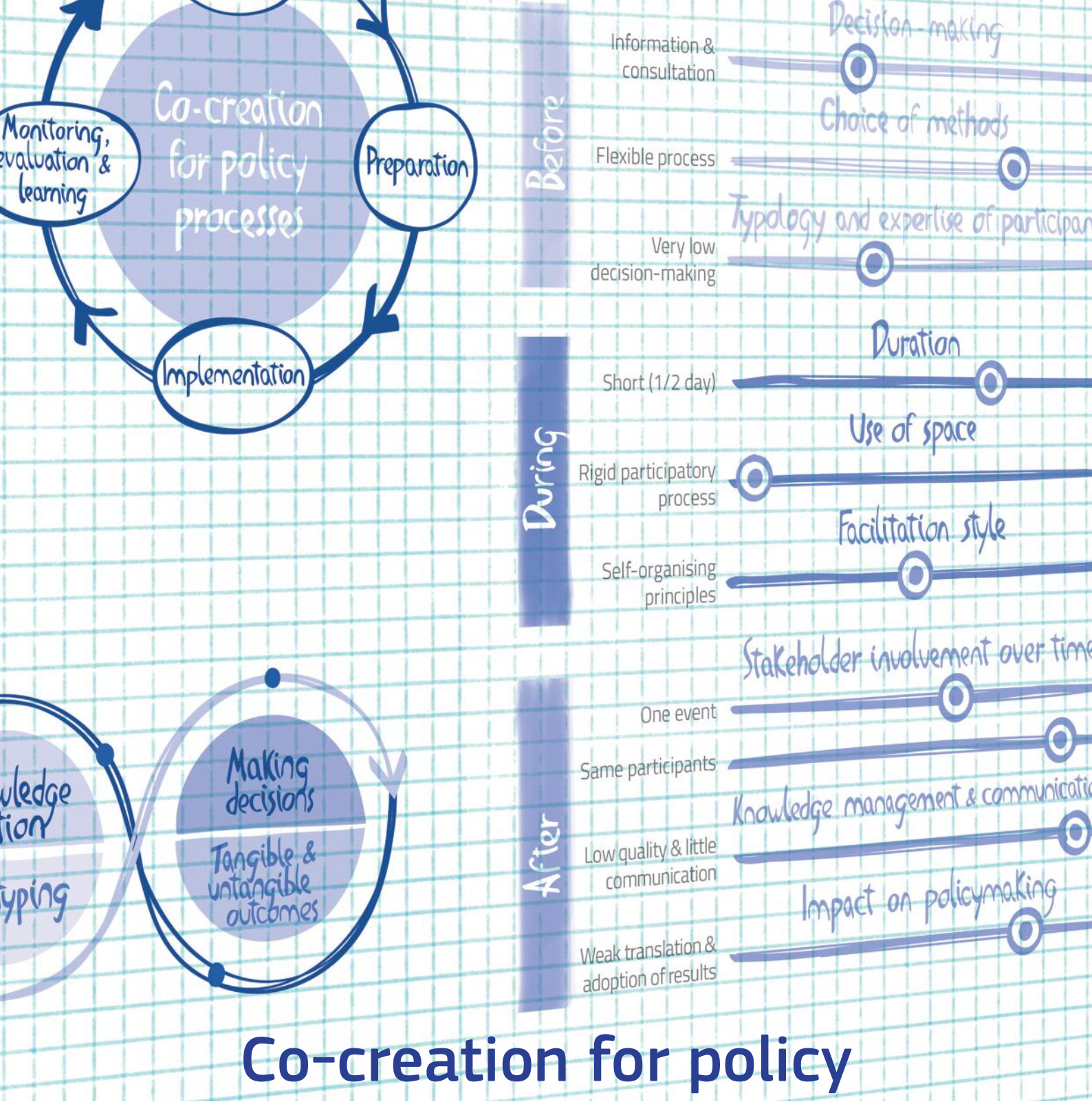

Co-creation for policy

Participatory methodologies to structure multi-stakeholder policymaking processes

Edited by Cristian Matti and Gabriel Rissola

European Commission

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CO-CREATION FOR POLICY

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CO-CREATION FOR POLICY

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Abstract

The COVID-19 pandemic, climate change, digital transformation, demographic changes and other global challenges are urging us to take profound yet agile policy action at all levels. The scale and complexity of the action needed make it essential that we perform this work while engaging with all relevant stakeholders. In this context, we see an increasing need to learn about how to organise policy co-creation processes and events in a purposeful and structured way.

This handbook aims at helping its users to effectively co-create the powerful policies we need today. It combines an entrepreneurial way of thinking and a concrete process for developing breakthrough ideas that stand a high chance of producing real-world impact. It presents a practitioner-oriented narrative for the design and implementation of innovative participatory processes and workshops to address societal challenges – coordinated by policymakers and with the active engagement of key stakeholders. It applies tried and tested self-organisation and design-thinking principles for co-creation.

The handbook provides practical steps and recommendations for the identification of synergies among stakeholders across territories, sectors and levels. It shows how to ensure optimal knowledge management and efficient communication to optimise resource usage, policy convergence and the achievement of positive results when designing or implementing policy. By combining community engagement and knowledge management services, the handbook highlights how participatory processes can be embedded in the policymaking cycle with a view to improving the societal value of generating collaborative innovation, goodwill and co-created evidence for informing policymaking.

Forewords

In December 2019, the European Commission presented the European Green Deal – a bold and ambitious roadmap putting Europe on track to become the first climate-neutral continent by 2050. The European Green Deal is bolstered by the belief that Europe needs transformative innovation policy. Climate and environmental challenges must be turned into opportunities across all policy areas, opportunities that ensure a just transition, leaving no one behind.

At the European Institute for Innovation and Technology (EIT) we know all too well that for inclusive and transformative innovation to happen, Europe's key stakeholders, citizens, initiatives and instruments, at EU, national and regional level, must be brought together. This is necessary to align efforts, implement synergies and engage directly with society. As Europe's largest innovation ecosystem, the EIT connects close to 3,000 partners and secures the right environment for creativity and innovation to flourish.

Innovation is key to solving pressing global challenges while ensuring a green and sustainable future for Europe. Since our establishment in 2008, the EIT Community has powered more than 3 800 start-ups and scale-ups that have jointly gone on to raise EUR 3.9 billion and create more than 13,000 jobs, bringing over 1,400 new products to the market. We are also one of Europe's foremost drivers of entrepreneurship education, having equipped over 4,000 MSc and PhD graduates with entrepreneurial skills, with thousands more currently enrolled in training programmes and workshops.

Support for innovation goes beyond the EIT. This is why we are committed to close institutional collaboration working with the Joint Research Centre (JRC). Together, notably through the reinforced EIT Regional Innovation Scheme (EIT RIS), we will strengthen innovation networks and develop synergies between innovation and regional development to achieve the goals and vision set out by the European Green Deal. Just as innovation often occurs when technologies from different domains are brought together, cooperation across institutions often leads to new ideas to flourish across multiple organisations.

We hope readers will benefit from the breadth of knowledge and expertise that the EIT and the JRC have to offer in the following handbook to support practitioners across Europe in the design of policy co-creation workshops. Through its multi-stakeholder approach, the handbook sets out to equip practitioners with the tools required to tackle major societal challenges, helping give life to transformative innovation for a more sustainable Europe.

Martin Kern

Director, European Institute of Innovation and Technology

Forewords

In April 2022, the European Commission and the Committee of the Regions launched a new flagship initiative on Partnerships for Regional Innovation at the intersection between innovation and territorial policy agendas. Championed by the Commissioners for Innovation, Research, Culture, Education and Youth and for Cohesion and Reforms, this initiative further strengthens the ties between the two institutions while joining forces to give a new push towards the green and digital transitions across EU regions and cities. The European Commission's Joint Research Centre (JRC) is deeply committed to contribute with a fresh approach, the Partnerships for Regional Innovation (PRI), which builds on positive experiences with smart specialisation strategies and incorporates a methodology for transformative innovation policy. The latter appeals to pursuing place-based missions (like combatting climate change) to overcome policy silos and achieve innovation at a higher system level. Regions and countries piloting PRI will co-create future versions of the methodology.

At the same time, strategic foresight, another inherently inclusive and participatory activity, is positioned at the core of EU policymaking. It is a long-established practice through which the Commission works with all relevant stakeholders to identify the policy challenges of the future.

Both examples illustrate why a handbook on Co-Creation for Policy like the present one is very much needed. It is a resource to wisely design policy co-creation processes in which multiple stakeholders participate, processes that can spark collaboration and collective intelligence at multiple levels of governance (from EU to local and vice-versa) and generate tangible outcomes to inform decision-making.

This handbook is the result of a long process of maturation, in the context of JRC work on Smart Specialisation Strategies (S3) and by the EIT Climate KIC. It involved intensive methodological experimentation, through participatory and co-creation methodologies. It constitutes the evolution of the 2018 JRC's Innovation Camps methodology that, in turn, was an improvement of a similar methodology (ACSI Camps) already in use by the Committee of the Regions. The methodology has been systematically adopted for programmes like *Science meets Regions*, another example of intense collaboration between the European Commission and the Committee of the Regions. The rich experience of the JRC's EU Policy Lab in organising policy co-creation activities inside the Commission considerably facilitated the drafting process, while other EIT KICs (Energy, Raw Materials) contributed with their own territorial experiences.

We hope readers will appreciate through this handbook the value of planning and executing well-designed policy co-creation processes, with a view to fostering an evidence-informed policymaking culture.

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CHAPTER 1

Co-creation for Policy (CfP) process: a tool for impactful policymaking

"Europe needs more partnering, creative thinking and a stronger focus on outcomes and impact."

"[...] value creation with scientific evidence, combined with our local knowledge and proximity to citizens, will lead to better understanding of the challenges Europe's regions and cities are facing"

M. Markkula (former President, European Committee of the Regions)

The purpose of this handbook is to orient practitioners through a series of clear guiding principles and concrete methodological steps that can be applied while running policy-driven co-creation processes that are articulated around a series of participatory events. Experience accumulated over a decade by the European Commission's Joint Research Centre and the European Institute of Technology Climate-KIC has shown that, far from following a linear process, these challenge-led policy development events helped foster the process of policy and regional innovation through iterations, prototyping and scaling-up innovative solutions, eventually contributing to deliver systemic change. This handbook is the fruit of these years of experience, which have taught us the importance of curating the process behind the scenes, a process that when articulated in single events (workshops, etc.) can be fully incorporated into the broader process of policy formulation where its results are expected to inform subsequent policy options.

1.1. Getting to know Co-creation for Policy Processes (CfP)

1.1.1. WHY ORGANISE CFPS?

The increased level of complexity in EU policymaking and the rapid evolution of societal and environmental issues create a twofold need for policymakers at all levels (from local and regional to national and European) to encourage:

- A clear and strong impact of the policies designed to address current societal challenges with public accountability
- Greater engagement of all relevant stakeholders at the various stages of the policy cycle to co-create efficient solutions for formidable and intertwined challenges

CfPs offer a concrete and practical response to the growing demand of policymakers for tools and methodologies to address societal challenges, empowering citizens and building a sustainable Europe.

CfPs have a broad range of application. For example, with regard to the development of European territories there is an increasing consensus in regional and urban policy circles

that policymaking can only set up the framework, while the real actions and impact must come from the bottom up. In the context of the design and implementation of regional smart specialisation strategies, CfP have shown they can help set up national or regional agendas for economic transformation as well as define smart specialisation governance and monitoring mechanisms in any EU region.

As a result, policymakers are increasingly willing to engage in participatory processes that facilitate the involvement of all relevant stakeholders and increase the sharing of responsibility. This ranges from simple consultation and deliberation to co-creation and co-ownership, from simple representation to long-lasting partnerships, to maximise the impact of policies.

However, the multilevel governance of EU policymaking adds complexity for practitioners, who may feel lost in the different layers of decision, while citizens expect clarity and efficiency in the resolution of the societal challenges they face.

In this context, co-creation for policy processes (CfPs) emerge as a flexible and powerful approach to better understand economic, social, technological, cultural and environmental challenges and design innovative solutions collaboratively at many levels.

While the EU is working on (and has largely set) its 2030 targets (e.g. climate and energy framework, Energy Union Digital Compass), its long-term vision (EU 2050) is to meet its green and digital objectives in an inclusive way, not leaving anybody behind. This needs to be achieved while ensuring social fairness, investing in realistic technological solutions, empowering citizens and creating policy coherence across key areas such as, for example, industrial policy, education, employment, finance and research.

Multilevel governance ***is a concept that describes the way power is distributed vertically among many levels of government and horizontally between several governmental and non-governmental organisations and actors.***

By focusing on inclusive processes rather than on single events, CfPs create the capacity to deliver plans for concrete, actionable solutions, and stimulate follow-through and further adjustments, thus leading to a high probability of achieving tangible results.

Depending on the needs and strategic purposes pursued by policy, CfPs can combine and integrate different participatory methods (from simple focus groups, or world cafes, to more sophisticated methodologies like innovation camps or policy labs).

BOX 1 — Innovation Camp

The Innovation Camp is a process in which societal challenges are explored via an entrepreneurial-discovery approach by multiple stakeholders with different backgrounds, who collaboratively design and propose solutions or policy options to overcome them. Its execution includes a face-to-face Camp and a more extensive follow-through, leading, ideally, to the rapid realisation of the best ideas in practice. This innovative bottom-up approach, which extensively relies on self-organising principles, requires political endorsement and a certain level of institutional governance to succeed. Extensively applied by the JRC to territorial development (e.g. in the context of Smart Specialisation Strategies or Science meets Regions programmes), it is a suitable co-creation method for other policy domains.

BOX 2 — EU Policy Lab

The EU Policy Lab is a space designed to foster creativity and engagement, and to develop interactions, processes and tools able to encourage innovation for better European policymaking. The work proceeds based on four complementary dimensions: Foresight, Modelling, Behavioural Insights and Design for Policy. As in other policy labs, the emphasis is placed on co-designing, experimenting and usefulness for policy, by using tailored made frameworks with a strong visual focus. Labs can be thought of as both physical and conceptual spaces to open up the conversation and facilitate collaboration between policymakers and stakeholders.

The examples of the Innovation Camp[1] and the EU Policy Lab[2] show that CfPs have the capacity to unleash the potential of citizen engagement (CE) and participation in policymaking by bringing together key stakeholders to address relevant policy issues in an open, co-creative, democratic way. In a policy lab, all participants – regardless of their background, position, seniority, gender, etc. - are able to take ownership of the process by which relevant perspectives are explored, new ideas are generated and decisions are made. In this respect, CfPs spark a process of creative and constructive dialogue, which unleashes the European innovation potential of diverse possibilities and points of view.

In a nutshell, CfPs offer policymakers:

- An inclusive, robust and flexible engagement processes that generate high buy-in across stakeholders
- A structured way to build strong collective intelligence/knowledge and a robust systemic/360° view, and
- A capacity to deliver concrete and actionable outcomes with high stakeholder support and involvement in their further implementation

1. https://publications.jrc.ec.europa.eu/repository/handle/JRC102130

2. https://blogs.ec.europa.eu/eupolicylab/

1.1.2. WHO SHOULD ADOPT CFPS?

CfPs enable strong bottom-up and widely participatory processes, enabling the transition from a Triple helix model (i.e. collaboration between public sector, academia and private sector) to a Quadruple helix model (where the civil society is involved, either through its organisations or directly through citizen engagement).[3] The deep involvement of a broad range of stakeholders fosters the evolution toward knowledge-based, transparent and open societies, and increases stakeholder and public support for policies. In this way, CfPs can be seen as an agile and practical way to create engagement and collaboration across the Quadruple Helix.

BOX 3 — RIS3 example

In the EU, the rise of Regional Innovation Strategies for Smart Specialisation (RIS3) in the context of cohesion policy during the period 2014-2020, used CfPs intensely as an interactive learning process between regional actors (Henderson, 2000) through an entrepreneurial discovery process (Foray, 2014, 2016; Del Castillo, 2015). CfP are also driven by entrepreneurial discovery, i.e. a process where every participant is actively trying to understand challenges in-depth and collaboratively seeking creative policy options or innovative solutions to overcome them.

Therefore, all Quadruple-Helix actors are potentially interested to embrace the practice of CfPs as a new mode of collective action:

- **Policy makers** can mobilise efficiently and openly all the relevant stakeholders at the adequate levels to address the societal challenges and innovate in the governance and problem-solving process.
- **Civil society** can feel more empowered and part of the solution. Citizens can gain ownership and conceive innovative solutions to societal issues of their concern, together with the other actors.
- **Business/entrepreneurs** can match/join interests, capacities and forces at all levels to compete innovatively in a globalised market by better aligning their business solutions with the needs and utilising rapid prototyping.
- **Academia** can identify meaningful research and innovation capacities to be developed in the long run, in cooperation with business and government, while working with and for society, thus embracing its growing “third mission”.

1.1.3. WHAT ARE CFPS ABOUT?

At this stage, defining Co-creation for Policy processes can help understanding their particular relevance to solve societal challenges, which requires effective instruments, good communication, learning and active openness between different stakeholders.

3. For the distinction between the two, consult the Glossary

BOX 4 — Co-creation for Policy Process (CfP) definition

CfPs are participatory problem-solving processes led, chaired or hosted by policy-makers. In practice, these are collaborative events (e.g. workshops) with the active engagement of all key stakeholders, where self-organisation and design-thinking principles are applied (see Chapter 2) in tackling societally-relevant challenges. Quadruple-Helix actors are activated with a view to co-creating and prototyping actionable solutions.

CfPs are intended as dynamic processes that can be structured around a series of specific events (e.g. workshops, innovation camps, policy labs), which are considered milestones of that process. This means that the preparation and follow-up phases of these events are at least as important as the events themselves, if not more *(cf. Chapter 3)*.

As part of this multi-stakeholder policymaking process, CfP events gather participants from diverse backgrounds, countries and disciplines. Together they work to discover and leverage both in- and out-of-the-box opportunities for creating breakthroughs in a process of collaborative solution seeking. During CfP events, the challenges of the key stakeholders themselves are identified, refined and analysed from different perspectives by diverse participants, who transform them into opportunities that can be further developed and realised in practice. To address such challenges requires bottom-up perspectives, full stakeholder involvement and shared ownership of the decision-making processes.

Ultimately, CfPs contribute to the stimulation and enhancement of a creative culture of policy innovation, systems thinking and problem-solving on the ground. At the same time, CfPs generate evidence to inform policymaking while gathering knowledge that may reduce uncertainties around the policy options, helping to achieve a greater policy impact.

To help ensure their success, CfPs should be carried out according to five guiding principles *(cf. Chapter 2)*:

BOX 5 — The five principles of co-creation for policy processes

1__ **Clarity of scope and purpose:** the purpose and scope of the exercise must be clearly identified and defined.

2__ **Focus on outcome:** expectations and expected concrete outcomes must be defined from the design stage of the event so as to enable an optimal harvesting of results.

3__ **Inclusiveness and representativeness:** the right participants must be selected, in terms of individual expertise, representation of all the relevant stakeholder groups and diversity of personal backgrounds for an optimal development of collective intelligence.

4__ **High-quality, tailored process:** the design of the event must be tailored so as to best serve the purpose and not be the slave of orthodoxy with regard to standard tools. Preparation and resources should be allocated for the smooth implementation of the process and the harvesting and analysis of the results.

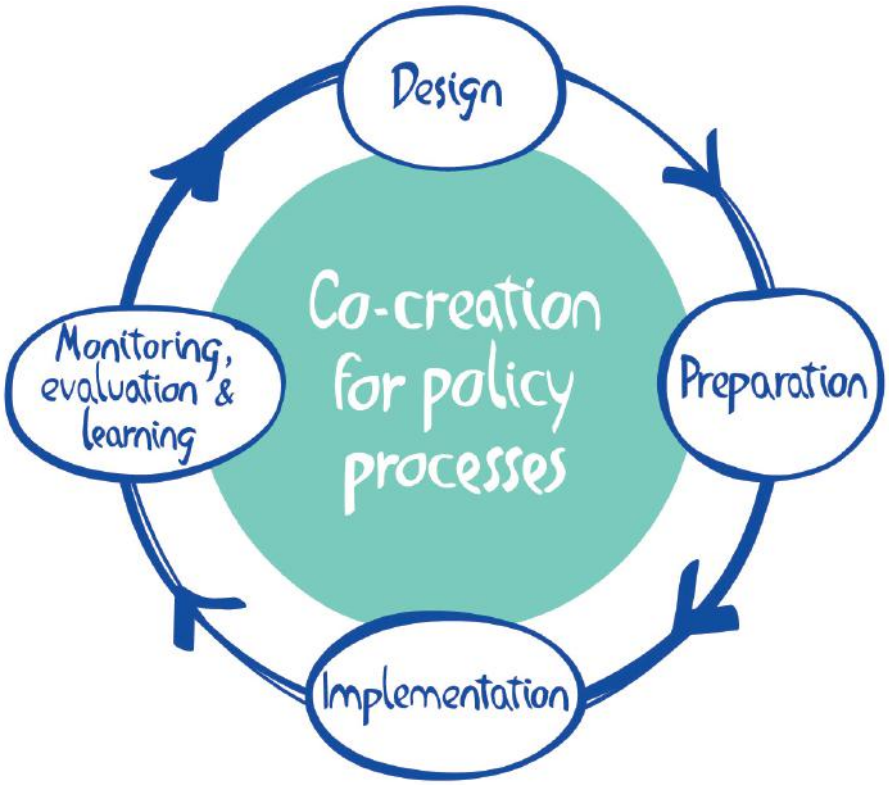
5__ **Systemic perspective:** this is essential for understanding the positioning and dependency of the issue at stake on external factors, for connecting the parts to the whole with all the sensibilities involved and maintaining coherence of action.

1.1.4. WHEN TO RUN CFPS?

CfPs are designed to establish, strengthen and structure new collective thinking about complex issues, creating promising new perspectives that increase the possibility to address them effectively. CfPs enable experimental spaces where multiple stakeholders can identify opportunities and simultaneously develop and prototype interventions together, moving through a multilevel policy mix.

CfPs help practitioners and participants go beyond the ordinary and expand their insights into how to tackle diverse societal and territorial challenges. Because of their flexibility and modular approach, CfPs can be tailored to the changing needs of different stages of the policy cycle through networked policies, identifying new strategic relationships between multiple sectors, locations and levels of government. Indeed, practice shows that CfPs with an outcome-oriented approach are better adapted to the design, preparation or implementing phases of public policies, while the knowledge gathered through the collaborative process may enrich the monitoring, evaluation and learning phase.

Figure 1. Co-creation for policy processes and the public policy cycle



Source: author's elaboration

CfPs nurture all the stages of the policy cycle. In the early stages they contribute insights, helping to set priorities and support the open discussion on implementation and resource allocation. They also support the fundamental learning-by-doing process that arises from experimentation with new practices, instruments and approaches.

The policy mix *is the combination of instruments, resources and common objectives across different policy areas, geographies and levels of government.*

1.1.5. HOW TO RUN CFPS?

This handbook offers a step-by-step approach to guide practitioners on how to run CfPs, from simple definitions and examples to key elements for practical application:

- **Chapter 1** focuses on defining key elements to get to know policy-driven co-creation processes (CfP), thus creating a framework of common understanding.
- **Chapter 2** conceptualises the main principles that serve as the backbone of policy-driven participatory processes to ensure their quality.
- **Chapter 3** focuses on the actual preparation of a co-creation process and its practical aspects.
- **Chapter 4** deep-dives into the stakeholders involved in the policy co-creation process, introducing the roles and variety of engagement between who is organising the CfP as well as the role and functioning of the community engaged.
- **Chapter 5** focuses on the practices for managing *actionable* knowledge produced during the participatory process with the purpose of enabling further interactions and exchange aimed at moving forward with the policy process.

- **Chapter 6** illustrates different facilitation methods and tools that can be combined in CfPs as needed.

1.2. Co-creation for policy processes in practice: examples from policymaking

CfPs have been widely used to understand complex issues and impasses, to stimulate cross-border collaboration, explore opportunities for social and open innovation and help eliminate any obstacles to innovation. In practice, CfPs have contributed to a societal approach of issues such as low-carbon urban planning, running regional testbeds and demonstrators, renewing citizen-government engagement and enhancing social innovation and inclusion. It has been applied in customs policy, digital technology policy, agriculture & food system policy, climate policy and regional development policy. Some remarkable examples of the latter follow below.

1.2.1. EXAMPLE: SMART SPECIALISATION STRATEGIES (REGIONAL POLICY)

Conceived within the reformed European Cohesion policy, Smart Specialisation is a place-based approach characterised by the identification of strategic areas for intervention based both on the analysis of the strengths and potential of the economy and on an Entrepreneurial Discovery Process (EDP) with wide stakeholder involvement. It is outward-looking and embraces a broad view of innovation including but certainly not limited to technology-driven approaches, supported by effective monitoring mechanisms.

Entrepreneurial discovery is both a mindset and a skill set. It entails a way of interacting with the world from an entrepreneur's point of view, utilising certain skills for making sense of the context and understanding the consequences of action or inaction. It calls for the spirit of entrepreneurship: curiosity, creativity and courage (for calculated risk-taking). It requires the capacity to act.

Innovation Camps, a type of CfP methodology, have been applied to support the entrepreneurial discovery process required for the effective implementation of research and innovation strategies for RIS3 priorities. Indeed, CfPs use an entrepreneurial discovery process to drive their central processes: understanding diverse perspectives to understand challenges, issues and problems, exploring new opportunities to address these challenges and prototyping promising ideas as solutions to the problems.

Since 2017, Innovation Camps have addressed uncountable territorial innovation and development challenges such as the development of thematic clusters in line with regional priorities; the co-creation of regional policy initiatives for the circular economy; public employment services, universities and cities as open labs; interregional collaboration in the field of energy (sustainable buildings, bioenergy and solar energy); and sectoral collabora-

tion in the field of digital economy. Engaging society at large in participatory processes for the co-creation of regional policy initiatives has been a transversal aim in all these camps.

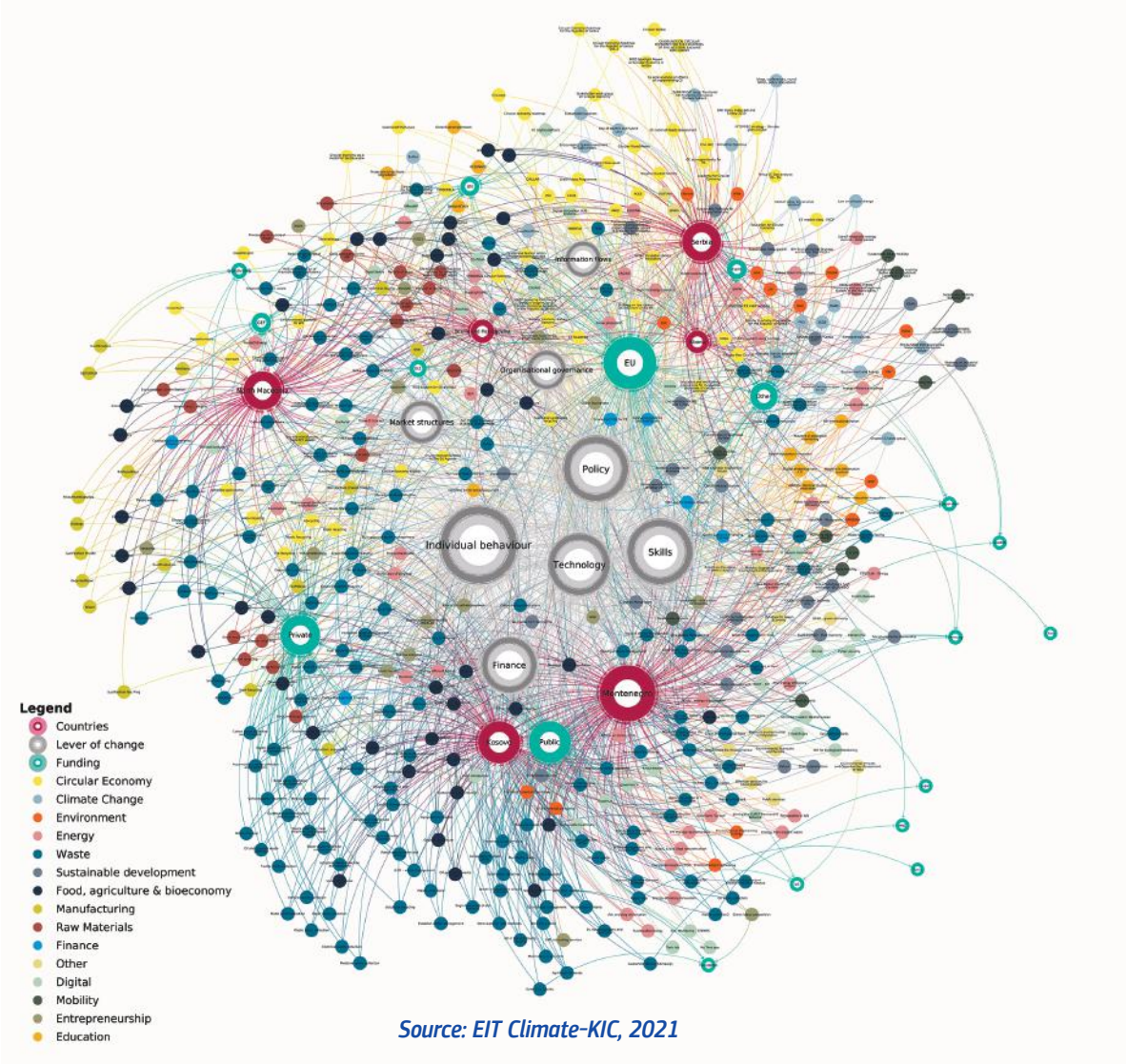
1.2.2. EXAMPLE: THE EIT CIRCULAR ECONOMY INITIATIVE IN THE WESTERN BALKANS

The Circular economy is considered as a tool for delivering part of the 2050 decarbonisation agenda in Europe, and the Western Balkans Green Agenda has been designed to align with EU Green Deal and guide the whole continent towards the 2030 and 2050 targets. Better ecosystem understanding is needed in the Western Balkans where governments face the challenge of aligning with the European Green Deal and the EU Circular Economy Action Plan amid EU enlargement discussions.

The challenge-led systems mapping approach, another format of CfP methodology, has been implemented simultaneously in the six Western Balkans economies as part of a "learning by doing" process embedded in an EIT Cross-KIC collaboration project. This project implements an innovation policy for sustainable growth by introducing tools for territorial analysis to support development policies. It is the first regional effort of this kind, positioning existing circular economy challenge owners in a system viewpoint as part of a co-creation process.

- **Systemic perspective.** An EIT Cross-KIC community and its partners carried out a system and policy mapping as part of a co-creation process in the Western Balkans to have a clear picture of what the current ecosystem looks like and where, how and who is involved in specific value chains. It enabled synergies and overlaps in interests, activities and stakeholders through a broader, green economy approach.
- **Evidence-based policymaking.** A co-creation process relating to the circular economy was implemented based on the results of the mapping exercise and acted as the stakeholders' engagement plan to facilitate a sustained process for the co-design and implementation of an actions portfolio.
- **Collaborations & partnerships.** The initiative has enabled strategic alliances and cooperation with national authorities, managing authorities and policymakers, as well as building synergies with other international organisations and private actors active in the region.
- **Users, stakeholders & beneficiaries.** Challenge owners (national and local governments and industries) are the main beneficiaries. The mapping exercise aimed to help them understand the ecosystem and their roles. The policy co-creation workshop served as a platform for beneficiaries to prototype actions based on evidence-based information relating to the circular economy.

Figure 2. Circular economy portfolio map in the Western Balkans



Source: EIT Climate-KIC, 2021

CfPs can enable a variety of stakeholders to convert exchanges, insights, prototyped interventions and action processes into actionable knowledge. The initiative in the Western Balkans has integrated a simultaneous process of creating a better understanding of their ecosystem with actions, projects and collectively designed interventions into innovation portfolios addressing multi-level cross-sectoral and specific place-based topics.

BOX 6 — Participatory approaches

Find out more

- Rissola G., Kune H. and Martinez P. **Innovation Camp Methodology Handbook:** Realising the potential of the Entrepreneurial Discovery Process for Territorial Innovation and Development, EUR 28842 EN, Publications Office of the European Union, Luxembourg, 2017, ISBN 978-92-79-74613-0, doi:10.2760/924090, JRC102130. Available Here
- Matti, C., Martin Corvillo, J. M., Vivas Lalinde, I., Juan Agulló, B., Stamate, E., Avella, G., & Bauer, A. (2020). **Challenge-led System Mapping.** A knowledge management approach. EIT Climate-KIC. Available Here

1.2.3. CFP AS A TOOL TO ADDRESS GRAND SOCIETAL CHALLENGES

Beyond the examples above, there are excellent opportunities for renewing the innovative capacity of Europe, and many of the CfPs methodologies mentioned in this handbook (innovation camps, EU policy labs, Climate-KIC Transitions Hub events, Climathon, etc.) are actually helping policymakers to design innovative policies to tackle the society's grand challenges, paving the way for a new kind of public intervention so-called mission-oriented policies (Mazzucato 2018, 2019).

More and more challenges have also emerged. The UN's 17 **Sustainable Development Goals** (SDGs) encapsulate the major societal challenges of the twenty-first century, while the increasing incidence of media-driven trends – fake news, alternative facts, cybersecurity issues undermining authority, popular hostility to established institutions, and lack of trust in government – challenge government and civil society to develop processes for broader inclusion, public engagement, co-creation and collaborative decision-making.

In this broader context, a methodology like CfPs can contribute to ensuring that not only governments, business and academia, but also civil society at large can work together to discuss and find solutions to common challenges:

> *"New ways of thinking are needed for tackling societal challenges, as we discover that traditional problem solving methods are no longer sufficient."*
>
> **M. Markkula (former President, CoR)**

This evolution offers a unique opportunity for committed stakeholders, regardless of their background, to contribute to making policy more relevant for society. They can learn to design and conduct policy-driven co-creation workshops with the help of professional facilitators, to generate concrete results, whether these are policy recommendations, practical experiments or pilot projects and prototypes adapted to the level and circumstances of the action. This is particularly suited to challenge-led initiatives.

1.2.4. CFP AS A TOOL TO DEVELOP LOCAL COLLABORATION AND ENTREPRENEURSHIP

While more positive attitudes and a culture of entrepreneurship and risk-taking are needed to turn Europe into a more innovative, dynamic and competitive economy in a globalised world, this cultural shift needs to be stimulated and nurtured across society. However, approaches based on CfPs, which extensively rely on self-organising principles, cannot realistically be put in practice without political endorsement and a certain dose of institutional governance. This is still largely an open issue, but CfPs are starting to become embedded in (EU, national, regional, urban, rural) policymaking and problem-solving, as a tool for institutions to facilitate collaboration between multiple stakeholders with a view to solving problems and stimulating action. When applied well, the CfP practice eventually leads to the development of a culture of innovation, co-creation and

problem-solving. CfPs also create the basis for an institutional framework to sustain local innovative systems emphasising the role of municipalities as a key actor in mobilising the local innovation ecosystem.

BOX 7 — Labs and platforms for urban innovation

For instance, **Living Lab (LL)**[4] is an open innovation ecosystem for European cities based on a systematic user co-creation approach that integrates public and private research and innovation activities in communities, placing citizens at the centre with the help of various approaches, instruments, methods and tools.

Another initiative, **NetZeroCities (NZC)**[5] is aimed at supporting the European Union's Green Deal by making available a service-oriented platform supported by world-class practitioners. Cities can explore mechanisms to overcome the current structural, institutional and cultural barriers they face in achieving climate neutrality by 2030. The initiative brings together new and existing tools, resources and expertise as well as pilot demonstrations to help drive rapid learning about how to achieve climate neutrality at city scale and run a Twinning programme to enable peer-learning.

4. More information can be found at the European Network of Living Labs (ENoLL). Source: https://unalab.eu/en/project-partners/enoll

5. NetZeroCities (NZC) is part of the Horizon 2020 Research and Innovation Programme aimed at supporting the EU´s Mission of "100 Climate-Neutral and Smart Cities by 2030". Source: https://netzerocities.eu/

GUIDING QUESTIONS

Policy relevance of the issue and process at stake

- *Is the identified societal challenge or policy issue relevant enough at the level where the policy customer operates (e.g. local, regional, national, European or global)? And at its higher/lower level(s)?*
- *Are there potential synergies across multiple governance levels? How can all concerned levels benefit from a unique co-creation process?*
- *Is the identified issue/challenge relevant to all quadruple helix actors? (government, academia, businesses, civil society) or only two or three of them?*
- *Are key stakeholders (in the broad sense) open-minded and cooperative enough to engage in co-creation activities that tackle challenges of common concern?*
- *What is a reasonable (and feasible) timeframe? How is it aligned with the broader policy cycle. Into which policy phase (design, planning, implementation, monitoring/evaluation/learning) does it fit?*
- *Which kind of outcomes does the policy customer expect/need to get? What is the corresponding level of responsibility that they are ready to assume (before, during and after the co-creation process)?*
- *Is the institutional framework mature enough to assimilate the adoption of co-created solutions?*

CHAPTER 2

Ensuring quality

2.1. Introduction: participatory methods enter the policy arena

The previous chapter explained why participatory processes can and should be used for policy-making. As shown in the examples above, their characteristics make them increasingly attractive to policymakers and they have, for example, great potential to contribute to the European Commission's efforts at 'Better Regulation' (EC, 2015).

This chapter outlines five principles that are vital in ensuring the success of CfPs. These principles stem from a large body of practical experience that was accumulated in the field over the last decade as well as from the review of relevant literature. Although initially not intended for the policy sphere, participatory methods are proving to have a wider range of applicability than first estimated and are increasingly integrated in policymaking practices (Hinrichs-Krapels et. al. 2020, Nadin et.al, 2021).

This handbook aims at facilitating the dissemination of participatory methods and helps to spare users from reinventing the wheel.

Some of the key messages for a meaningful application of participatory processes are:

- It is best not to use these methods as 'add-ons' but rather as an integral part of policy-making.
- The proposed methods can and need to be tailored to the specific needs created by the issue at stake, the policy area, the involved stakeholders and the circumstances of the moment in question.
- The flexibility of these processes allows them to be applied to a wide range of issues and settings but delivering high-quality outputs requires ensuring that they fit the purpose.

Figure 3. Characteristics of policy co-creation processes

Source: authors' elaboration

While engaging with policy-driven co-creation processes, involved stakeholders are most likely to both receive information on the issue at stake and provide valuable knowledge that will feed into the subsequent steps of the process. Thus, a participatory approach can provide a unique bridge between all relevant stakeholders: citizens, experts, businesses, policymakers, and others. Typically, CfPs serve as a source of advice, collective intelligence or knowledge to decision-makers by articulating recommendations that draw on diverse views and expertise. They can also create communities and support them in their engagement with decision-making. When used well, they are extremely powerful vehicles for structured deliberation (See BOX 8).

The application of CfPs, including corresponding workshops, was developed in physical, in-person environments over many years. The recent massive shift to online tools as a result of the COVID-19 pandemic has however proven that the evidence presented in this handbook remains valid. One of the key differences this shift has brought along with it is the sudden possibility to significantly increase the number of people that can be involved. Another difference introduced by online participation is a change in the type of attention received from the participants. Sustained attention through a screen is more tiring than in standard meeting rooms, meaning that online events need to be kept shorter than physical ones. Also, participants can multitask more easily, resulting in a different level of engagement. The fact that the moderator is remote, and that people can switch their microphones or cameras off, makes it more difficult for the moderator to actively stimulate attention and participation. Some information processing phases that can take place in an inclusive and transparent way when a group is in a room can also be difficult to perform with all participants in an online workshop. However, despite these practical differences, the five principles that are foundational for high-quality participatory processes remain perfectly applicable (Figure 4).

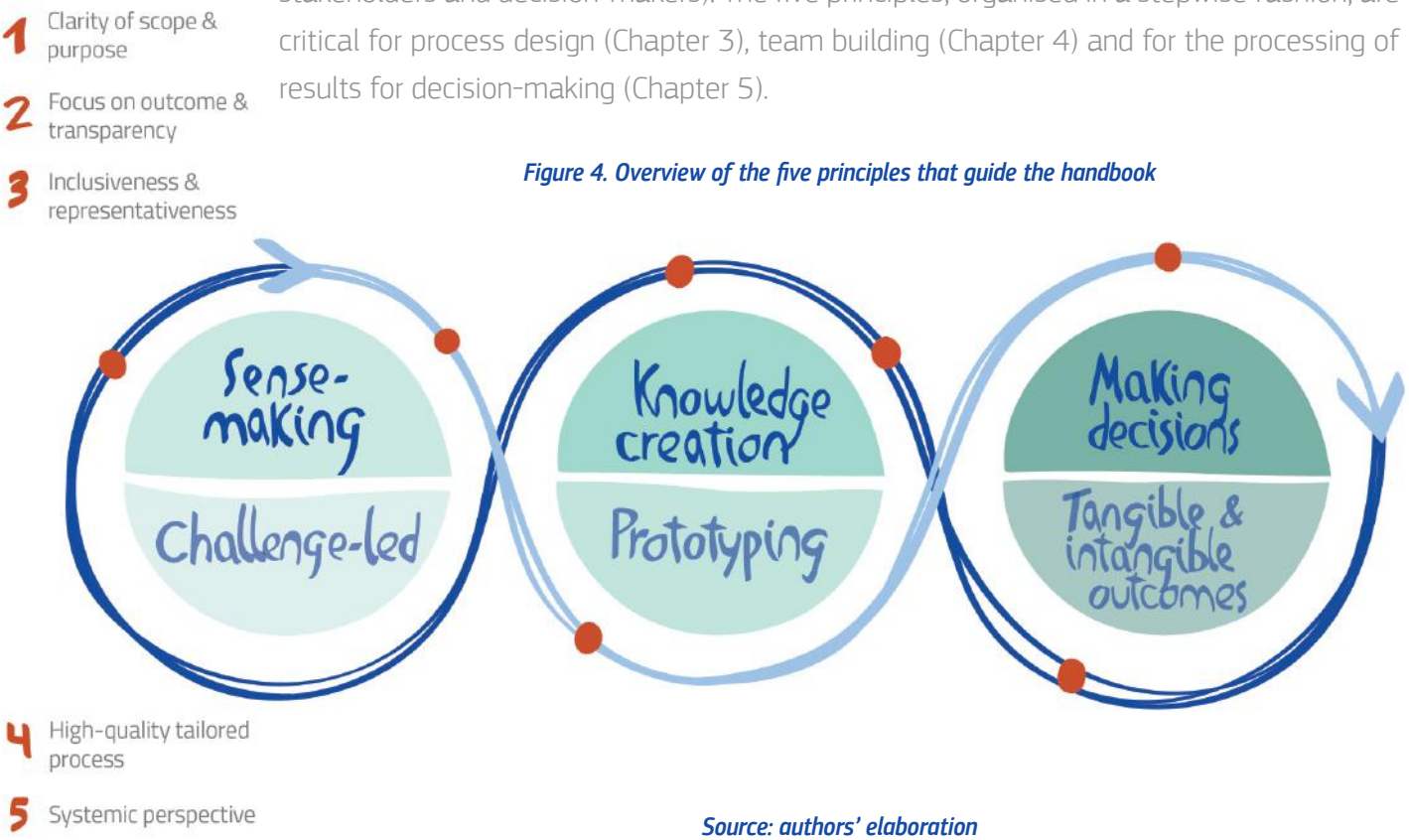
BOX 8 — Benefits of workshops for participatory policymaking:

1. **Inclusion** of all the relevant stakeholders simultaneously (which is seldom seen in other approaches).
2. **Structure**, making the workshops well suited for dealing constructively with diverse views and inputs.
3. **Collective intelligence**, essential when dealing with complex issues in times of rapid change.
4. **High degree of tailoring** to the needs of the policy process (issue, people, circumstances).
5. **Feasibility**, i.e., the workshops do not require undue resources to be applied, their timing requirements are reasonable and many people have the competence to run such processes.
6. **Increased buy-in** of the engaged stakeholder communities in ultimate policy decisions, thanks to their participation in the making.
7. Suitability for combination with **foresight** exercises, whereby groups of people develop a deeper and shared understanding of the future.

2.2. Five fundamental principles for practitioners

The principles outlined in Fig. xx constitute the backbone of policy-driven participatory processes. They make it possible to structure and build the knowledge landscape around a topic to serve policymaking optimally. These principles are organised around different ways of collecting and building knowledge (e.g., collection of information that is not widely accessible, harvesting of intangible knowledge, generation of collective intelligence during workshops) and create room for all those who can contribute meaningfully (participants, stakeholders and decision-makers). The five principles, organised in a stepwise fashion, are critical for process design (Chapter 3), team building (Chapter 4) and for the processing of results for decision-making (Chapter 5).

Figure 4. Overview of the five principles that guide the handbook



Source: authors' elaboration

2.2.1. PRINCIPLE 1 – CLARITY OF SCOPE AND PURPOSE

Principle 1 in short: ***The boundaries and the intention of the entire policy process, including the workshop(s), have to be identified and clearly determined. It should be ensured that the CfPs' application enables decisions that are relevant for the previously specified policymaking needs, along with the commonly defined and shared goals.***

It is essential to make sure that the team organising the process and the policy customer/partner share a clear understanding of why the policy-driven participatory process should be run and what the scope of the question to be addressed is. There are three main reasons for this:

- This allows for the optimum co-design conditions between the organising team and the policy customer/partner, as both are able to share their knowledge to the best of their abilities.
- It strongly reduces the risk of generating false expectations and misunderstandings, which ultimately will contribute to generating trust among participants.

- It maximises the chances of successful outcomes as the level of trust between the partners is likely to be high. In particular, the participatory moments of the process, such as workshops or online conferences, should have a clear objective with regard to the overall policy process.

Clarity on the objectives will make it easier to identify which participants need to be brought on board and will help to set the right expectations. Without a clearly defined scope and purpose, any policy-driven participatory exercise runs a high risk of not bringing full satisfaction for the policy customer/partner or to the participants. Indeed, ambiguity and unexpected elements often emerge during the process and a clear alignment between the policy customer/partner and the organisers is needed to optimally resolve them.

BOX 9 — Important elements to ensure clarity of scope and purpose:

- Problem identification
- Framing or contextualisation (mandate, target, focus, etc.)
- Scaling or positioning (e.g., coordination and centralisation)
- Early involvement of relevant stakeholders to build trust
- Identification of responsibilities
- Definition of the desired outcomes and ambitions
- Definition of ways forward to ensure that the co-created prototypes & policy options feed into policymaking through concrete actions (legislation, programmes, projects)
- Identification of gaps of knowledge and skills
- Collection of open questions at earliest stage possible
- Clarification of administrative issues
- Agreement on further process

2.2.2. PRINCIPLE 2 – FOCUS ON OUTCOME AND TRANSPARENCY

Principle 2 in short: ***Expectations and expected outcomes must be defined early to ensure optimal results. The outcomes as well as the entire policy process need to be made transparent to whomever it might concern by using appropriate visual techniques and communication.***

For a policy-driven participatory process to fulfil its promise, it has to deliver outcomes that serve the purpose as well as possible. In fact, a measure of its success is the effectiveness of the co-created policy innovation, for which both parties are co-responsible (and partners). Therefore, when the scope and purpose have been clarified and agreed upon, work must start on the identification of what outcomes are best achieved within the given timeframe and the prevailing practical conditions. Defining these variables will have a major influence on the design of the process including its events. Knowing what outcomes

are expected allows the design team to identify which steps, tools, methods and participants would best provide what is needed. Having built trust between the design team and the policy customer/partner when defining and agreeing on scope and purpose will largely facilitate the fulfilment of the second principle.

The inclusion of stakeholders and decision-makers from diverse but relevant contexts and perspectives contributing to the different phases/workshops of the co-creation process is likely to be successful when the objective is the delivery of a specific, well-defined and tangible product (e.g., action plan, indicator system, recommendations for action, vision). The process owners need to make clear from the start what types of deliverables and outcomes are due to be created. For example, is the goal to develop principles for an indicator system or is the goal to define precisely several indicators for a specific development goal?

Another key variable is how much scope there is for co-created decisions that are developed by the participants. That means not only what the contribution should entail but also to what extent the participants can actually shape the policy. Furthermore, the design of co-creation formats depends on the type of results that are desired (e.g. decision-support vs. sharing of understanding vs. development of intelligence/knowledge) and who the 'policy customer/partner' is. Finally, clear communication about the process steps, provisional results and final decisions will make the participatory process open and transparent. What is required to achieve this is described in more detail in Chapters 3-5.

BOX 10 — Helpful steps to define outcomes and enable transparency

1__ Description of current situation - **Horizon Scanning**
2__ Mapping actors, governance and policy – **Stakeholder Mapping**
3__ Identifying ambitions of the process - **Hierarchy of Objectives**

Generally, the better the structure of the information collected during the participatory moments of the process (e.g., workshops), the easier and more comprehensive the analysis can be. In other words, the better the templates used, the clearer the questions asked. Additionally, the more logical the sequence of information collection, the better the quality of the information and knowledge collected and the lesser the amount of effort needed to create meaningful reports. Attention should be given to the information collection at every step in the participatory process to avoid any gap or quality lapse in the final reporting. This significantly increases the degree of satisfaction of customers and users, leading to increased levels of support and enthusiasm for innovation and change and better relationships between the CfP expert team and their policy customer/partner.

2.2.3. PRINCIPLE 3 – INCLUSIVENESS AND REPRESENTATIVENESS

Principle 3 in short: ***For an ideal development of collective intelligence, the appropriate participants should be selected in terms of individual expertise, representation of all the relevant stakeholder groups and diversity of perspective. The parties who are concerned with the targeted policy context should have their own knowledge valued and should have a mandate to shape decisions through the entire process while at the same time building trust among each other to create agency for transformation.***

Involving all the necessary expertise and all the relevant stakeholders is essential for the success of CfPs. This requires, for example, inviting experts from both the supplier and consumer sides, or people influencing and affected by a decision. Indeed, the generation of collective intelligence sits at the core of policy-driven participatory processes. For this reason, the quality of the selected participants and the capacity of the organisers to facilitate their participation in the process are critical. Before selecting participants, a topic-specific mapping exercise helps to get an overview of what range of expertise is needed, the stakeholder landscape and what might be a constructive diversity. The 'pulling power' of the organisation or person sending the invitations can make an important difference in ensuring adequate representation in the workshop.

For trust building, constructive discussion and an optimal development of results, it is important to ensure that all participants feel equal in the process. Any sense of hierarchy would distort conversations: some people might not want to share their knowledge or creativity for a range of possible fears, others might want to say specific things to 'please the boss', others still might feel superior having a tendency to impose their views on others. Chapter 3 includes elements for designing a participatory process by building trust between participants, while Chapter 5 highlights practises for collecting and managing all contributions to build trust as part of a co-created narrative.

Policy-driven co-creation processes are not 'addressed to' (decision-makers) but 'performed with' all the relevant stakeholders to support evidence-informed decision-making. This means that the participants are not only consulted or partners in the development of the outcomes, but they determine jointly the content of the workshop output. Thus, when designing co-creation formats, it is important to be clear about the role of the participants and the type of ownership they will have.

BOX 11 — The benefits of applying a co-design approach:

- Generation of rich and well elaborated sets of ideas with a high degree of user value
- Improved systemic knowledge of an issue or policy with better understanding of customer or user needs as well as broad benefits and impacts
- Immediate validation of ideas or concepts
- Higher quality, better differentiated products, services, or policies
- More efficient and robust decision-making
- Lower overall development costs and development
- Better cooperation between different people or organisations and across disciplines – creation of long-lived communities of purpose

2.2.4. PRINCIPLE 4 – HIGH-QUALITY TAILORED PROCESS

Principle 4 in short: ***The design of the participatory elements has to be closely adapted to the specific needs and constraints of the process it serves. In particular, while the selected formats should be based on experience and draw on well-established methods, it is important that the overall process is closely tailored to serve the identified needs. (To ensure a good quality of outcomes, the participatory moments have to be both prepared with care and executed professionally.)***

BOX 12 — Cornerstones of a high-quality tailored process

- Co-design of process, key questions and proposed participatory formats
- Clear allocation of roles and tasks among organisers
- Experience in running participatory processes
- Quality of venue, online formats and other interfaces with participants
- Flexibility in shaping and adopting the process
- Sufficient resources allocated to both the preparation of participatory elements and the data harvesting as well as the analysis of the results
- Strong and clear interpretation and communication of the results

Many existing participatory methods and tools are available (e.g. Innovation Camps, Visual Toolbox for System Innovation and Service Design Tools) as well as several handbooks published for policy-driven co-creation. These are usually open-source and describe tried and tested techniques that can be applied when working in a participatory environment. They cover a broad palette of methods (e.g., Fish Bowl, World Café, etc.), whereas all of them have their own purpose, characteristics and types of outcomes. At the same time, each individual technique is limited in its scope and capabilities. Therefore, a typical policy-driven participatory process will combine several methods to reach

its goals. This offers a large degree of customisation to serve the needs of policy-driven processes:

- While each technique is well described and characterised, it is easy to create variants. This makes it possible to adjust them to the number of participants, the time available, the topic to be discussed, the previous or next steps in the process, etc.
- Participatory methods are modular and can be combined in an endless number of ways to be useful for the policy process at stake.
- Policy-driven participatory processes can be built around a series of interactive (hybrid) meetings, instead of just one physical event; this opens the possibility to create a more customised and modular process with more refined and adapted outcomes.

How and when should the process be tailored to the identified needs? In the best case, this is done as a direct follow-up of the work performed for fulfilling the first principle (clarity of scope and purpose) since the customer should be closely involved. The proposed way to do so is through a well-established approach called co-design. It usually involves various people from the institution that commissions the process to make a creative contribution in the formulation and solution of a problem. This is particularly interesting when dealing with complex problems such as those policymaking addresses. A co-design approach engages very early with the problem owner and possibly requires some key stakeholders to validate the addressed question and the subsequent process design.

It is clear that different policy contexts need individual solutions for participatory interventions to be successful. The ultimate quality of a policy-driven participatory process is only as good as the weakest step in the chain. This includes a careful preparation of the participatory moments (definition of scope and purpose, design of the process, recruitment of participants, etc.), the quality of the moderation/facilitation during the event(s) and the harvesting, processing and analysis of the information, solutions, prototypes or policy options collected during the participatory parts of the process as well as the preparation and communication of the output as a final result. In the same vein, proper follow-through is essential to get outcomes and impact from those outputs. This is a final step that is frequently minimised by practitioners who tend to perceive it as a policymaker's competence. However, both are co-responsible to ensure an adequate translation of outputs into policy action, eventually involving stakeholders to validate that such translations respect the spirit of the co-created innovation.

The team should include people with the appropriate skillsets regarding the challenges, flexibility in shaping and adopting the process as well as engaged participants. Even if they are respected fully, all the good work can be jeopardised if the execution of the participatory phases, the processing of the collected knowledge or the follow-through are lacking quality. This is usually not difficult, but it requires sufficient attention and resources, something that can be underestimated due to funding or time constraints.

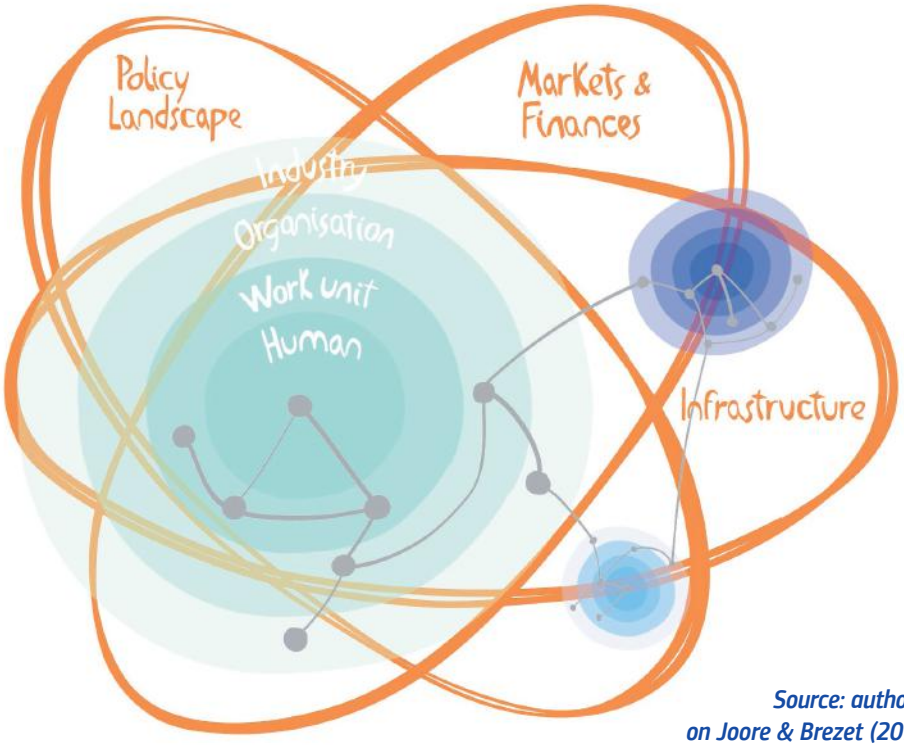
2.2.5. PRINCIPLE 5 – SYSTEMIC PERSPECTIVE

Principle 5 in short: *The process has to help the participants to develop an 'out-of-the-box' understanding of the issues at stake. This is essential for understanding the positioning and dependency of the discussed topics on external factors, for connecting the parts to the whole, for avoiding 'tunnel thinking' and for building coherence of actions. Developing a holistic, systemic perspective ensures the robustness of the outcomes.*

Policymaking usually deals with complex issues that carry a high level of uncertainty, involve numerous stakeholders and a multiplicity of opinions. As a result, the policymaking reflection has to avoid too much 'linear' thinking and engage in 'systemic' thinking. 'Systemic' thinking takes into account the diverse factors that are internal and external to any given issue and tries to understand their relationships and their direct or indirect effects. Thanks to the ability to involve a broad range of stakeholders, policy-driven participatory processes can go a long way towards helping develop systemic thinking. This is especially the case in processes that are developed to do foresight.

Seen from a different perspective: the processes that are run and the decisions that are made on one level will most likely effect other levels (Joore & Brezet, 2015; Jones, 2014). This is particularly true for policymaking since these kinds of actions are located at the societal system level. Hence, policy decisions will trickle down and relate to sociotechnical systems, entire sectors, products, companies and eventually people (See Figure 5). Therefore, navigating different levels and engaging in systemic thinking increases the depth of understanding of an issue and the robustness of the outcomes from the participatory process.

Figure 5. Multilevel and human-centred sociotechnical system



Source: authors' elaboration based on Joore & Brezet (2015) and Jones (2014)

2.3. Principles throughout the co-creation process

The five principles presented in detail above focus mostly on the upstream phases of the process. Co-creation in policy process allows for a systemic yet flexible approach to generate improved knowledge landscapes. Through the five guiding principles of this chapter, it is possible to ensure quality and to tailor different facilitation methods and tools to the specific needs of stakeholders and the targeted context. The next chapters give a detailed overview about the planning of such processes (Chapter 3), the team and skill sets needed (Chapter 4.) and the communication as well as knowledge management aspects (Chapter 5). This chapter has presented general principles that are substantiated with step-by-step description of different facilitation techniques in the next chapter.

With so many options at hand, it is important to recognise the centrality of processes in policy co-creation. There is an increasing recognition that policies can and should be co-created by selecting a variety of tools that are useful for the specific context. Processes in the form of procedures, tasks, mechanisms, activities and interactions that support the co-creation of value play a vital role. By configuring the CfP Tuner for the co-creation process, these processes are adjusted according to the requirements and circumstances of the policy context. Chapter 3 will introduce the CfP Tuner as the main tool for this handbook aiming at facilitating the design and implementation of the co-creation process. Chapter 4 will help to understand the big picture of the ecosystem involved in the CfPs. Finally, Chapter 5 will introduce new insights on producing actionable knowledge as part of the whole co-creation for policy process.

GUIDING QUESTIONS

Following the fundamental principles for practitioners

- *Is it clear why a policy-driven co-creation process is the best approach in your case?*
- *Can the process deliver what is needed for the issue to be addressed?*
- *Are your customers fully on board?*
- *Can the outputs of the process be defined and agreed upon by the customers and the people who will run the process? Are they commensurate to the needs?*
- *Can the process and its outputs deliver the expected outcomes?*
- *Can the process involve all the necessary stakeholders? Does it have a broad enough scope?*
- *Does the team running the process have the required competence and resources?*
- *Is there sufficient time to run a meaningful process?*

CHAPTER 3

Preparing a co-creation process: before, during and after

In the previous chapters, we have learned why CfPs are relevant for policymaking, what they are and what principles they have to respect to deliver all their benefits. Here we define the practical steps to be followed in preparing a successful CfP.

A policy-driven co-creation process is a series of complex and often almost magical moments during which people take what is the most important and precious resource they have, time, coupled with their visions, desires and knowledge, to address together a complex issue. This achieves results that cannot be reached individually. To ensure that real co-creation occurs and that the ideas and solutions that emerge are transformed into actions, some important preconditions have to be met. The actual preparation of a co-creation process is an iterative activity that starts with making rough sketches of plans, then gradually getting to a clearer set of tasks, steps and methods. The goal is to create an environment favourable to dialogue, visualisation, exchange of ideas, mutual learning, trust, motivation and change.

BOX 13 — Important preconditions for designing a policy-driven co-creation process:

- The purpose of the process must be clear.
- The customers must have a clear ownership of and commitment to the process. They should also have the capacity and commitment to implement the outcomes of the process.
- The process design and facilitation teams should have the necessary quality, experience and impartiality.
- An adequate physical or digital space and logistic arrangements must be available to allow people to work in small groups, to mingle, to participate in large plenaries, to visualise what emerges from the process by using panels, canvases and walls, and to arrange the furniture as the process requires.

BOX 14 — Methods library for facilitators

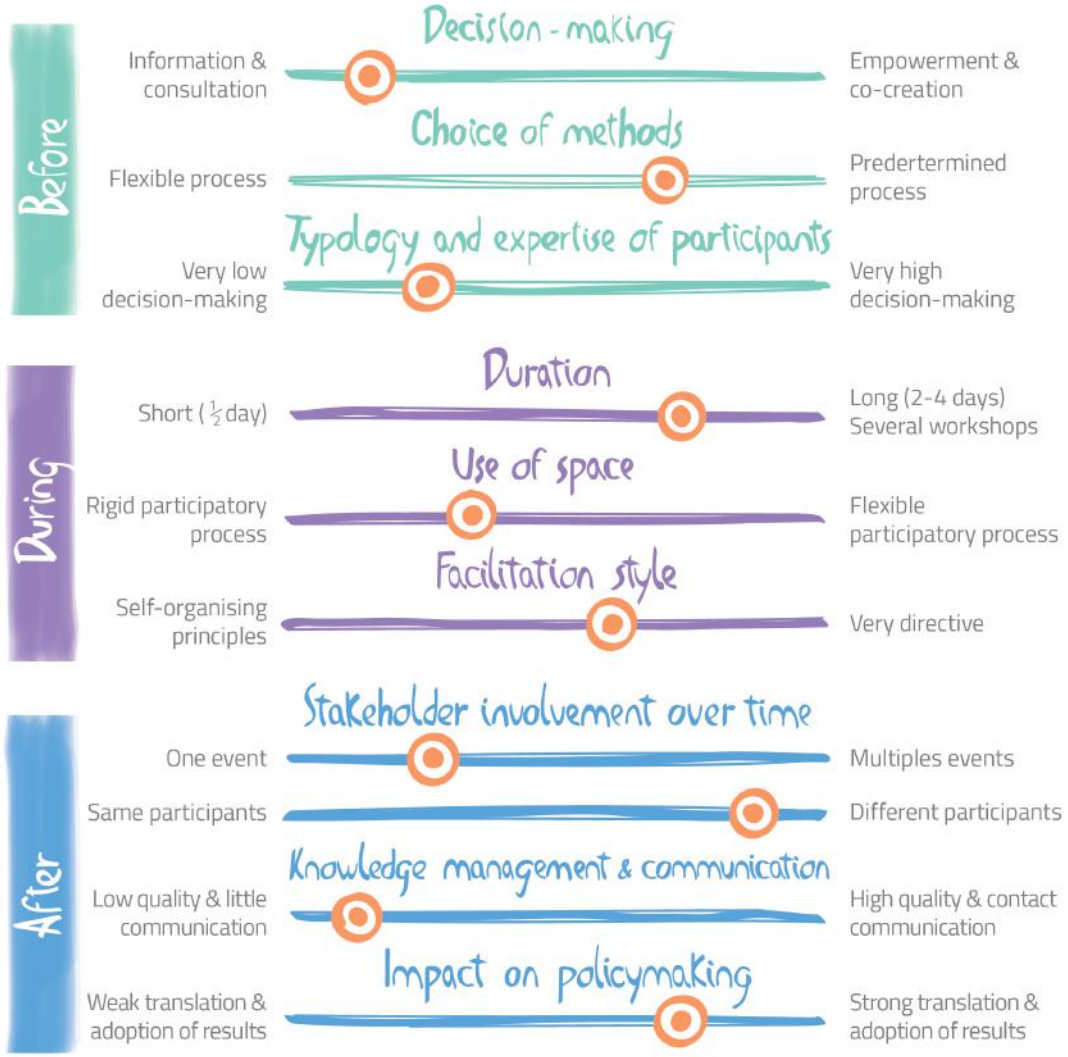
Find out more

- A platform of professional facilitators and a methods library can be found at the website of the International Association of Facilitators (IAF), a worldwide community of facilitators promoting excellence in the use of professional group process facilitation to create engagement and impact. **Available Here**
- The EIT Climate-KIC Transitions Hub knowledge library includes handbooks, methods, examples and knowledge visualizations for practitioners. **Available Here**

3.1. Fine tuning the policy co-creation process

Based on the general principles of the previous chapter and the specific details and needs of the targeted policy context, the different components of a participatory process need to be fine-tuned in order to be successful. For that purpose, we introduce the **co-creation for policy process tuner (CfP Tuner)**, a self-assessment checklist that can be used when designing a policy co-creation process (See Fig. 6). It is based on a series of criteria that can be tuned on a scale, where each dimension affects the others in a systemic way. Some variables are objective and tangible while others are subjective, so the tuning tool needs to be interpreted within the context and purpose of the policy co-creation process. The choice of these dimensions and variables arises from years of experience and practice and they help to define necessary preconditions to make the right choices when shaping a policy-driven co-design process.

Figure 6. The CfP Tuner



Source: own elaboration

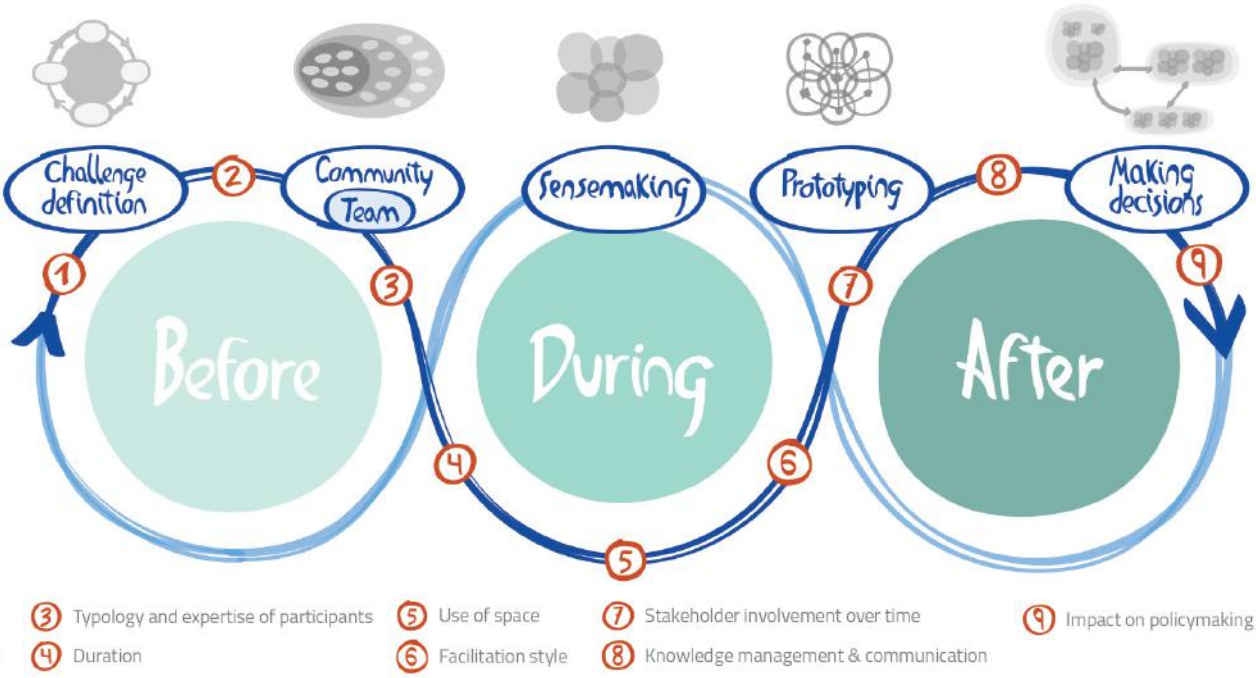
Each dimension of the scale in the Tuner deals with a specific aspect that may influence the preparation, design, running and outcome of the process, which helps the executive team and organisers to define alternative scenarios. Each dimension explores opposite and often extreme approaches, allowing one to position oneself on a specific part of the scale. There is no right or wrong position on the scale. However, in our experience the elements on the left of the scale may lead to lower impact while the elements on the right of the scale may lead to stronger and longer term impact and outcomes. In the case of the facilitation style, however, ownership and commitment usually are higher in self-organised groups than in more directed groups, which tend to generate more impactful outputs. Nonetheless, their risk of failure should not be underestimated, as it increases proportionally with the higher uncertainty in which they operate.

All these elements match the cornerstones of a high-quality tailored process (Principle 4) with the exception of the allocation of sufficient resources, which is relevant throughout the process. With so many options at hand, it is important to recognise the centrality of processes in policy co-creation. There is an increasing recognition of the role of processes that include procedures, tasks, mechanisms, activities and interactions that support the co-creation of value. By configuring the Tuner one way or the other, these processes are adjusted according to the requirements and circumstances of the policy context. In the following sections, each element of the Tuner and the alternative opposites on the scale will be explored.

3.2. Before, during and after co-creation activities

The overall co-creation process can be implemented in different formats, timeframes and conditions by following the broad range of conditions described before. This section provides some insights into the application of the **Tuner** regarding time lapses before, during and after concrete co-creation activities and interventions with the purpose of facilitating a flexible step-by-step guidance.

Figure 7. Before, during and after - Tuner dimensions and key process for co-creation



3.2.1. BEFORE

Level of decision-making

When assessing this dimension, the extreme opposites are processes based on **information and consultation**, versus processes that envisage **empowerment and co-decision** of the participants. Often, people confuse information and consultative (and even deliberative) processes with participatory ones. Clarity on the level of decision-making is fundamental when inviting stakeholders to participate and avoid frustration or worse, disillusion. The choice of the level will influence the communication, follow-up, authenticity and trust building between the stakeholders.

Choice of methods and tools

Sometimes, a process may require a more structured and mechanical approach (such as when time is limited) versus providing the context for more unstructured, goal oriented and self-organising practices. Whether to apply standard methods or tools or ad hoc ones depends on the phase and the maturity of the policymaking process and the capacity and expertise of the delivery team (see Chapter 4). For example, one can start with less ambitious, more directive, rigid, frontal, structured initiatives with low impact or a short-term vision to gradually help the stakeholders build more confidence, reciprocal trust and awareness. At a later stage, the process might be characterised by more open methods and tools, tailored to the circumstances, to have an increased impact, scalability, and sustainability over time. The reverse order may be also adequate, starting with an innovation camp to explore the boundaries of the challenges and envisage possible solutions or paths while building trust and cooperation among participants, to then introduce more directed activities where the results of co-creation are examined and adjusted using different criteria. In practice, methods should enable sensemaking conversations to interpret and understand changing conditions and their meaning for the whole community. Visual tools can help with these conversations and encourage stakeholders to create shared meaning by establishing relationships between their challenges and new concepts and frameworks.[6]

***Sensemaking or sense-making** provides a clearer space to contextualise the role of actors and resources within active innovation processes driven by concepts like Smart Specialisation and Systemic Innovation. The practitioner's own experienced, as well as external elements, form a broad policy framework and are the main inputs for conversations where methods are employed to make better sense of the diversity of knowledge available.*

Type and expertise of participants

The kaleidoscope of stakeholders engaged in a participatory process or participants involved in a workshop can vary from people with **very low decision-making power** and expertise to ones with **very high decision-making power** and expertise. Knowing the composition of the targeted community when planning a participatory process will influence the outcomes, level, depth and impact of the dialogue and deliberations. Key is to engage the right level of stake-

6. For inspiration, you can see the collection of 16 tools collected in the Visual toolbox for System Innovation (De Vicente and Matti, 2016), the X-Curve sensemaking tool for exploring transition dynamics (Silvesti et al., 2022) and the collection of experiences using the Scenario Exploration System approach (Bontoux et al., 2019).

holders for the challenge being addressed. In general, the higher the expertise and decision-making power of the participants, the more impact can be achieved. In processes structured around multiple events, it is worth reflecting on whether forming a committed group of participants that is invited to all events (to allow progressing faster and deeper), or ensuring a certain level of rotation (e.g. up to a pre-defined percentage of newcomers per event) in order to guarantee that fresh ideas and perspectives are added to the ongoing discussions.

BOX 15 — Before - Checklist for preparation and follow-up

Preparation (1) 2-3 months before (or even 4-6) with high level decision makers	**Process design**	+ Process dimensions. Use the Tuner for a better and more balanced design of the different co-creation instances planned during the process, identifying for every gathering the desired level of intensity in each dimension of the Tuner (e.g. decision-making, stakeholder involvement, facilitation style, etc). + Challenge definition. Use tools such as Purpose, Outcome and Process (POP)[7] to answer the question "why?" with your customer, identify indicators of success and how to get there, both at the macro and micro level (and share them in the communication actions and programme). + Challenge description: each target topic and challenge, including their boundaries, need to be addressed very clearly from the beginning.[8] + Transparency, accountability and trust: make it clear to the customer that participation is contrary to manipulation, and that if badly managed (e.g. expectations) it will not work and may backfire. + Empowered decision-making: while the participatory process is revolving around the topic and challenge at stake, any decision or action related to them should be suspended until possible solutions emerge, and once this happens, the latter have to be tested/validated and fed into the policymaking process (ask the policy customer to consent and take responsibility).
	Programme, agenda and storyboard of each "act"	+ Facilitation team: define the needs (one or many facilitators, facilitation coordinator yes/no, preparation and ability to deal with complex issues).
	Participants, stakeholders and experts	+ Core team: define the needs (one or many facilitators, facilitation coordinator yes/no, thematic experts, communication officers, preparation and ability to deal with complex issues). See Chapter 4 for details.
	Participants, stakeholders and experts	+ Typology-background of participants to be involved (high decision level power – executive – low decision-making power – mix). + Number of participants to be involved (very large e.g. >=500 to small, e.g. 6-10 people). + Communication and information. + POP (Purpose, Process and Outcome) to inform and involve the participants: background information, save the date, programme.[9] + Desk research, interviews and outreach to prepare background material to have informed participants that can therefore make more informed choices.
	Logistics[10]	+ Venue setting: choose the ideal place in terms of accessibility, flexibility of spaces and furniture, possibility to use walls, having a plenary and breakout spaces or separate rooms (this depends on the method but in some cases the method has to be adapted to the space and circumstances). + Get details/plans of the rooms, of the electricity plugs, of the windows, walls, neighbouring rooms, catering spaces and services, lighting, audiovisual equipment, wifi, furniture.

7. POP is a planning tool that facilitates focus and can be applied in a variety of contexts (See Gass, 2013).

8. For more details, see Annex 4. Challenge Description Form and Annex 10: Challenge-Owner (or Challente-Holder) Guidelines (an Example) in (Rissola, Kune & Martinez, 2017).

9. For inspiration, see Annex 11. What You Can Expect as Participant and Annex 12: Example of Information for Participants in (Rissola, Kune & Martinez, 2017).

10. Consult also Annex 6. Description of Facilities for an Innovation Camp in (Rissola, Kune & Martinez, 2017).

Preparation (2) one week before the participatory process	**Goals and narrative**	+ Check again the purpose and objectives with your customer and adapt the process accordingly. + Ensure a committed pitch from your customer on the Purpose, Outcome and Process (POP) of each topic to be addressed. + Clarify what is at stake and the margin for real empowered decision-making.
	Informing and communicating with participants	+ Ensure participants are well informed in advance: send an information kit on the context, scenarios, background, options (documents, videos, podcasts, etc.). + Confirm participants' involvement and define possible ways to distribute them heterogeneously according to the challenges, gender mix, level of expertise, role, objectives. + Activate a platform for a community of practice and blended learning relating to the policy co-creation process to support the follow-up activities.
	Team coordination	+ Final polishing and check on programme, steps, timing and storyboard of each "act" with your customer, organisers, facilitators, rapporteurs, challenge owners and experts. + Final video conferences and meetings between facilitators and local organisers.
Preparation (3) one day before the participatory policymaking workshop(s)	**Logistics**	+ Final venue set-up and check of spaces, facilities, audiovisuals, visual and stationery with the facilitation team. + Supporting material and IT: handouts and registration material, PCs for rapporteurs, registration desk and supporting secretariat.
	Briefing	+ Exchange info with the organising team, coordinator, challenge owners, facilitators, rapporteurs. + Running through the programme with a simulation. + Final update on participants and profiles. Possible reshuffling of participants between groups to ensure a good balance. + Each facilitator takes ownership of the space based on their facilitation style and skills, within the framework of the chosen process.
	Reporting	+ The report will be the basis for follow-up activities, so it should focus on outcomes relevant for further action (prototypes, envisaged solutions, lessons learnt). + Clarify what has to be reported and identify rapporteurs beforehand. The function and experience of the rapporteur depends on the complexity of the issues that are dealt with: the higher the complexity, the more skilled and experienced the rapporteurs should be on the topics discussed. + The report shall also document the process, including photos and videos.

3.2.2. DURING

Use of space

The type of space that is used and how it is set up influences the mindset and spirit of participants. Rigid spaces are mainly frontal (as in a conventional theatre) and can be useful for some plenaries (e.g. one-to-many broadcasting sessions) while flexible, open and adaptable spaces, which include the possibility of moving the furniture or using the wall for visualisations, are crucially important for more interactive participatory sessions. Additionally, light, fresh air and other logistic arrangements such as the possibility of having coffee stations, water and snacks instead of coffee breaks, allow people to self-organise the breaks at their own pace and save precious time.

The use of space also applies when working in remote/digital contexts. A webinar would be considered as a rigid space where only a few people are presenting (one-to-many) and there is a low to minimal level of interaction with the audience that can be mediated through some digital polling tools (many-to-one). Digitally facilitated workshops allow multiple interactions where all participants can work in breakout rooms, use digital whiteboards, canvases and sticky notes, exactly as in the face-to-face ones (many-to-many, guided interaction). In general, the higher the flexibility of space (physical or digital), the richer the outcomes and impacts.

Duration

The duration of one workshop in a participatory co-creation process can range from being very short – from half an hour to a half day – to being very long – 3 days or more. Time is a big constraint on the involvement of decision-makers as they normally have a very busy schedule. This puts pressure on the process, with a tendency to have short to very short participatory moments when high-level decision-makers are involved. On the other hand, as a workshop is a constructivist learning process, time allows people to reflect, adapt and harmonise their views, improving the communication and level of trust among participants. The duration also helps people learn more about other perspectives and adapt their points of view. Whether the duration is short or long, the presence and commitment of participants is essential: they must understand what has emerged from the dialogue in order to be part of the deliberation process from beginning to end. If people are fully present, it is more likely that they will support the outcomes of the process as they have been part of the intense work that generated them. Compromise solutions are possible, provided that they ensure adequate involvement on the part of high-level decision-makers (e.g. in key instances of the process), sufficient time for participants to fully engage in discussions and co-creation activities, and responsible participation by all participants (including decision-makers).

Facilitation style

There are many possible facilitation styles and over 1,000 facilitation techniques and tools. The choice of the facilitation style may be very directive and structured or based on self-organising principles. In the case of directive methods, the facilitator gives a strong structure and timing to all the activities, while in the case of self-organising approaches, apart from a clear agreement among participants on group rules and behaviours, the facilitator just "holds the space" and enhances self-organising where participants take an active role in deciding when and how to do things. Often, both approaches are needed to best serve the desired goal and the stakeholders involved, and are alternated in different instances of the co-creation process.

Less experienced delivery teams tend to stick to more structured facilitation styles and more experienced ones feel comfortable in both directive and self-organising ones. In the latter, they have less control as they trust the participants' sense of responsibility and purpose. Self-organising requires a discrete but constant eye on the process; interventions are

restricted to carefully selected moments when the facilitator feels they are really necessary to make the co-creation process evolve along its different stages (from the deconstruction of challenges to the construction of solutions) towards the accomplishment of its expected goal. The aim of self-organising formats is to empower participants and stimulate their ability to create new relations to enable the implementation of their proposals.

BOX 16 – During - Checklist for preparation and follow-up

Preparation (4) Alignment, learning and insights	**Briefing**	+ Just before the launch, the organising team and facilitators check in briefly to see if there are changes and to share any particular issues. + Use the notes, briefing reports and knowledge harvested during early stages to review the ongoing narrative, main discussion topics and key opportunities for engagement.
	Fine-tuning	+ There may be a need to make a quick adaptation to the process and method based on knowledge exchange, conversations and organisational aspects. This means that the facilitators and coordinators need to liaise constantly. If a problem emerges, a solution can thus be found in real time.
	Learning and insights	+ Whatever the duration in days of the participatory process, it is a good practice to have an end-of-day debriefing with a retrospective on what was planned, what went well and what could be improved. + These learning loop processes empower participants to consolidate and highlight the main agreements and opportunities they can take forward in the next step + This is an excellent learning process for the team and can be used also at the very end of the process to plan future improvements and next steps.

3.2.3. AFTER

The process of co-creation is a continuum in which feedback loops are very important to maintain the Clarity of Scope (Principle 2) and to ensure that Focus and Outcomes (Principle 2) are in line with overall challenges and the ongoing policy process. Here, "after" refers to the different dimensions of The Tuner that aim to strengthen continuity and added value along the whole co-creation process.

Stakeholder involvement over time

This component assesses the involvement of the same stakeholders in participatory processes over time. The two extremes are: one event versus multiple events involving the same participants. Multiple events involving different participants implies a low involvement of stakeholders over time, while multiple events with the same participants require a high level of commitment from the participants. The scale of stakeholder involvement allows concentrating or distributing different phases of the creation and deliberation process in one or more events. Multiple events allow participants to develop a mutual understanding and higher level of collective intelligence, trust, diversity, inclusion and capacity to think out of the box. In general, when time and scope allow it, it is better to have multiple events distributed over time to allow the participants to improve their co-creation capacity

and to build knowledge progressively on the basis of previous workshops. This gives time for asynchronous activities before and after the workshops to deepen the knowledge on the topics, gather more information and reflect on the results. This keeps co-creation with other participants going.

Knowledge management and communication

This scale relates to the way knowledge flows before, during and after the process. It can range from low quality & little communication to high quality and constant communication. The higher the importance placed on knowledge flows in the preparation and follow-up stages (capturing and processing the results), the more likely the process will be to engage, empower and change the perspectives of participants. Knowledge creation can happen at any stage of the process by converting and combining data, outputs from co-creation session and different types of knowledge into insights that can facilitate further conversations and decision-making processes. The output of this process can take the form of new knowledge integrated as a shared vision, potential solutions through rapid prototyping that can lead to new (policy) actions, allocation of resources, as well as the engagement of new actors. Capturing, processing and communicating the knowledge created can happen as part of feedback loops throughout the co-creation process, inputting each workshop along the journey with the knowledge and ideas generated in the previous one.[11] This is an important way to bring evidence into the decision-making process. Guidance on capturing and knowledge management practices are provided in Chapter 5.

Impact on policymaking

The scale relating to impact on policymaking goes from low commitment on follow-up to high commitment on follow-up, implementation and impact. The choice of either one or the other influences the setting, mindset, attractiveness and energy that can be generated in the process. Through prototyping and discussion, the co-creation process can yield a solution – within the available resources – to an issue perceived as critical and challenging by many stakeholders. Facilitation of priority-setting and sense-making with regard to the potential of prototyped solutions can encourage multiple stakeholders to invest time, energy and resources to join the co-creation process. This gives the opportunity to request commitment and to attract high-level decision-makers. The latter can benefit from collective intelligence to identify solutions for challenges they face in their policy agendas (this is the promise) at the "cost" of committing to take seriously into account the outcomes of the co-creation process, which is key to stimulating other stakeholders' engagement.

Participating in the process will also reinforce their feeling of being owners of the challenge while the co-creation process helps to reshape insights and alignments into prototypes and, thereby, to make participants the owners of the solutions. Participants are in turn likely to support the implementation of the results of the process, increasing the likelihood of impact.

11. Consult also Chapter 4 Knowledge management, analysis and dissemination in (Matti et al., 2020).

***Prototyping** is an important stage of co-design and it functions as a quick, low-cost mechanism to test an idea (or aspect of it) by creating an early sample or model and enabling rapid feedback on it. That immediate feedback from existing or potential use allows one to refine or discard the idea as part of a dynamic portfolio of policy instruments envisioned for implementation. Rapid prototyping can include paper-prototyping, focused and contextualised conversation, simple design-based techniques and roleplays. This will reveal strong and weak points in the proposed solution, and lead to an improved proposal – more concrete, more practical and more creative – for full prototyping, where ideas are improved sufficiently – and build enough stakeholder buy-in – for an evidence-based decision about whether or not to realise the idea in practice.*

To summarise, the Tuner is a simple yet effective tool for the executive team of a participatory process. It helps structure the work and steer the aims, goals and participatory moments of the process. Different settings as well as the availability of resources will result in different kinds of fine-tuning. The components of this tool are critical to policy-driven participatory processes and set the scope for actions. The following guiding questions can contribute to frame fundamental discussion to use the Tuner on the design and implementation of co-creation process. To implement these actions and to harvest and analyse the data coming from them, a team with diverse skill sets is necessary as will be explained in the following chapters.

GUIDING QUESTIONS

Creating collaborative relations

- *Have you agreed with the challenge-owner about the main aspects of the challenge? Can you line them up in three bullet points?*
- *Have you used existing evidence to reshape the overall challenge? By using existing evidence?*
- *What is the level of consensus among team and challenge owner on tasks, deliverables, roles and responsibilities? Can you map that out in a simple plan?*
- *Does the challenge owner's level of ownership and commitment to translate the outcomes into policy action compensate for the efforts needed to face the design and implementation of new activities?*

Planning appropriate process

- *Are the selected methods and processes appropriate to the challenge, the context and the resources available?*
- *Have you co-designed schedules and organisational aspects to support group operation? Is everybody clear about timeline and next steps?*
- *How have you considered diverse learning and cultural perspectives?*
- *Have you made the place arrangements (physical or digital) to support the purpose of the meeting? Have you designed plenary and breakout group spaces to guarantee different types of communication and exchange?*

Participatory environment

- *Have you considered that opposing standpoints may arise?*
- *How can facilitators support an open and inclusive communication between participants?*
- *What are the strategy and practices to turn group conflicts into group creativity?*

GUIDING QUESTIONS

Outcomes and ownership

- *Have you designed activities for individual and targeted groups?*
- *Have you included exchange activities between groups and at plenary level?*
- *How have you planned to extract and communicate reflections and learnings?*
- *How have you agreed with your policy customer to structure the translation of co-created solutions into policy actions (e.g. feasibility, validation, implementation, evaluation). With which level of involvement of co-creators/participants?*

CHAPTER 4

The team, the close community and the broader community

This chapter deep-dives into the stakeholder management aspects of the policy co-creation process, describing the roles and diverse types of engagement between who is organising the CfP, who is participating in it and who is involved in a broader perspective.

Figure 8. The ecosystem of CfP actors

Source: own elaboration

Depending on the needs and the objectives that motivate a policy-driven co-creation process, three distinct but interrelated layers of stakeholders can be identified:

- The core team
- The close community
- The broader community

Each layer aggregates new participants and stakeholders. Some of these roles are mirrored in other layers (policy responsibilities rest with different people depending on the institutional framework, e.g. local policy officer and national policy officer), while others do not belong specifically to one or another layer of policy formulation by design (e.g. the media).

12. For an example of challenge-owner (or challenge-holder) guidelines, see Annex 10 of JRC's Innovation Camp Methodological Guidelines, available at https://publications.jrc.ec.europa.eu/repository/handle/JRC102130

The identification of synergies among stakeholders across layers, optimal knowledge management and efficient communication mechanisms may increase the optimisation of resources, policy convergence and increased positive results when implementing policy (Vivas et al., 2018).

The roles and functions of the core team involved in co-creation workshops are explained as follows:

4.1. Core team

4.1.1. CFP AND WORKSHOP CONVENERS

The CfP convener is typically a decision-maker who sponsors/chairs the co-creation process and takes responsibility over the feeding of process outcomes into decision-making. The workshop convener, in turn, is the main person responsible for the organisation of each co-creation workshop, a role usually performed by a key professional that has earned personal and expert credibility through a stable professional trajectory, often working in a public institution, without disregarding professionals from academia and the private sector who have the right networks and skills.

They coordinate the process regarding the following overarching aspects:

Goals setting	+ What the CfP is aimed to achieve
Contents	+ The specific societal challenge or subject to be addressed during the process + The transversal theme to be tackled across individual challenges
Stakeholder engagement strategies	+ To enhance stakeholders' involvement and interaction over time + To generate results and fulfil the objectives + To enhance knowledge transfer, circulation and communication + To enhance engagement with partners and sponsors

The workshop convener oversees the design and implementation of the co-creation process by following the principles and the Tuner elements (presented in Chapters 2 and 3, respectively), including agreements regarding agendas and dates for the event (or events), choosing location and generating a stable communication with the lead facilitator.

4.1.2. CHALLENGE OWNER

The challenge owner[12] is the person and/or organisation that faces, owns and selects (and therefore also takes responsibility for) an individual challenge to solve throughout the participatory process. The challenge is defined within the boundaries of the societal challenge or subject proposed by the conveners and aims to contribute to tackle a particular facet of

it. The challenge owner's priority is the very first formulation of the problem and hypothesising a resolution. They shall understand and present the following features:

The broad framework	+ Legal, administrative, organisational + Financial, economic, technical + Cultural, Political, Societal + Environmental and natural capital
Knowledge and abilities	+ Overall understanding of the challenge and its dimensions + Good understanding of the context and critical analysis + Deep knowledge about the ecosystem and the ability to link with it + Openness to consider disruptive solutions that go beyond the current framework

4.1.3. WORKSHOP ASSISTANT

Usually belonging to the challenge owner organisation, the workshop assistant is responsible for the overall logistics of the workshop. Thus they coordinate the preparations, organisation and running of the workshop (including work spaces and catering). This person has also the main responsibility of establishing a communication channel with the lead facilitator so the activity runs smoothly. The workshop assistant is a pivotal intermediary with the capacity to understand not only all dimensions of a policy-driven co-creation workshop, but also the roles developed by the other professionals in each of these dimensions. For instance, if the challenge owner is the city's mayor, the workshop manager assistant will probably be a technical civil servant from the Mayor's office.

4.1.4. TECHNICAL OFFICER

The technical officer belongs to the challenge owner's team and is a specialist on the topic at the core of the challenge that needs to be addressed. Hence, as the specialist, they are responsible for providing the necessary detailed and contextualised input on the specific topic. They contribute to the definition of the problem together with the challenge owner and the workshop convenor.

4.1.5. THEMATIC EXPERT

The thematic expert is the external expert on the challenge's topic. They do not belong to the same organisation as the challenge owner (e.g. they might be a consultant), nor are they formally related to the workshop convenor. Together with the workshop convenor and the challenge owner's technical officer they will contribute to the definition of the problem to be solved.

4.1.6. LEAD FACILITATOR

The lead facilitator is the main methodological expert of the co-creation workshop and guarantees the following of key quality principles. They have a proven experience in the facilitation of participatory processes, as well as a sufficient theoretical background in participatory methods. The lead facilitator applies the elements of the Tuner (presented in Chapter 3) to make sure the workshop's process, timing and objectives are met, and that participants have

a constructive interaction. We can compare this role to the conductor of an orchestra; they don't get caught up with facilitating any of the sub-working groups that may be arranged for the workshop. Their mission is, precisely, to coordinate and supervise the overall activity as well as to supervise and coordinate the work of the assistant facilitators (see below).

4.1.7. ASSISTANT FACILITATORS

On the one hand, the assistant facilitators manage the logistics for the co-creation workshop with the workshop assistant, hence they coordinate the preparations (focusing on both the available resources and the strategy to interact with the participants); very importantly, they also act as a guide in each sub-working group. The number of assistant facilitators has to be harmonised with the number of participants. For example, one assistant facilitator for every five participants can guarantee a high-quality interactive process. On the other hand, they follow the lead facilitator's indications on how to manage groups, timings and diverse settings. Likewise, they need to design and implement a very clear communication method among them to make sure they are able to solve potential problems (such as participants' lock-ins or complications understanding the visual tools), as well as back each other up: it must be a team, truly acting as a team, lending mutual support.

4.1.8. KNOWLEDGE MANAGERS

Knowledge managers are a team of professionals committed to compiling and organising all information and data inputs generated during the co-creation workshop. They are involved in setting up how information and data will be harvested so as to ensure the quality and alignment of outcomes. They then transform and translate the harvest into useful knowledge for decision-making in public policies. These inputs are essential to ensure the follow-up, scaling and sustainable implementation of the solutions. Hence, the team must ensure at least three profiles as follows: rapporteurs, able to contextualise and frame the inputs coming from the participants captured on a canvas, whiteboard, etc.; analysts, providing added value through the systematisation and synthesis of results; and finally, visualisers, whose task revolves around compressing the insights coming from the results and translating them into a universal and accessible format.

4.1.9. COMMUNICATION OFFICER

The communication office's role is to coordinate the communication of the results back to the challenge owner. This figure is crucial, as it is essential for the very first step of results delivery and therefore the beginning of a process of concretion and successful implementation of strategies and results. Ensuring clarity throughout this process contributes to maintaining the added value of the entire process.

While the abovementioned roles are many and diverse, suggesting the need of a complex organisation and investment level, when resources are scarce it is possible to assign more than one role to a single professional – provided that the roles' boundaries, as previously described, are respected.

It is of the utmost importance that the core team is well aware of and adheres to the principles described in Chapter 2 prior to engaging with the community layers that follow.

4.2. Close community and broad community

In the previous section the notions of 'close community' and of 'broad community' were introduced. These are secondary yet essential dimensions to the task and the output of the core team in participatory policy co-creation practices. A community is intended as a formed group of individuals with a shared interest, interacting in a common environment, which functions as a common denominator to establish a specific (innovation) ecosystem. Indeed, while those stakeholders within the core team will be the actual performers of the co-creation practice, actors that make up the local community and actors in the broad community shall be interpellated, involved and targeted by specialised and tailor-made conclusive messages (cf. Communication officer and Knowledge curator), embedding the five principles from Chapter 2.

4.2.1. CLOSE COMMUNITY

In our figure, stakeholders in the close community (blue area) are closest to the core team. Challenges brought in, discussed and addressed by the core team and their possible regulatory and policy solutions will likely affect the workings of businesses and business associations, and of citizen and civil society organisations. Indeed, in the case of a policy and regulatory evolution brought forward by the core team, these actors will have to adjust to the new regulatory playing field. Likewise, it is important to consider that the actors in the local community can also raise the challenge for the core team to address. On their side, universities and the research community are responsible for both integrating public sphere evolutions into their endeavours, as well as for bringing in scientific input to the core team's process and discussion. Media has the duty to spread policy evolution both to the general public as well as the specialised audiences affected by the new regulations. The local community is therefore the first interaction level of input-provision and impact-recipient for policy co-creation workshops and its composition needs to be clearly defined prior to the start of the participatory process. In the engagement of local community, the guiding principles of clarity of scope and purpose, the focus on outcome and transparency and ensuring inclusiveness and representativeness are crucial for the quality of outcomes.

4.2.2. BROADER COMMUNITY

As mentioned in Chapter 1, European policy development is framed within a multilevel governance system (local, national, regional, supranational) that demands swift coordination. Whether because public authorities, businesses, civil society organisations in any level often face similar real-world challenges, or because opportunities for collaboration, funding and resource optimisation are to be found at all levels, it is essential that actors and policymakers are connected, well organised and operational. Multi-stakeholder participatory practices such as the model offered in this handbook are optimal methodolo-

gies for identifying common ground, producing effective solutions and establishing efficient synergies. As broached above, it is relevant to know prior to the participatory process's implementation which is the broader community connected to policy outcomes and how the translated results will be shared.

What follows are some real-world illustrations of achievable synergies between the three levels in our stakeholder interaction model within the European context.

The three cases highlight:

- Set-up of the broad community at European scale to enable activation on local community level.
- Integration of different local communities in a broad community.
- Implementation of a cross-institutional policy co-design as part of an EU broad community engagement.

4.3. Examples of community building and ecosystem orchestration

Initiated by the European Parliament, the Joint Research Centre of the European Commission runs a programme called Science meets Regions aimed at promoting scientific, evidence-based policymaking and societally-led research agendas across European territories. In its first edition in 2019, a regional event was organised in every European member state. The selection process was competitive, and selected proposals submitted by regions and municipalities received a grant to run their desired event. Science meets Regions' call-for-proposals encouraged applicants to go beyond the traditional (i.e. seminars, symposiums, etc.) and propose co-creative activities like Innovation Camps (a typical CfP methodology). A higher-than-expected number of applicants reacted positively to this invitation, and six innovation camps were successfully organised that year, mobilising participants not only from local governments and academy but from the private sector and civil society too. This endeavour is an example of inclusiveness and representativeness (principle 3, explored in Chapter 3), as well as a systemic perspective (principle 5) brought on by the 'out-of-the-box' understanding of the issues at stake, as developed by participants, which allowed envisaging original, innovative options for science and policymaking collaboration in different "hot" domains: industrial circular economy in Asturias (Spain); clean air, sustainable mobility and innovation in Sofia (Bulgaria); urban renewal in Nijmegen (Netherlands) and Ghent (Belgium); healthcare provisions in rural areas in Saxony-Anhalt (Germany), immigrant integration in Catalonia (Spain); societal resilience in Bologna (Italy).

Co-creation in policy is also a key aspect of one of EIT KIC's core programmes. A concrete example is the Regional Innovation Scheme, which is the bridge between regional transition and spreading innovation excellence in Southern and Central Eastern Europe. Co-creation workshops have been largely used by one of the KICs, Climate-KIC, to engage policymakers and local stakeholders in the local communities, through the empowerment and

capacity building of satellite organisations called “Hubs” that serve as connectors between EIT KIC’s and the countries’ ecosystems, stimulating a culture of innovation on the ground. Throughout CfPs, those Hubs have mapped stakeholders and engagement, designed governance models and visions, and positioned themselves as drivers of innovation in the local context, exploring opportunities and blockages.

Another example of the role of co-creation and knowledge sharing for better policymaking is the foresight work performed by the JRC’s Competence Centre on Foresight on the future of customs in the EU. In this work, not only was an in-depth foresight exercise necessary, but a special effort had to be made to engage customs policymakers both in the EU institutions and across the EU. This required creating two strong overlapping communities: one involving all key relevant stakeholders to build a strong analytical and critical thinking capability in the core participatory foresight project; the other consisting in the community of customs policymakers across the EU. As the first community contained a contingent of customs policymakers, both communities were overlapping, which facilitated the transfer of the learnings from the foresight project into the policymaking community (Ghiran et al, 2020).

GUIDING QUESTIONS

Regarding team buidling

- *Have you clearly defined the needs and objectives of the co-creation process?*
- *Have you gone through the Tuner as described in Chapter 3?*
- *Have you designed the workshop's structure before assigning roles and responsibilities to the team?*
- *Have you clearly defined the roles of each member of the team during the workshop? Have you assessed whether you have enough capacity to cover all roles?*
- *Have you assigned responsibilities to each team member?*

Regarding community engagement

- *Have you ensured inclusiveness and diversity of perspectives is represented in the community?*
- *Have you ensured representation from both close and broader communities connected to the outcomes you aim to achieve?*
- *Have you engaged the relevant stakeholders from each community layer before starting the process?*
- *Is it clear to which layer you should assign the identified stakeholders?*
- *Have you identified relevant synergies among the stakeholders involved?*
- *Have you included the five principles from Chapter 2 in the engagement phase?*

CHAPTER 5

From co-creation to actionable knowledge

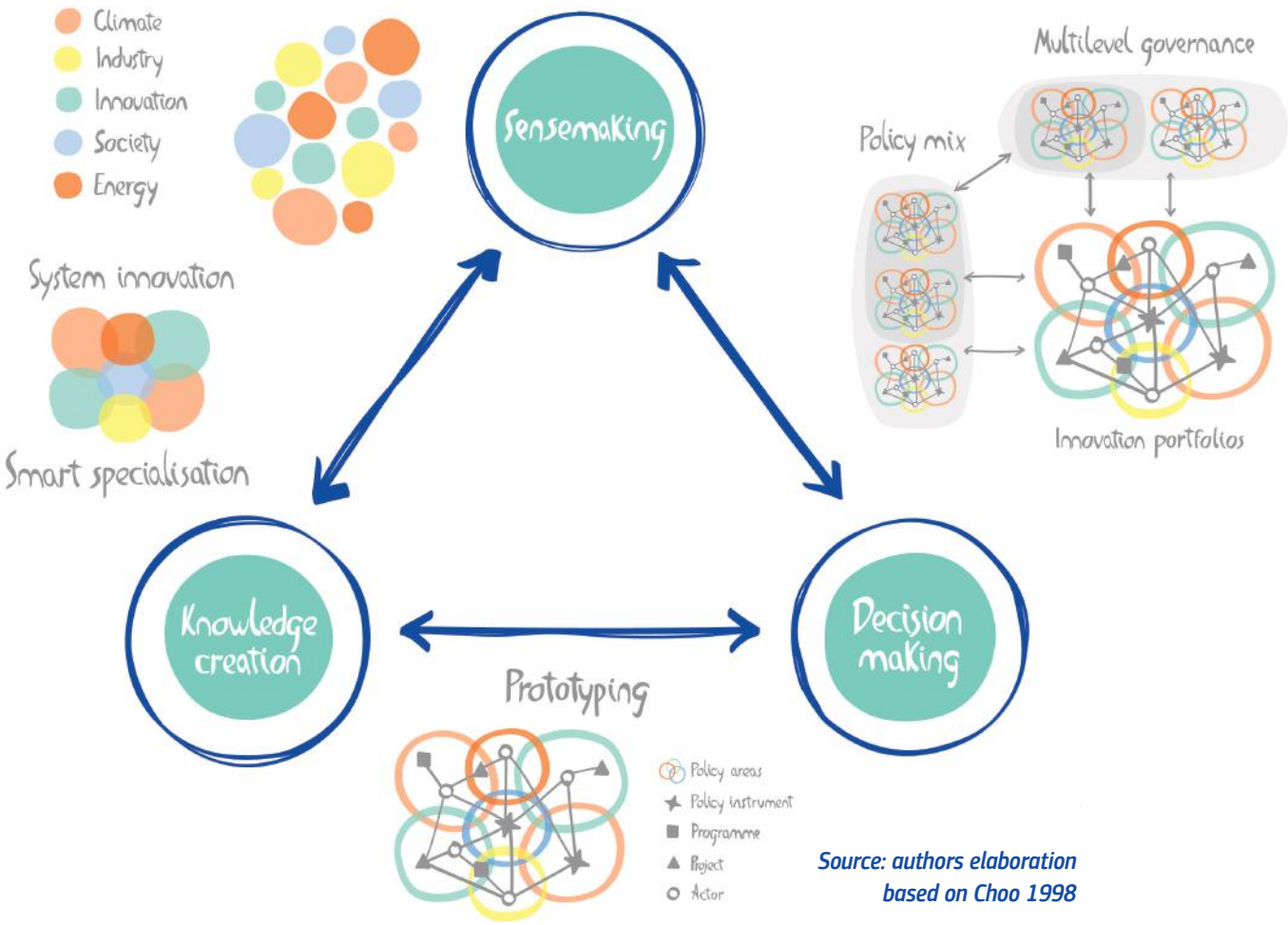
This chapter looks at the practises for managing the actionable knowledge produced during the participatory process to enable further interactions and exchanges to drive the policy process. It shows how processes such as sensemaking, knowledge co-creation and collective decision-making can be combined to generate new knowledge and evidence for informing the policy process.

5.1. Knowledge management for policy design

Chapter 1 introduced the logic of policy driven co-creation as an interactive cycle, Chapter 2 provided five principles to frame the overall process, Chapter 3 introduced “the Tuner”, a tool that sets key parameters to design a participatory process, and Chapter 4 illustrated the importance of an ecosystem approach including human resource aspects for co-creation processes. In this chapter, we highlight how to synthesise co-produced information into actionable knowledge, and we show how this can facilitate multi-stakeholders interactions across different stages and levels of the policy process.

Knowledge management should not be seen as the last step in the process but as a continuous activity that accompanies the different stages of the policy process while being maintained over time (Mair et al, 2019). Workshops are the core activity in participatory processes, but they also include executive meetings, preparations, implementations and follow-ups, as well as managing relationships with challenge owners and participants. The data collected is part of the knowledge management process, which is used to transform the results of the process into insights through continuous feedback and learning loops. In this respect, the collection of results from participatory processes can be explained through the lens of the continuous learning and adaptation cycle or "knowing cycle" (Choo 1998), which integrates three strategic information processes: sense-making, knowledge-building and decision-making.

Figure 9. Knowing cycle in policy co-creation processes



Source: authors elaboration based on Choo 1998

These three processes were briefly introduced in the previous chapter and will be presented as a walkthrough by highlighting practical aspects, following the key principles and dimensions of The Tuner (presented in Chapter 3), required inputs for implementation, as well as expected outputs and key resources. Each of the three processes can contribute to different stages of the policy process (see Chapter 1) while the whole knowing cycle is intrinsically connected to monitoring, evaluation and learning actions embedded in the policy process. Ultimately, each process informs the following one in terms of inputs needed. That is why the section below explains the implementation of the knowing cycle step by step, even if it is not a linear process and interconnections may occur over time and across different types of processes.

5.1.1. SENSEMAKING

Sensemaking is a process by which conversations take place to interpret and understand the overall challenge, the broad targeted system, the changing conditions and their meaning for the whole community. It can be implemented mostly at the early stages of co-creation process, contributing to the definition of the clarity of purpose and systemic perspective (principles 1 and 5 presented in Chapter 2) since it helps to define the variety of elements and topics around the challenge, the targeted system and its boundaries. In later stages, it also helps to address the integration of newly proposed actions and interventions as part of an evolving, collectively created narrative.

Sensemaking using the Tuner

Before	**Decision-making**		+ Sensemaking can be applied as an interactive practice for **expressing** individual views and **sharing** multiple perspectives and opinions. + It is relevant to define the **focus and scope** of the challenge to clarify the co-creation process is grounded in relation to existing policy processes.
	Information & consultation	Empowerment & cocreation	
	Choice of methods		+ Design thinking, foresight and futures literacy **tools** can be used for incorporating new participants' viewpoints, while developing a common understanding of the problems and the changes they are envisioning. + **Foresight** methods such as visioning and road-mapping can be fundamental to conducting successful transformation exercises while enhancing the understanding of systems and their dynamics.
	Flexible process	Predetermined process	
	Typology and expertise of participants		+ A **diverse stakeholders** setting helps participants discover how their perspectives and interests are interconnected.
	Low decision making	High decision making	
During	**Duration**		+ Sensemaking can be implemented through short sessions aimed at providing inspiration on the broad challenges and making sense of any situation demanding change.
	Short	Long	
	Use of Space		+ A **flexible setting** is recommended for presenting different results as part of a gallery or work-café format.
	Rigid	Flexible	
	Facilitation style		+ **Minimum facilitation** is required only to ensure that everyone has had the chance to present their ideas as part of an open discussion.
	Self-organizing	Directive	
After	**Stakeholder engagement**		+ **Several sessions** can be organised for any policy process, while early sessions help to create some shared meaning among participants, later sessions help to support decision making. + Participants may vary over time but group challenges in terms of thematic areas, geographical scope or specific topic should be maintained over time.
	One vent	Several events	
	Same participants	Different participants	
	Knowledge management and communication		+ **Feedback loops** over sessions facilitate the consolidation of shared meanings and the discovery of how their perspectives and interests are interconnected.
	Low quality & little communication	High quality & constant communication	
	Impact on Policy Making		+ Sensemaking should not focus on creating consensus but on developing a **shared language** for understanding the common problems and how activities and goals are related.
	Weak translation & adoption	Strong translation & adoption	

Foresight and futures literacy. *Foresight provides tools and methods to explore long-term futures and co-create evidence-based visions to help to build and use collective intelligence in a structured and systemic way to discuss, plan and decide on alternativecourses of action. Futures literacy is a community-based learning process aimed at exploring diverse perspectives on the future where different types of knowledge are applied to develop new shared meanings on alternative futures as part of sense-making processes. Futures literacy is considered as one of the key competences needed in EU policymaking identified by the European Commission's EU Policymaking Hub.*

5.1.2. KNOWLEDGE CO-CREATION

Knowledge co-creation allows a range of diverse stakeholders to engage in converting and combining different types of knowledge to address the main challenge. Knowledge co-creation enables practices on ideation and prototyping interventions to contribute to the exploration of possible futures (Principle 2: Focus on outcome) from different viewpoints and to jointly develop collectively created narratives (Principle 3: Inclusiveness & representativeness).

Co-creation and implementation processes enable and empower a broad set of actors to contribute to helping governments and societies jointly respond to emerging challenges. A non-conventional co-creative collaboration between practitioners and policymakers motivated by the societal challenge that must be resolved can boost the capacity to co-create, exchange knowledge and make it actionable.

Knowledge co-creation using the Tuner

Before	**Decision-making**		+ The **co-creation** process is one of learning by interacting, where multiple stakeholders use their experiences, information and knowledge to explore concrete opportunities around their challenges.
	Information & consultation	Empowerment & co-creation	
	Choice of methods		+ **Design thinking** encourages prototyping as a quick and inexpensive part of the creative process and not just as a means of validating interventions. + **Prototyping** is used for narrowing down and focusing on more practical implementation steps by analysing resource constraints and overall commitment.
	Flexible process	Predetermined process	
	Typology and expertise of participants		+ A **mixed setting** is required: while entrepreneurs learn by exploring the application of policy instruments, policymakers can learn from getting insights on the impact of proposed interventions.
	Low decision making	High decision making	
During	**Duration**		+ Knowledge co-creation through prototyping can be organized in **multiple short sessions**. Each session can be a quick, low-cost way to test an idea (or aspect of it) by creating an early sample or model and eliciting rapid feedback on it.
	Short	Long	
	Use of Space		+ Co-creation requires **space for idea generation, experimentation and interaction.** Open, configurable spaces like those used for the world café format and presentation settings like those used for elevator pitch contests can stimulate feedback loops.
	Rigid	Flexible	
	Facilitation style		+ Facilitation should evolve from **enabling a creative setting** to **brokering and fostering relations** along the process moving forward. While prototyping sessions tend to be more technical, inspirational and conceptual, co-creation entails managing teams and resources and making decisions based on actionable knowledge to reach an output.
	Self-organising	Directive	

After	**Stakeholder engagement**		+ Engagement among participants should **increase over time** along with the commitment to the prototyped actions. Series of events should evolve into **working groups and partnerships** for projects and joint actions. The knowledge flows, the stakeholders and the challenge owner are the fundamentals of continuum processes.
	One event	Several events	
	Same participants	Different participants	
	Knowledge management and communication		+ Stakeholders are engaged in interactive **storytelling** processes to negotiate priorities and what is meaningful for them to produce collective narratives. **Harvesting and communicating** those narratives needs to take place to consolidate ideas and increase commitment while reinforcing ownership among multiple stakeholders.
	Low quality & little communication	High quality & constant communication	
	Impact on Policy Making		+ Prototypes and collective narratives contribute to the **translation of current challenges and vision(s)** of the future into actionable knowledge. They **facilitate adoption through alignments** of challenges, interventions, interest and broad resources such as knowledge and funding as well as relations.
	Weak translation & adoption	Strong translation & adoption	

Storytelling and collective narratives. ***Storytelling is the practice by which the results of conversations among different actors are reshaped into a collective narrative aimed at presenting an innovative course of action and getting interest and support from others. It is a powerful practice to enable knowledge sharing and increasing understanding of diverse perspectives by increasing the application of ideas developed in a participatory process. Stories are complemented with other forms of evidence and data to inform the policy process with regard to different opportunities, perspectives and priorities.***

5.1.3. DECISION-MAKING

The decision-making process is facilitated by conversations based on new evidence that addresses key challenges and priorities. The evidence may also include potential actions and interventions developed through the co-creation process. The decision-making process can then be guided by discussing the synergies between the proposed interventions and the existing portfolio of projects, strategies and system resources. In this way, the evidence-based decision-making process helps in discussing alternative measures that aim to influence policy through multiple levers of change.

The co-creation process contributes to decision-making by facilitating conversations between challenge owners, beneficiaries of policy programmes, specialists and the community (high-quality tailored process) regarding the suggested interventions, by reconnecting them with resources and broad innovation portfolios (Principle 5: Systemic perspective) and potential impact pathways (Principle 2: Focus on outcomes & transparency). In doing so, it contributes to the design and adaptive implementation of multilevel governance policy mixes where multiple strategies and funding schemes such as Smart specialisation, Recovery Plans, Urban development strategies need be considered to achieve a systemic perspective on the targeted challenge.

Decision-making using the Tuner

Before	**Decision-making**	Information & consultation / Empowerment & co-creation	+ Participants are encouraged to take **ownership** of their narrative in terms of how the priorities and interventions discussed can have an Impact on policymaking. The stakeholder involvement over time becomes relevant in terms of the **commitment of the challenge owner** and other participants in follow-up actions.
	Choice of methods	Flexible process / Predetermined process	+ **Evidence and data** play an important role in illustrating resources and relations between policy frameworks as part of different policy mixes. + **Innovation portfolios** can provide a framework to transform rough preliminary ideas and prototypes into real investment opportunities by revealing potential synergies with the current and potential policy mix.
	Typology and expertise of participants	Low decision making / High decision making	+ Experts and experienced practitioners play a more important role in bringing the closeness to the context, the resources and the reality check.
During	**Duration**	Short / Long	+ A series of interactive sessions can be planned to work on matching the prototyped actions with existing portfolios and policy mix. + Short sessions can be used for consolidating commitments and empowering the participants to take ownership of the outcomes.
	Use of Space	Rigid / Flexible	+ Combined multilateral conversations and discussion panels where prototyped actions are confronted with the big picture can be organised as part of online meetings and more executive in-person discussions.
	Facilitation style	Self-organising / Directive	+ A more structured moderation is needed as the course of action is discussed in terms of timeline, responsibilities, resources and expected outcome.
After	**Stakeholder engagement**	One event / Several events Same participants / Different participants	+ Engagement and follow-up actions depend on the participants themselves and the outcomes and/or agreements made during the co-creation process. + Community building is an outcome of the iterative process that can promote working groups, new coalitions and partnerships to explore the potential of the prototyped interventions.
	Knowledge management and communication	Low quality & little communication / High quality & constant communication	+ Results from these discussions can be summarised in a format that is accessible to a broad audience, such as a policy briefing or pamphlet. These results can be shared with other regions and communities.
	Impact on Policy Making	Weak translation & adoption / Strong translation & adoption	+ Consensus on prototyped interventions can facilitate further actions in terms of synergies with broader innovation portfolios and policy mixes. Actionable knowledge can take the form of a variety of outputs. + The responsibility for any further actions shifts from stakeholders to policy-implementers who can take actions through which the intent of the policy can be fulfilled and translated into reality.

***Innovation portfolios** are dynamic, complex structures where projects, programmes and actions enable links with interconnected policies by creating new strategic relations among multiple sectors, locations and levels of government. A portfolio perspective can facilitate interactions between multiple actors to identify and create synergies between projects, programmes and multiple policy frameworks*

BOX 17 — Innovation portfolios

Find out more

- OECD (2021). Public Sector Innovation Facets. Innovation Portfolios. Observatory of Public Sector Innovation, OECD report. **Available Here**
- Alvial-Palavicino, C., Matti, C., & Witte, J. (2021). MOTION Handbook. Developing a transformative theory of change. Transformative Innovation Policy Consortium. **Available Here**
- Navigating from system mapping to innovation portfolios: a look at the transition to Circular Economy in the Western Balkans. An EIT Cross-KIC project. **Available Here**

5.2. Managing actionable knowledge for informing policy

The co-creation for policy process involves the exchange, combination and adaption of broad-ranging knowledge between different stakeholders, applied as part of flexible and dynamic settings (Topp et al, 2018). The elements of the Tuner help to explore alternative courses of action for a targeted challenge where actionable knowledge can be developed at different stages, from sensemaking and prototyping to more advanced conversation on priorities and decision-making. To this end, two main sets of practices can be highlighted:

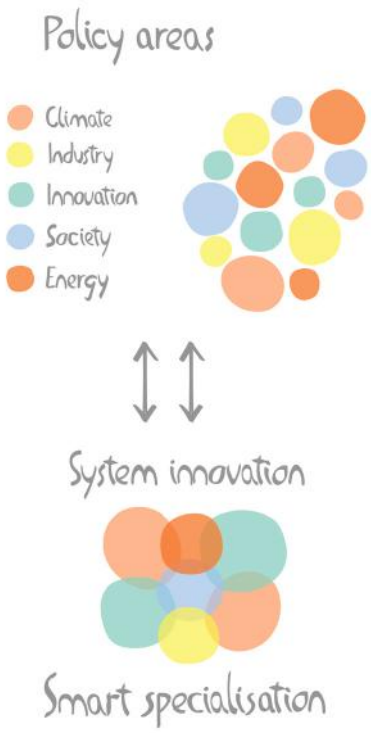
Harvesting and documentation. Starts from the design of the challenge and continues throughout the participatory process. It focuses on the management of information, and it compounds two interlinked actions, managing the information flow and reframing ideas as part of this continuous process. To do so, different narrative layers can be developed through short and compact information packs with materials ranging from factsheets and posters to more complex and detailed documents including webinars, online dashboards and reports.

Developing actionable knowledge. This focuses on the conceptualisation and analysis of the results of the co-creation process with the goal of highlighting the main patterns and achieving some level of synthesis. It can take the form of insights and prototype interventions that can be used to integrate proposals and drafts of action plans. They can also be available for use by other communities/working groups dealing with similar challenges. This task is intended to support the challenge owner and other stakeholders in takinge the proposed interventions, practices, actions or changes forward and facilitating decision-making at a particular point in the policy process.

Communication and knowledge flows are a critical input to facilitate the continuity and further development of the exchange of ideas. The figure below presents how these knowledge flows can take form in terms of the inputs and outputs related to the three strategic information processes of the knowing cycle: sensemaking, knowledge creation and decision making.

Actionable knowledge using the knowing cycle

Strategic information processes	Actionable knowledge
Sensemaking	**Inputs**

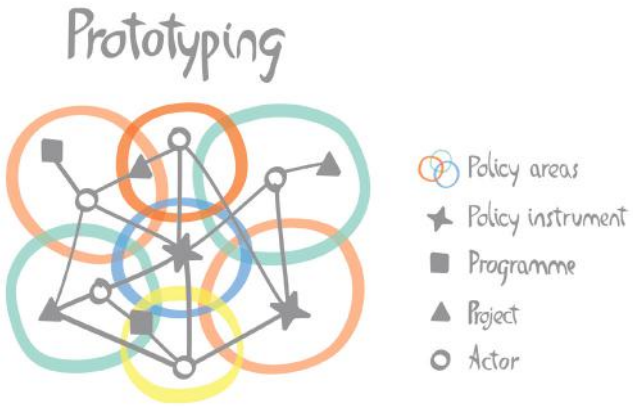


+ Existing information about the challenge and policy process (e.g., regional or thematic priorities) that can be guided by concepts and policy frameworks, for example, smart specialisation or mission-oriented policies
+ Data, evidence and cases that help to illustrate the challenge and the targeted system
+ The experience and knowledge of participants
+ Challenge briefing containing information on the case, project or targeted ecosystem

Outputs

+ New shared meanings developed through stakeholders' exchanges
+ Insight briefings including better defined challenges and system compositions within innovation processes by integrating shared meanings developed through sensemaking with framing concepts such as smart specialisation and systemic innovation

Strategic information processes	Actionable knowledge
Knowledge co-creation	**Inputs**



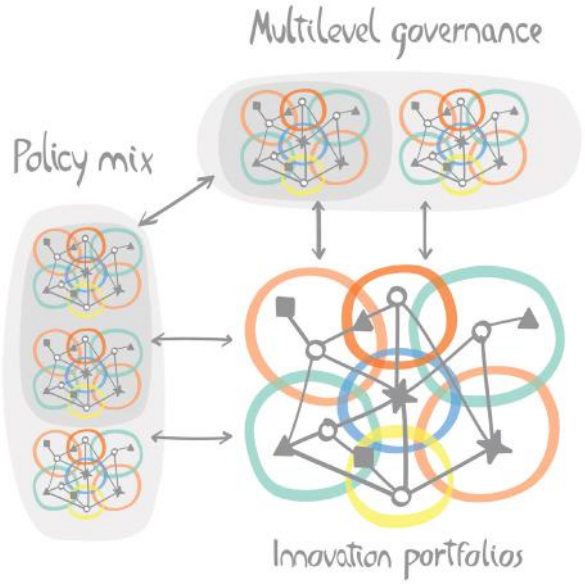
+ Shared meaning developed during the sensemaking process
+ External knowledge on the target challenge and system such as socio-economic and environmental statistics availability of resources and funding landscape
+ Key resources: tools and methods can facilitate the prototyping of actions through business models, governance models as well as financial engineering by combining public and private investment

Outputs

+ New collective narratives based on the systematic capture of ideas and knowledge exchange
+ Collection of early prototypes of potential interventions jointly designed during the co-creation process. They may take the form of new frameworks, changes in legislation, alternative resource allocation or more instrumental interventions such as tenders, as well as social innovation solutions

Strategic information processes	Actionable knowledge

Decision-making



Inputs

+ New evidence developed on the collective agreements and priorities materialise in proposed actions and early prototypes
+ Collective narrative illustrating potential development pathways and the likely impact of choices. At this stage the whole team needs to reinforce knowledge exchange as well as analytical and communicational efforts with the aim of moving forward to the identification of options

Outputs

+ Community-based alignments and consensus on specific priorities, strategic direction and potential coalitions addressing the targeted challenge
+ A set of prototyped actions discussed in terms of existing portfolios, financial resources and policy framework to be overseen by the challenge owner

Challenge briefing *contains a set of evidence including indicators, cases, examples and stories that helps participants to get easily involved in the discussion of the targeted challenge by setting the scene. This practice is essential at the early stage but can be applied throughout the process by contextualising updates of new developments in the broad context related to the challenge.*

Insight briefings *entail harvesting and documenting a large volume of ideas, priorities and other collectively created knowledge developed through each interaction (e.g., workshops, conversations, online meetings) with the purpose of capturing and distilling messages to be used as inputs for the next step in the co-creation process.*

Shared meanings *are developed as part of the participatory process through multiple exchanges of perspectives and viewpoints as well as negotiation of concept meanings. The harvesting and documenting result in a story, but it requires analytical and communicational efforts to make that story useful in building trust, supporting two-way communication and activating follow-up processes related to decision-making.*

These collections of elements are intended to guide operational knowledge management and communication activities during the process. Most important, however, is the team's effort and ability to effectively incorporate participants' perspectives, taking into account cultural and social aspects, as well as strengths, uncertainties and the diversity of viewpoints. A wide range of formats and resources can be used simultaneously to address different audiences and contexts in terms of complexity, interest and context of communication. These practices aim to facilitate the path to implementation and increase the chances of the proposed measures being applied as part of the policy process. This phase can include a structural component on community management to facilitate the understanding of innovation systems and in this way guide collaborative spaces and potential coalitions in creating their own connections with the broad system in terms of the existing innovation portfolio within a broad policy landscape at multiple levels.

GUIDING QUESTIONS

Sensemaking

- *What is the main challenge addressed? Who are the leaders, beneficiaries and main stakeholders?*
- *What does the targeted system look like? (e.g., components, processes, resources, multilevel, and cross-sectoral relations)*
- *What are the current processes and initiatives addressing the challenge?*

Knowledge co-creation focused on prototyping

- *WHAT. What is the action about? What does it achieve?*
- *WHY. What issues does it tackle? How does it contribute to addressing the main challenge? What are the main levers of change?*
- *HOW. What are the available resources? How will it be funded? How could new prototypes be related to initiatives included in the current portfolio?*
- *WHO. Who can be involved? What are the main roles and responsibilities?*
- *WHERE. Where can it be implemented? Which ecosystems are better candidates? Is it related to a value chain logic?*
- *WHEN. What are the possible timelines, support start time, market ready time?*

Decision-making

- *What are the proposed actions and interventions addressing the challenge?*
- *How is this portfolio of actions expected to impact the policy process? What are the relevant levers of change?*
- *Which are the synergies with existing portfolios of actions, policy frameworks and programmes?*
- *Which mechanism can be used to facilitate or enable those synergies?*

GUIDING QUESTIONS

Communication & dissemination

- *What kind of information and documents do you have about the overall challenge? What is the challenge owner's vision on the targeted system? How are you planning to introduce the challenge to the stakeholders?*
- *How is the policy co-creation process embedding in an ongoing policy process? Which kind of inputs are you expected to produce from the co-creation process?*
- *Have you selected tools and methods for the participatory process by considering the needs for harvesting and documentation? What are the relevant data and narratives to be gathered? NOTE: Think about the relation between the ´Choice of Methods´ (BEFORE) and ´Knowledge management and communication´ (AFTER) in the Tuning.*
- *How is your knowledge co-creation working in practice? What are the design elements to be considered?*
- *What are the potential formats of prototypes? How can you visualise those results for better communication?*
- *Which information should be shared to foster better community engagement? What is the role of the challenge owner as communicator?*

CHAPTER 6

Workshop examples

6.1. Innovation Camp: Bratislava, Slovakia (2016)

Objective(s)

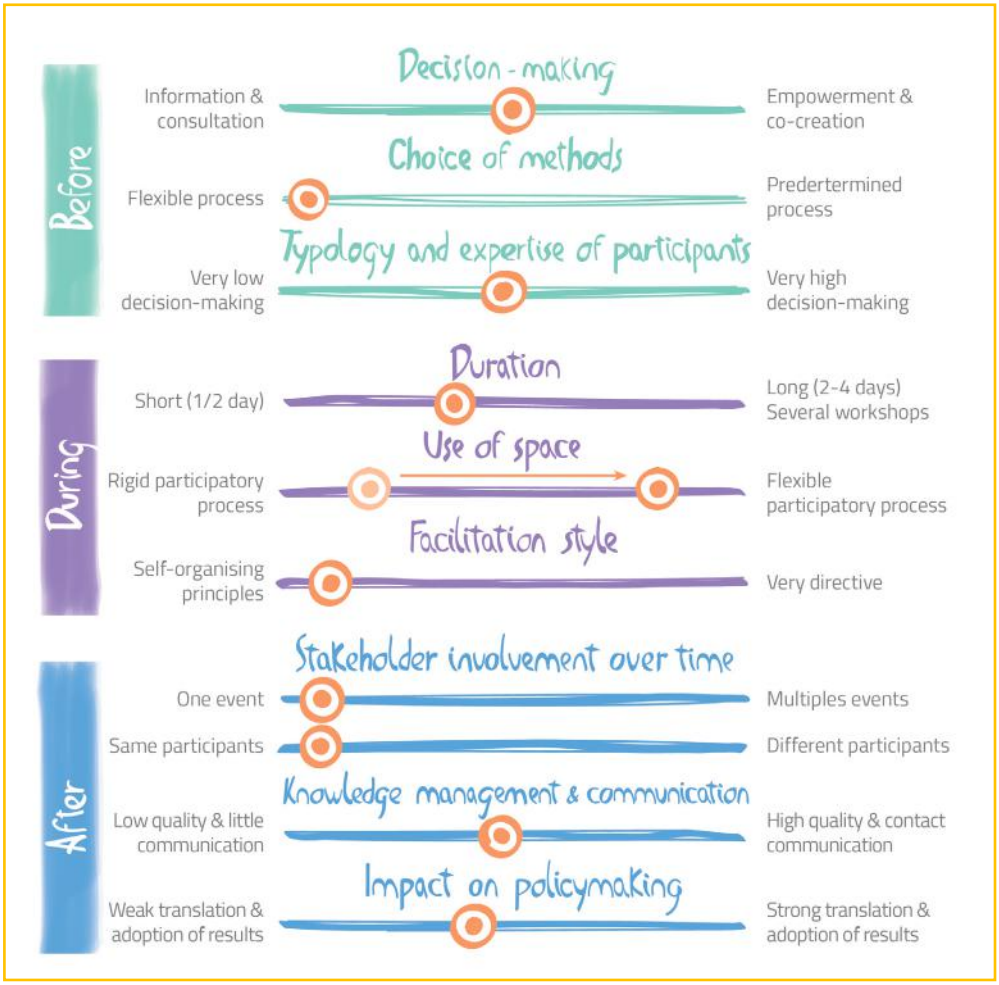
With the overarching goal of fostering connections and investment for a collaborative Europe, the Bratislava Innovation Camp addressed – among others – the specific theme of "Development Danube Innovation Hub"

Countries benefitting / Direct beneficiaries

Danube region stakeholders

Description of support and outputs

Approximately 50 people of 13 different nationalities took part in the Bratislava Innovation Camp. The participants gathered around four focus groups to discuss region-specific challenges.



JRC led the discussion on the challenge "Development Danube Innovation Hub", seeking the alignment of smart specialisation strategies across borders in the Danube region to achieve synergies and complementarities of R&I competences and to create sustainable transnational R&I networks, leading to new opportunities for entrepreneurial discoveries and better access to global value chains.

The event was supported by the Slovak Presidency, the European Committee of the Regions, the municipality of Bratislava and the Joint Research Centre.

Uptake/impact

The Danube region has great potential for collaboration in research and innovation. Smart specialisation has opened a new cross-cutting topic for the DR collaboration that provided the impetus to the new partnerships around similar or complementary smart specialisation priorities. To benefit from funding opportunities Danube stakeholders have to streamline their efforts and upgrade Danube regional and national and transnational networks of knowledge and expertise to establish a macro-regional level collaboration.

The stakeholders discussed the creation of the Danube Open Innovation Platform (DOIP) for research and innovation, which would be an open co-working space promoting transnational learning and joint initiatives among stakeholders of the involved regions and countries. DOIP could be a basis for the joint Danube ecosystem and would allow aligning RIS3 roadmaps based on local ecosystems. The platform will help to coordinate the ecosystems by identifying the common challenges, shared goals and collective ambitions.

Context/Comments

The output of the camp has provided a good input for the preparation of discussions at the annual forum of the EU Strategy for the Danube Region in Bratislava.

Methodology

The Smart Specialisation platform hosted by the JRC has piloted the methodology for regional innovation purposes, having organised or supported RIS3-related whole Camps or single Camp challenges for interregional cooperation, regional S3 implementation, resilient S3 governance in less developed regions, interregional and sectoral cooperation. JRC has also tested the methodology in other areas such as on the resilience of energy-critical infrastructure for European defence, on innovation in the financial sector and on the integration of refugees and migrants in local communities.

6.2. Innovation Camp: Asturias, Spain (2019)

Objective(s)

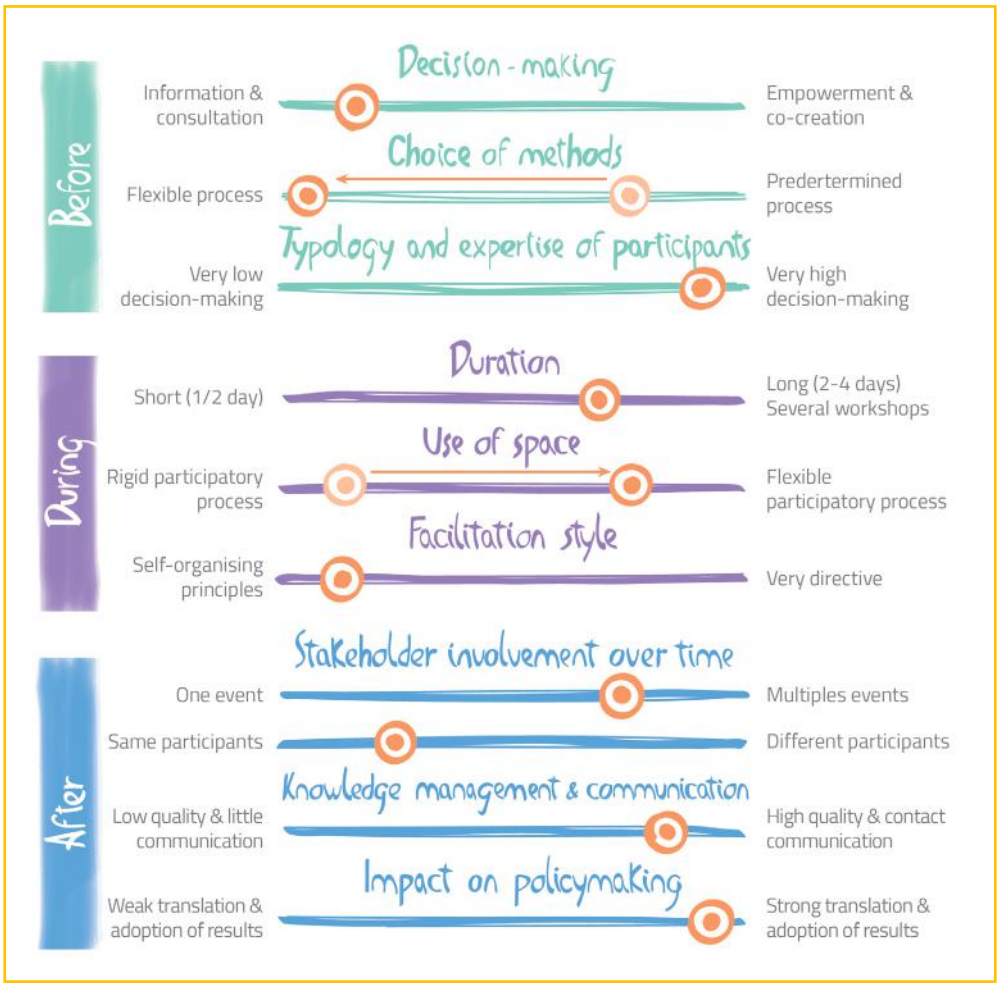
This camp was convened by IDEPA (the regional innovation agency) with the goal of tackling a key challenge for Asturias: how to reconcile tourism and industrial activities, which are two driving sectors for the regional economy. In particular, how to manage the waste produced by industrial activities in a way that does not harness the "natural paradise" Asturias claims to be in touristic promotion campaigns. The camp was intended to produce prototypes of policy actions and activate collaboration between key stakeholders.

Countries benefitting / Direct beneficiaries

Asturias region stakeholders

Description of support and outputs

This camp was funded with a grant from JRC's Science meets Regions programme in 2019. It brought together approximately 40 key stakeholders in Covadonga, an emblematic place in the mountains (Picos de Europa). Initially planned by the organisers as a combination of keynotes (by subject-matter experts) and workshops, it was reoriented into a proper innovation camp format thanks to the methodological support provided by JRC experts along the lines of this handbook. The tuner below provides an idea of its configuration, with blue arrows showing adjustments made during the planning phase.



Camp participants co-created critical outputs in just two days:

- New Vision: embrace the circular economy as a regional catalyser
- New Slogan: "Asturias Paradise Hub4Circularity"
- New Policy Agenda: articulated set of policy initiatives and funding schemes to be implemented under the leadership/coordination of the camp convener (i.e. the regional innovation agency)

Uptake/impact

The proposal of transforming Asturias into a "Circular Paradise Hub" was the main uptake, aimed at conciliating heavy industrial activities, technological and research capacities and the uniqueness of the region, 50% of which is covered by some kind of environmental protection. In addition, the sustainable nature of the circular economy is potentially capable of keeping populations in the region, thanks to its use of endogenous resources from the land. To get a solid social consensus, such an initiative would be supported by agreements among the concerned parties, with a governance model to be adjusted to the profile of the Hub.

The Circular Paradise was envisaged as a setting in which industry maintains its leadership through a high commitment to the area where it is located. Processing industry was identified as the start and end of waste. To facilitate the search for technological solutions and accelerate the transfer of technology to the market, a number of actions were proposed.

On the socio-economic front, the need was identified to advance toward a favourable legal framework that enables the development of business projects focused on recovering by-products and waste, in which public-private collaboration will play an important role. The importance of societal involvement was highlighted too, e.g. through a devoted platform, a shared motto and awareness-raising campaigns.

Policy reflections

This camp produced a particularly positive impact as bold policy action was undertaken by the camp convener and their partners. Its outcomes fed into the R&I Regional Agenda in Raw Materials and influenced the preparation of a regional inventory of R&D Infrastructures for Waste Recovery. With the purpose of being a pioneer in the creation of a Circularity Hub in Europe, the region joined SPIRE association and attended a meeting with the European Commission promoted by the former where the region presented the Asturias Circular Paradise idea. Also at European level, the region approved a pilot action to test an Integral Valorisation Circuit, a formula for the combined exploitation of public and private R&D infrastructures.

Methodology

Innovation camps, as described in the JRC methodological handbook. Two professional facilitators specialised in the methodology were employed.

6.3. Cross-KIC Climathon: Brussels (2017)

Objective(s)

The Climathon was originally conceived as a 24-hour hackathon bringing together citizens and professionals to create concrete solutions to solve a climate-change challenge. In 2017, the first Climathon was organised in Brussels together with InnoEnergy. The objective was to capture the potential of such a type of engagement in the capital of the European Union.

The city of Brussels enjoys the benefit of a vibrant community of citizens, including highly qualified human capital coming from all around Europe and beyond. The challenge of the first edition of the Brussels' Climathon focused on sustainable energy and energy efficiency in buildings.

The participants were asked to provide conceptual and technical solutions to encourage inhabitants to change their behaviour toward a more flexible and more efficient consumption pattern of energy in buildings.

Brussels was the perfect pilot for an exploration of the energy and climate-related aspects in the city in relation to buildings, as well as of the awareness, involvement and active role of citizens in its immediate environment.

Countries benefitting / Direct beneficiaries

Belgium, more specifically, Brussels' citizens
Energy efficiency associations
Participants

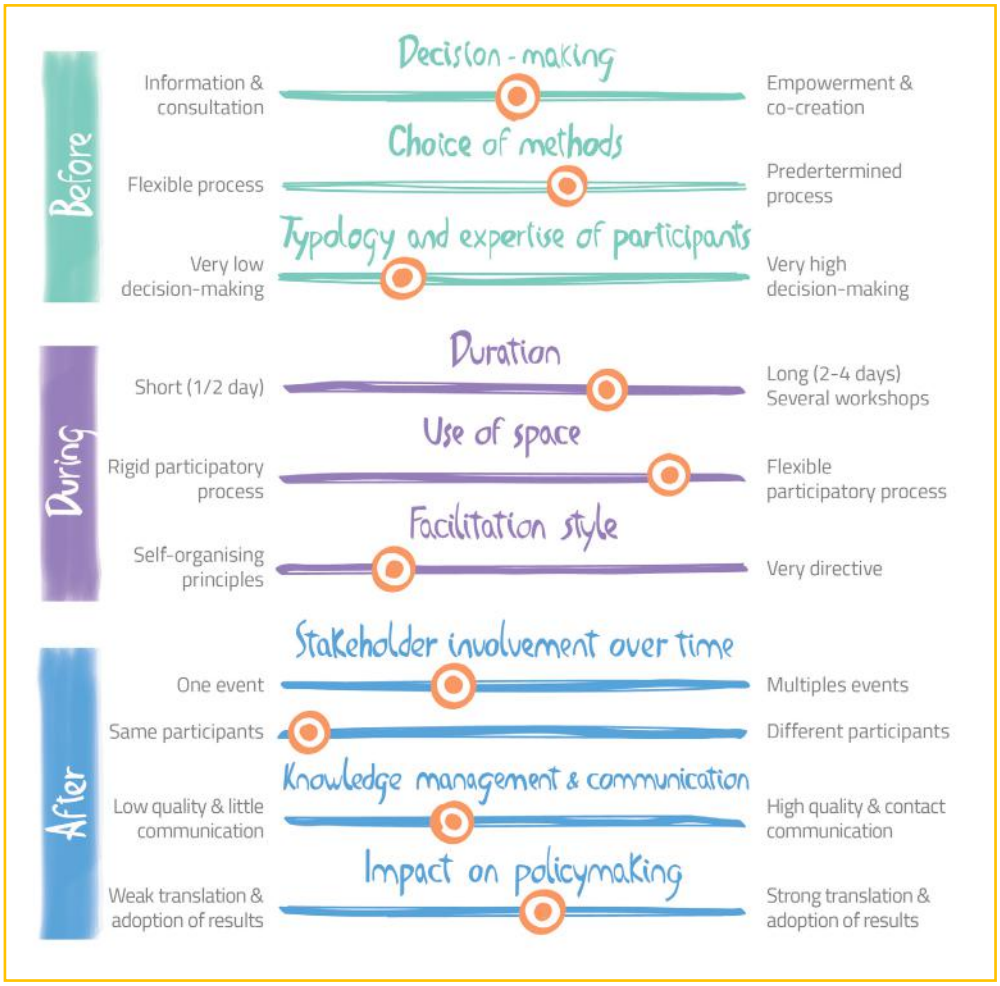
Description of support and outputs

Approximately 30 participants from across Europe and beyond took part in the Climathon. Most of them were university students from universities such as KU Leuven.

The participants gathered in groups and presented six innovation ideas in response to the challenge.

The jury was given the scoreboard from the Climathon website to score the ideas. After listening to the pitches, they went to a separated room to discuss their individual ratings. After more than 15 minutes of discussion, they consulted with the team if they could award the prize to two ideas given that they could not agree on just one. After an internal consultation, without knowing which ideas the jury was considering, the team agreed, and it was decided to give the digital course to the first winning team and

a one-day coaching session to both ideas: Energy Doctor and Flower Power.



Uptake/impact

The two winning teams were invited to a coaching session with InnoEnergy's Pierre Serkine and Joan-Marc Joval. The aim of the session was to work further on the business ideas and prepare them to be fit and accepted to be screened by InnoEnergy's Highway programme (www.innoenergy.com/bcs/innoenergy-highway/). The coaching session took place in January 2018.

The participants have pursued interesting career paths in the private and public sector. Some of them published their Climathon ideas in their professional profiles, and two of them pursued entrepreneurial paths with ideas connecting energy systems to citizens' behaviour.
https://powerblockeitinnoe.wixsite.com/website

Policy reflections

Involvement of the city council, why it went wrong

Methodology

Pentagonal Problem from the visual toolbox and the Business Model Canvas.

6.4. System mapping process: low carbon economy and RIS3 (2018)

Objective(s)

The EIT Climate-KIC, DG JRC, DG REGIO and the national and regional ESIF Managing Authorities (MAs) and bodies responsible for RIS3 implementation worked with common stakeholders from across the quadruple helix. This Stairway to Excellence (S2E) event was organised to explore the similarities of activities and target groups to bring together national and regional MAs with EIT Knowledge and Innovation Communities (KICs) to address a clear need to seek efficient collaboration between the national and regional MAs and partners of EIT Climate-KIC, including other actors responsible for RIS3. The joint event of S2E and EIT Climate-KIC was both novel and unique in bringing together those stakeholders.

Countries benefitting / Direct beneficiaries

Managing authorities, stakeholders and organisations from Slovenia, Portugal, Malta, Bulgaria, Cyprus, Italy and Spain

Description of support and outputs

- Alignment of priorities, stakeholder involvement and synergies
- Special emphasis needed: governance and management

Following this approach, some possible activities in the common agenda are:

- Bringing together both sides' stakeholders and encouraging them to undertake joint activities, including co-organisation of policy events and providing the groundwork for new projects.
- Complementary use of current information tools and enhancing dissemination of relevant information.
- Involvement of both communities in events, conferences, EDP, etc. with the emphasis on the participation of lagging countries and regions.
- Joint analytical work, papers, reports etc. in order to assist both sides' communities.

Dashboard: https://public.tableau.com/profile/th6094#!/vizhome/Slovenia_0/Story1

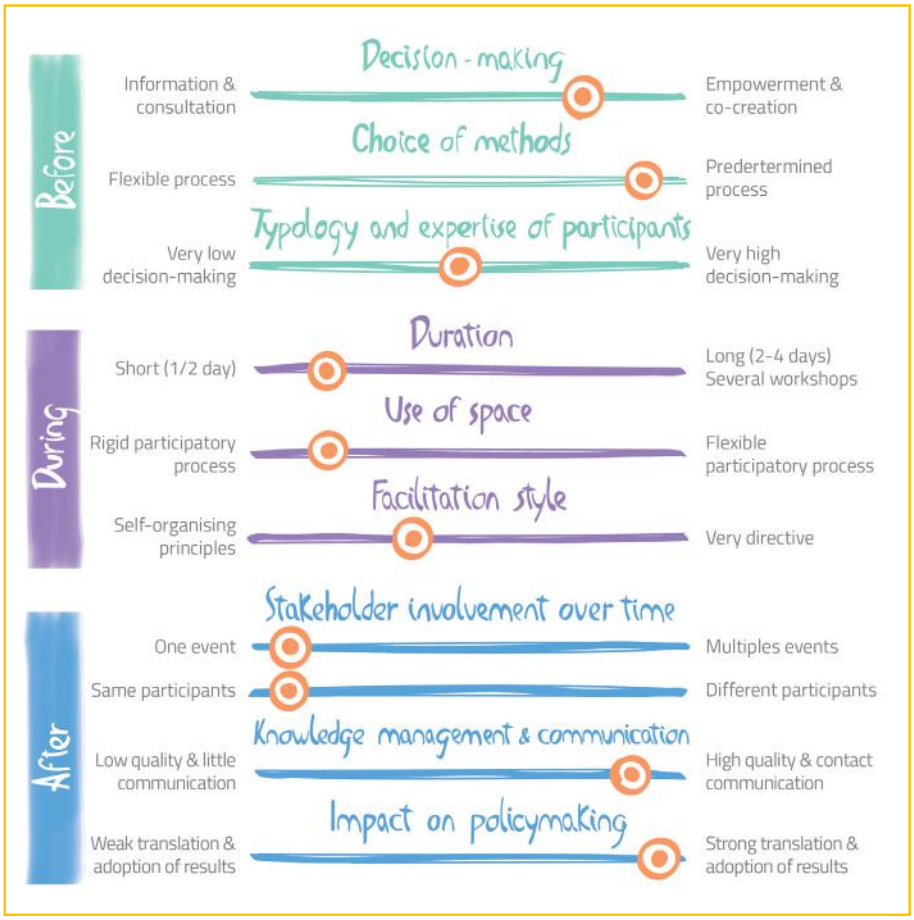
Uptake/impact

The systemic approach jointly developed during the event has strengthened the capacity of stakeholders to better understand the synergies between their activities, priorities and the overall EU policy framework on two fronts.

At the national level, the discussions and lessons learned laid the groundwork for the first inter-ministerial working groups. Countries such as Slovenia and Bulgaria received support from the EIT Climate-KIC Deep Demonstration programme to create an exper-

imental space for discussing systemic action portfolios for the transition to a circular economy. The Slovenian government is applying this approach in the current implementation of the Cohesion Policy 2021-2027.

At the supra-regional level, the discussion of the EIT RIS themes of the EIT Climate-KIC (climate adaptation, energy transition, cities with sustainable buildings and Industry 4.0) as top priorities for all MAs in their RIS3 has facilitated the further design and implementation of several cooperation projects, in particular Sustainable Historical Districts, Cities of the Future, System Mapping as a Service for Transitions, Circular Economy Beacons and Transform for Climate.



Policy reflections

There is a growing need for mediation activities that promote the exploration of synergies between cross-value chain, supranational and subnational investments as part of a complex policy mix of EU, national and regional instruments.

Emphasising the orchestration of ecosystems and related services to facilitate new experimental governance configurations is important to foster these synergies. Therefore, improving communication between these actors and aligning their activities can help foster regional capacities and create more opportunities for collaboration for each actor in the regional innovation ecosystem.

Methodology

The agenda of the event had three sessions. The third session was a participatory exercise based on an adapted version of the Ocean of Opportunities/Empty Spaces tool from the Visual toolbox for System Innovation that allows gathering, codification and analysis of results for further reporting and follow-up exchange with participants. The exercise was divided into two sessions. The first one identified ideas, initiatives and related stakeholders with an emphasis on the alignment of regional RIS3 priorities and EIT RIS themes. The second session followed the results of the first session with the focus on the relation between the identified projects, ideas or initiatives within the broader framework of the EU and the Climate-KIC.

6.5. System mapping process: circular economy in Bulgaria (2020)

Objective(s)

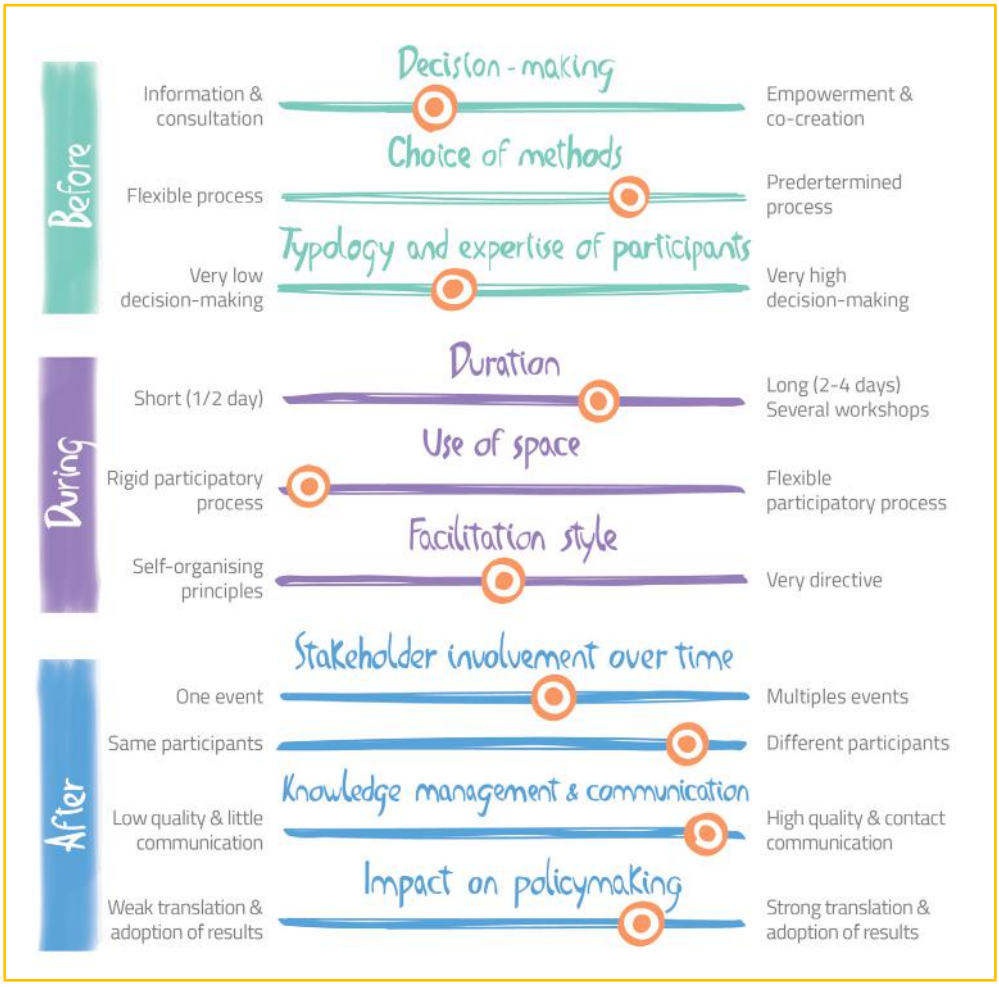
In collaboration with six Bulgarian ministries, the EIT Climate-KIC Deep Demonstration programme on circular and regenerative economy aims to co-create a vision of how the circular economy can be realised in Bulgaria across all policy domains in an integrated way.

Countries benefitting / Direct beneficiaries

Bulgaria

Description of support and outputs

During three focus group workshops, preceded by various stakeholder mapping exercises and system analyses that proposed relevant policy strategies and actions, regional value network maps were established. The focus groups were organised thematically, including the (recycling) industry, small-and-medium sized companies and start-ups.



In the context of this multi-ministerial innovation policy development for the regional transition toward a sustainable circular economy, value network maps allowed stakeholders to propose actions or improvements to a prepopulated map and to provide feedback about a more effective implementation of the actions presented on the map.

Uptake/impact

The facilitated conversation on governance structures, ecosystem relationships and resource flows allowed special attention to be paid to the mutual understanding of each other's needs for value creation, including on the part of entrepreneurs and governments in relation to each other and to the roles of all other stakeholders, such as users, financiers and waste managers.

The synthesis of the co-created network for circularity in Bulgaria during the workshop with the first focus group of recycling companies yielded the following insights, among others:

National government is given an important role, certainly in relation to the end-users. There can be a strong multi-directional bond between government, end-users and recycling companies.
The transaction considered by most to be deserving of attention was that between recycling and production companies.
In that transaction the financial sector can play an enabling role, since it is mutually connected to both parties.

Context/Comments

Mapping exercises might be simple or very complicated. There is no right or wrong way to put them to use, only better ways to build further with them on what stakeholders know and can do. This requires proper preparation beforehand and knowledge management after workshops. The focus groups were entirely implemented online as an adaptation to the conditions imposed by the COVID-19 pandemic.

Policy reflections

Mapping exercises are particularly useful in settings where conventional structures can no longer be relied on. By making explicit the current roles and relations within a system, they allow the questioning of both the system's components and its organisation, and so help people to reorganise themselves sustainably.

Methodology

Value network mapping helps in getting a grip on systems by mapping how values connect. From that mapping, one can identify intervention points that make sustainability transitions happen. It supports the iterative analysis and redesign of the structures around us in a visual way.

6.6. Roadmap co-creation: supporting traw material transitions for Africa and Europe (2019)

Objective(s)

This activity was part of the EIT Raw Material project WinSmartRM. It was aimed at promoting multi-stakeholder cooperation to support the creation of win-win situations for Africa and Europe where both can successfully contribute to a sustainable mobility transition in line with global directives.*

Generating intelligence, data and information related to the framework conditions in the EU and Africa to boost collaborative innovations between stakeholders from the knowledge triangle, relevant to the recent and future mobility transition trends.

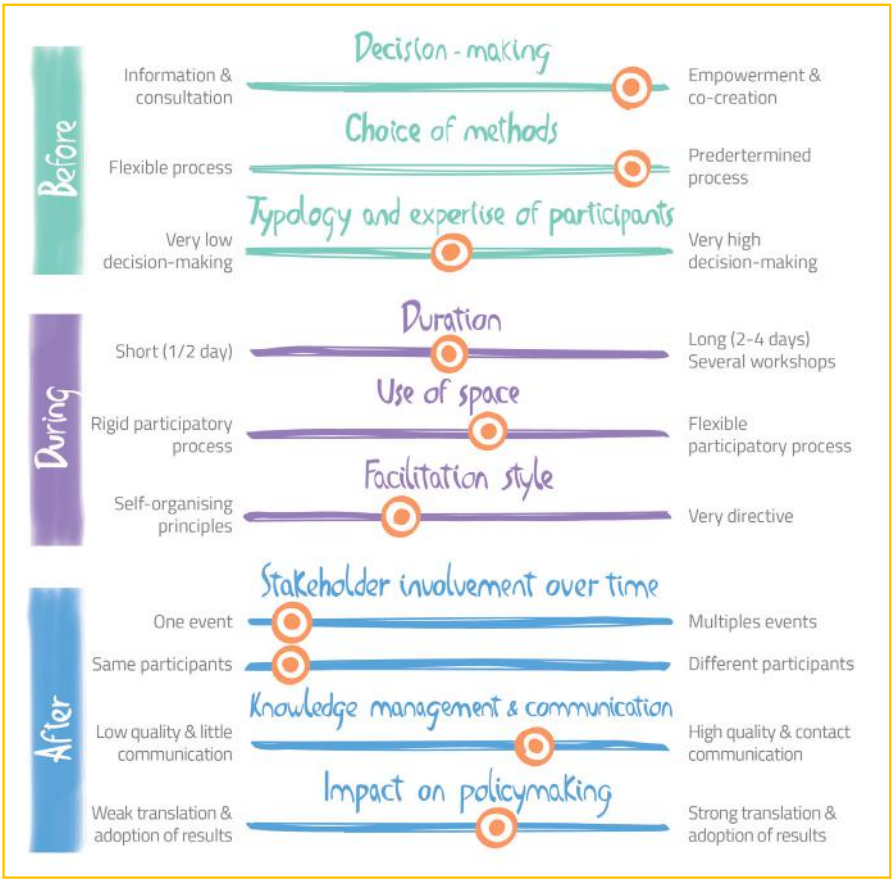
Identifying the main conditions for and barriers to business and social innovations in the context of the mobility transition for EU and Africa. Co-developing a roadmap to support the mobility transitions with regard to raw materials.

* Such as the Sustainable Development Goals, the Minamata Convention on Mercury, the Paris Climate Agreement, among others, and in particular with the E Communication on A Clean Planet for All – A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy.

Countries benefitting / Direct beneficiaries

South Africa, Finland, Ireland, Spain, Belgium, Germany, Sweden, Estonia, local universities, local businesses, local policy-designers.

Description of support and outputs



Two-day workshop

+ Participants: around 20 participants from business (large and SMEs), academia, research and policy-designers from the government sector gathered to diagnose challenges, identify strengths and build a roadmap for collaboration in areas relative to raw materials within the context of the mobility transition.
+ Outcome: A 3-lane roadmap for the next 10, 20 and 30 years was built, based on a set of priorities identified by the participants.

Uptake/impact

- Further opportunities in the battery sector.
- Further integration opportunities for the African region in specific value chains.

The engagement of several sectors in a horizontal and open conversation that led to creatively formulating strategies for mutual benefit had a positive impact in nurturing future collaborative relations.

Methodology policy reflections

The workshop placed social values first and foremost in the discussion, which was highlighted and welcomed by all participants. As these aspects are traditionally difficult to incorporate into technical projects, an initial feeling of overwhelm linked to social aspects activities in extractive industries was progressively replaced by optimistic views and creativity facilitated by the methodologies used. These methodologies are powerful tools enabling participants to depict concrete approaches in complex systems and transitions. In particular, they enable a comfortable integration of social and technical requirements in multi-stakeholder activities.

Methodology

Pentagonal problem, six systemic strengths and sociotechnical roadmap (from Visual Toolbox for System Innovation).

6.7. Policy vision and roadmap co-creation: bringing the EU Customs Union to the next level (2019-2020)

Objective(s)

- Generate strategic intelligence for EU policy-making in the domain of customs in the European Union, including foresight scenarios.
- Create a shared and strategic understanding among key stakeholders of ways to deal with current and future challenges for customs.
- Build a tool to help relevant actors and stakeholders of EU Customs engage with the foresight scenarios developed by this project.
- Generate a shared vision for customs in the European Union in 2040.

Countries benefitting

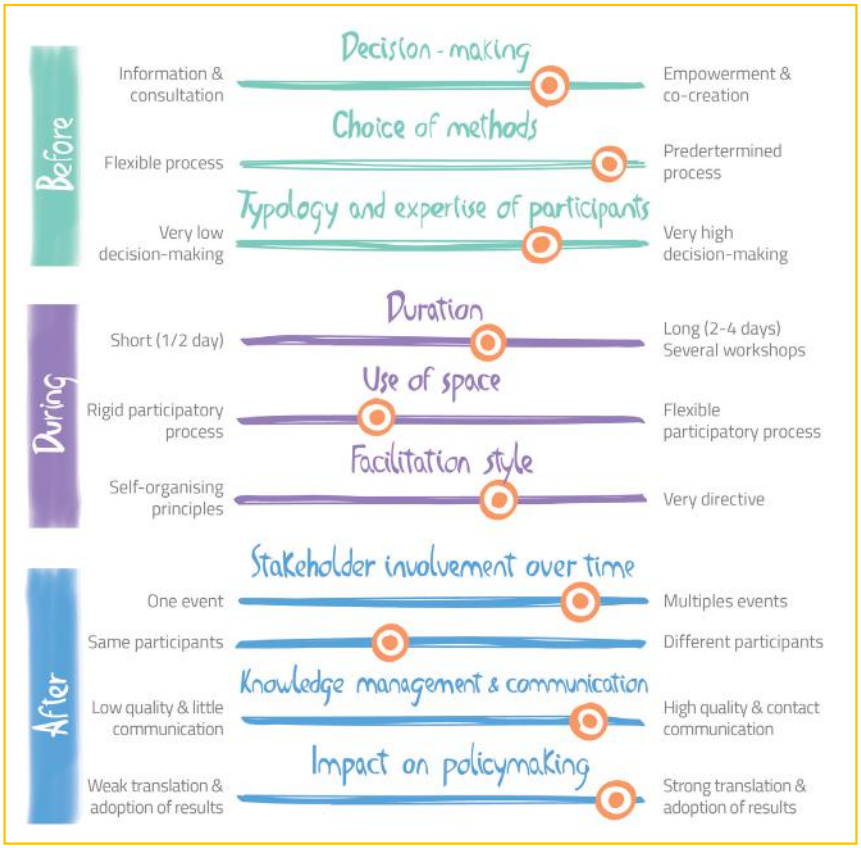
The EU and its member states

Direct beneficiaries

EC DG TAXUD and customs stakeholders

Description of support and outputs

An 18-month project based on a series of policy-driven co-creation workshops.



- Participants: around 50 expert participants from business, import/export, academia, international organisations, EU member states customs services, various Commission services and EU trade partner countries. In some phases of the project, representatives from member states (up to 80 customs policy officials).
- Output: a set of scenarios on the future of customs in the EU, a "customs edition" of the scenario exploration system, a vision for the future of customs in the EU, two possible roadmaps toward achieving the vision and a foresight toolbox.

+ Outcomes: a solid EU community of understanding on the future of customs, a framing vision for the 2020 update of the EU Customs Union Action Plan, a strengthened relationship among stakeholders and increased foresight literacy among customs professionals

Uptake/impact

The project has had multiple impacts. The engagement of all key stakeholders simultaneously in a horizontal and open conversation has led to the construction of a solid EU community of understanding on the future of customs. This has also strengthened the relationship among stakeholders and increased foresight literacy among customs professionals. The project has also produced a framing vision for future EU customs policy that was used already for the 2020 update of the EU Customs Union Action Plan.

Policy reflections

This highly participatory project, built around a series of participatory workshops alternating engagement with stakeholders and engagement with policymakers (the “users”), has changed the traditional dynamics in customs policymaking. Not only have stakeholders had an opportunity to get to know each other better, but the process has also made it possible to table taboo issues, allowing policy makers across EU member states to map the various "policy camps". It has also shown to the Commission how it is possible to engage constructively with all stakeholders simultaneously.

Methodologies

Scoping exercises, Delphi survey, scenario building, scenario exploration, vision building and roadmapping.

6.8. Visioning and prototyping: bringing new visions on green finance for cities (2017)

Objective(s)

The Climate Mitigation Fund 2.0 (CMF 2.0) is an EIT Climate-KIC project that brought together universities, local agencies and local authorities from the cities of Bologna and Frankfurt am Main with the aim of developing a fund structure that allows funding of income-generating and non-income-generating projects to boost carbon mitigation and climate adaptation actions substantially. Furthermore, tailoring the fund framework to the local ecosystem paves the way for a robust financial instrument with high and sustained adoption within the local governance system.

More specifically, the co-creation actions were supporting two objectives:

+ Generate shared visions for city greening
+ Help stakeholders understand how best to achieve these visions

Countries benefitting

EU member states

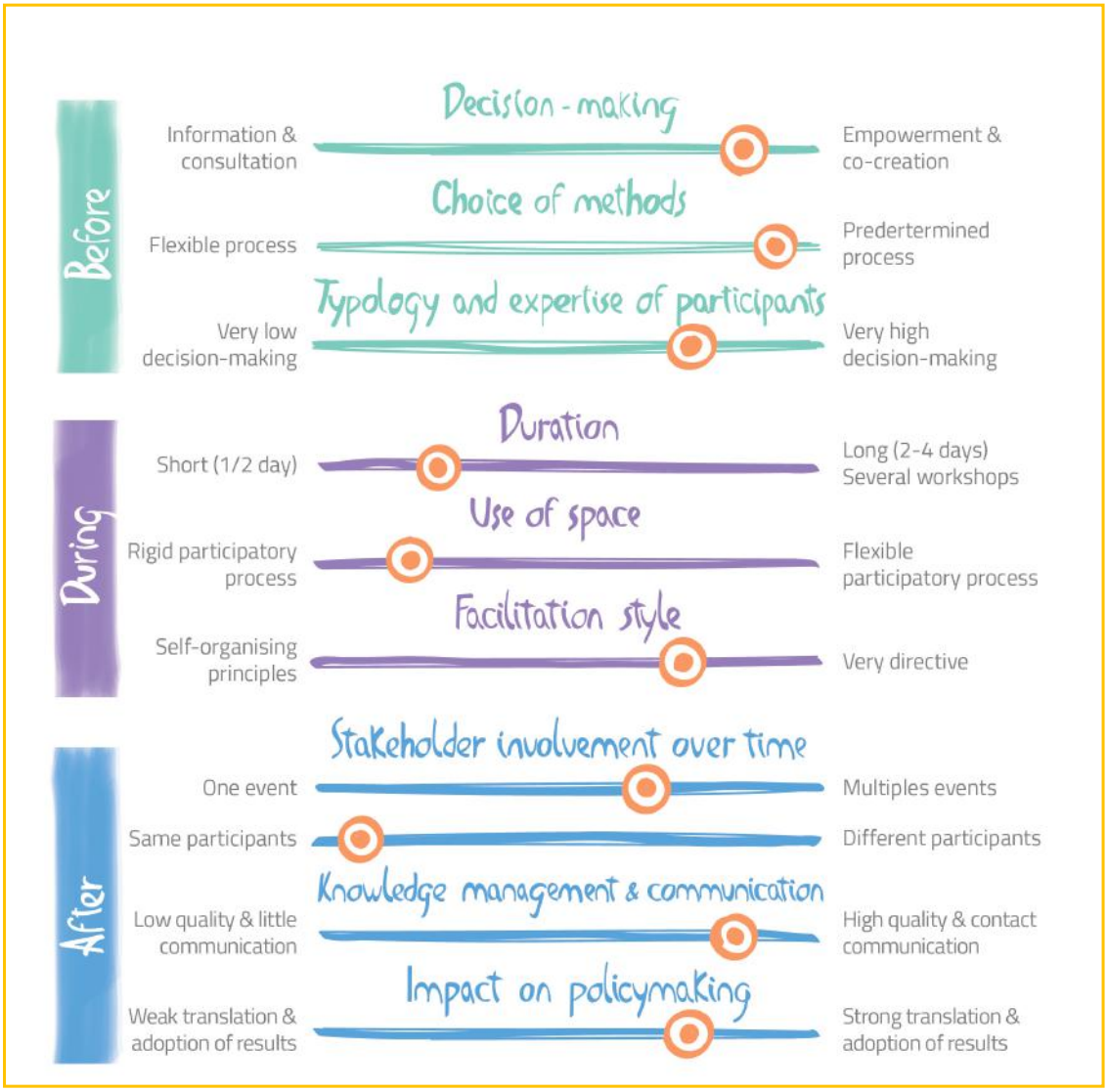
Direct beneficiaries

European cities and in particular Bologna and Frankfurt

Description of support and outputs

Two policy-driven co-creation workshops to help green Bologna and Frankfurt

+ Participants: around ten participants in each city: mostly representatives from development agencies, municipal services and communities/citizens.
+ Output: two bespoke "editions" of the Scenario Exploration System, using the vision for greening generated for each city.
+ Outcomes: empowered local stakeholders with a deeper understanding of the issues and their dynamics. Valuable lessons about the strength and versatility of participatory approaches and their ability to adapt to specific circumstances in real time.



Uptake/impact

The project has helped the relevant stakeholders develop concrete ideas about different ways to green their respective cities. This approach to engagement has also helped people understand the dynamics between the different stakeholders that could help or hamper the transition.

Policy reflections

In this project, not only have stakeholders had an opportunity to get to know each other better and gained a shared understanding of issues, but the process discussed very concrete local issues from a dynamic, long-term perspective.

Methodologies

Vision building and roadmapping from Visual Toolbox of System Innovation, Scenario Exploration System.

Glossary

Term	Description
Challenge owner	Organisation or person that selects – and takes responsibility for – he challenge(s) of the event.
Co-creation workshop	Participatory exercise in a concrete timeframe around a common vision to address together a complex issue (societal challenge) through dialogue, visualisation, exchange of ideas, mutual learning, trust, motivation and change.
Entrepreneurial Discovery Process	The Entrepreneurial Discovery Process (EDP) is an inclusive and interactive bottom-up process in which participants from different environments discover and produce information about potential new activities, identifying potential opportunities that emerge through this interaction, while policymakers assess outcomes and ways to facilitate the realisation of this potential.
Facilitator	Main methodological expert of the co-creation workshop. The facilitator makes sure the workshop's process, timing and objectives are met, and that participants have a constructive interaction.
Knowledge management	Process of managing, analysing and translating the knowledge contributed by the participating experts to obtain a product that is useful in public policy decision making.
Co-creation for policy process (CfP)	CfPs are innovation-led territorial participatory processes of problem solving led/chaired/hosted by policymakers, with the active engagement of key stakeholders, that apply self-organisation and design-thinking principles to tackle societally-relevant challenges, by the activation of the Quadruple Helix actors, toward the co-creation and prototyping of actionable solutions.
Prototype	A prototype is a mock-up version of a project, model, strategy or policy that is still open to further improvements and adaptations.
Quadruple Helix	Quadruple Helix (4H) gathers representatives from industry, academia, governmental bodies and civil society.
Smart Specialisation (S3)	Smart Specialisation defines a process of diversification of regional resources and competences in a certain number of economic domains that represent possible paths for transformation of productive structures (Foray, 2014).
S4	Sustainable Smart Specialisation Strategies.

Societal challenge	Problem involving one or several public policies involving the quadruple helix stakeholders of industry, academia, governmental institutions and civil society of a specific territory (e.g. city, region, country).
System innovation	System innovation can be understood as the transition from one configuration of a sociotechnical system to a new one, in which the system remains able to deliver its key functions but in a different way.
Tuner	Self-assessment checklist for the design of a policy co-creation process. Each criterion can be tuned on a scale where each dimension affects the others in a systemic way. The tuning tool has to be interpreted within the context and purpose of the policy co-creation process. The choice of these dimensions and variables arises from years of experience and practice and help to define necessary preconditions to make the right choices when shaping a policy-driven co-design process.

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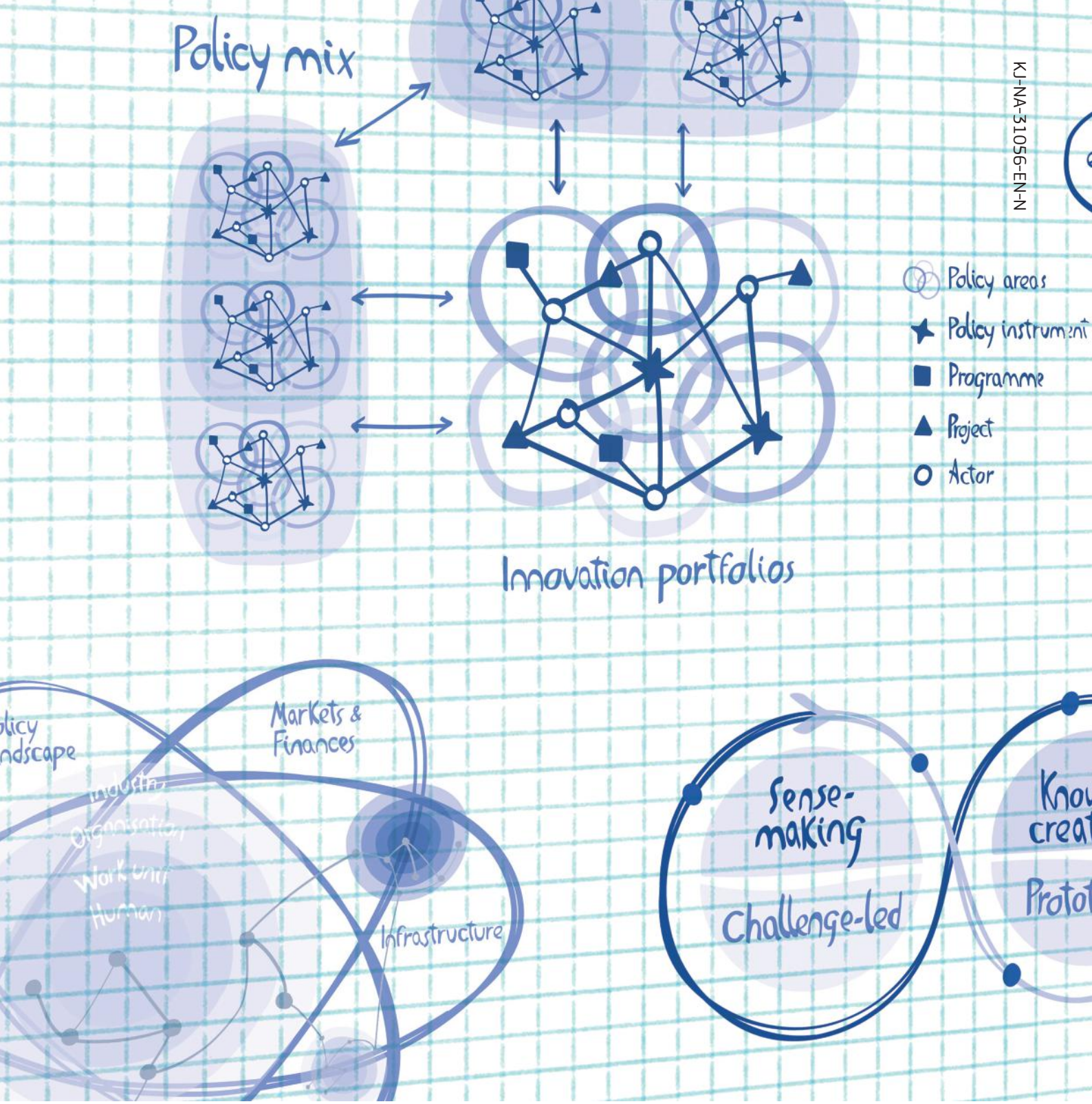

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