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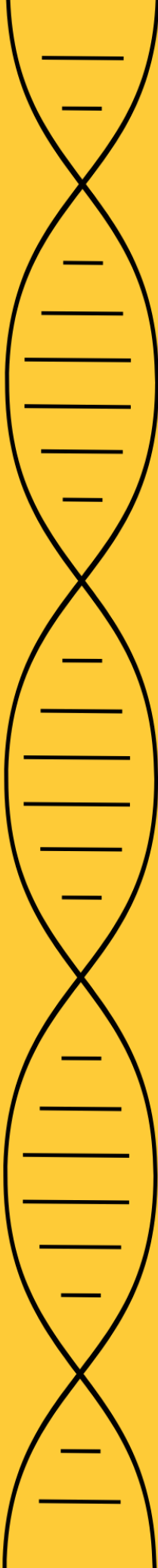
MANUAL for a CO-CREATION PROGRAMME

Policy and funding version:

Guiding and finetuning regulatory set-up linked to innovations , including inclusive and holistic decision making over funding and subsidies



A co-creation programme for meaningful stakeholder involvement

To give directions to the development, regulation and implementation of new technologies

Innovations like new technologies can be disruptive and have a whole range of consequences, negative (risks) as well as positive (benefits), or neutral changes. They can change the world in ways that are sometimes hard to predict, but especially negative consequences must be anticipated and mitigated as much as possible.

The development, implementation and regulation of new technologies, including a broad assessment of the consequences, thus needs an inclusive process that involves all relevant stakeholders – ranging from those responsible for regulation, production and implementation as well as those expected to make use of the results and those speaking for the effects on environment or social structures.

This inclusive approach has taken the form of a co-creation programme, and can enable policy makers, researchers and industries to make legislative and application-oriented choices that are relevant, feasible and acceptable for the majority of those involved.

Its main objectives are to pinpoint the hurdles and cues for acceptance and uptake, and find solutions with regulatory interventions, communication strategies, targeted financing of research, practical developments and guidelines, conditions for implementation, etc.

CO-CREATION PROGRAMME IN FOUR PHASES

1. Explore

- ✖ Map consequences and alternatives
- ✖ Map stakeholders
- ✖ Evaluate consequences per stakeholder

2. Involve

- ✖ Prioritise stakeholders for involvement
- ✖ Involvement strategy
- ✖ Roll-out

3. Assess

- ✖ Identify hurdles, cues & potential
- ✖ Validate
- ✖ Prioritise

4. Co-design

- ✖ Find solutions, improvements & mitigation strategies
- ✖ Validate

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Toolbox added to the manual

The manual describes the different steps in more detail and indicates what results to expect in each step. It also highlights the key points for each step, as well as tips and tricks for each step. Accompanied with the manual you can also find a toolbox, which contains more practical tools and step-by-step walkthroughs of certain parts of the programme.

The toolbox contains:

1. Explore

2. Involve

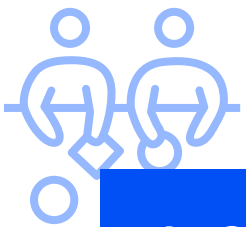
Consequences mapping tool

Stakeholder mapping tool

Co-creation toolbox

Communication & recruitment toolbox

3. Assess



4. Co-design

Co-design toolbox

Guiding and finetuning regulatory set-up linked to innovations , including inclusive and holistic decision making over funding and subsidies

This application of the programme aligns with the guidelines for better regulation, formulated by the European Commission in 2021, and supported by a toolbox that was updated in 2025.

While not a replacement for the 'Better regulation toolbox', the programme does provide a concrete and practical approach to guide certain regulatory changes and decisions, especially on how to approach stakeholder involvement. In this context, specifically for legislations that are not directly targeted at the innovations themselves, but will influence the development and uptake of new innovations nonetheless, such as regulations on labelling and transparency, a framework on regulatory sandboxes or even regulations on intellectual property. It also provides an inclusive and systemic framework to approach decisions on funding and subsidies, to support sustainable innovation while avoiding counterproductive fundings and subsidies and unwanted side effects.

Expected outcomes

- ✖ A clearer view of the consequences of regulatory or funding decisions and changes, and which stakeholders are affected by it.
- ✖ Detection of difficult practical implications, unwanted side effects and loopholes.
- ✖ Alternative solutions that avoid these negative consequences and regulations and funding systems that better fit with the real world.

Main pitfalls and attention points

- ✖ Objectivity: Challenging sacred cows or receiving feedback on a proposal that took many hours to set out can be confrontational, and remaining objective in this context can be difficult. Involve a neutral party that can openly and objectively capture and convey the message.
- ✖ Open-mindedness: As an expert, it can be hard to think beyond the current (legal and subsidy) systems in place, and even beyond ingrained habits. Involve partners that are experienced in differential thinking.
- ✖ Openness and flexibility: When stakeholders are engaged to guide the set-up or revision of regulatory and subsidy systems, there must be the openness and possibility to include their input in the resulting decisions. Otherwise, the process is of little relevance and could lead to the erosion of the principle of stakeholder engagement.
- ✖ Access to stakeholders: Many stakeholder groups are not part of the policy makers' usual network, and engaging a diverse and representative sample may prove difficult. Collaborate or contract networks and partners that have sufficient access to these stakeholder groups.

Before starting

Before launching the trajectory of the programme, the organising team should confirm five things:

Case
What policy or funding question is being discussed?

Room for influence
What can still change as a result of the trajectory, and what is already fixed?

Ownership
Who is responsible for organising the trajectory, synthesising the results, and converting them into action?

Central question
What must the trajectory help decide, improve, validate, or redesign?

Decision context
Who will use the results afterwards and for which decision or next step?

Without these elements, stakeholder engagement risks producing interesting conversations but not usable results.

The concrete output of this start-up step is a short case brief, an agreed trajectory objective, and a named owner for follow-up.

Note about time and budget requirements

- ✖ Not every case needs a full-scale programme.
- ✖ The different steps in the programme can be executed on several scales. The extent of each step (for example the number of interactions) can be determined by the available budget and time.
- ✖ For smaller or earlier-stage questions, a lighter route can still be useful if it remains disciplined.

Warning

This step is important to reassure that the purpose of the engagement is to listen and act upon the findings. Real engagement requires openness towards change in the initial plan.

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1. Explore

1.1 Mapping consequences & alternatives

What to map:

✖ Consequences of the proposed framework

POSITIVE Consequences (benefits)	NEGATIVE Consequences (risks)
NEUTRAL Consequences (changes)	CONFLICTS LOOPHOLES

Why mapping consequences?

- The consequences determine the adoption of the framework, and whether it will succeed in reaching its intended goals.
- The consequences mapping can help identify loopholes, conflicting regulations en counterproductive effects.

✖ Different dimensions

- Effects on safety for health, environment and sustainability
- Socio-economic effects
- Direct and indirect effects
- Short-term and long-term effects

How to map?

Consequences mapping tool

Compare

- IMPLEMENTATION of the proposed framework
- NO IMPLEMENTATION of the framework (original)
- ALTERNATIVE FRAMEWORK(S)

Attention point

Safeguard objectivity in this process by involving a neutral third party (with sufficient background and access to the relevant literature) in this process or for review.

Tip

Impact mappings are a basic requirement in regulatory set-up and revisions. As this one mainly serves to identify the most affected stakeholders, a simplified version can be used that focuses on the most important risks and benefits.

Result

✖ The consequences of implementation of the proposed framework, set out against the current framework: positive, negative and neutral, conflicts, loopholes and counterproductive effects.

✖ A comparison with the consequences of alternative frameworks

1. Explore

1.2 Mapping stakeholders and their role

Initial mapping from the quintuple helix (5H)

Who to consider:

Start from the quintuple helix, and consider for each category:

- ✖ Stakeholders targeted: those who will have to apply the framework and/or will benefit from it
- ✖ Stakeholders indirectly or unintentionally affected

Mapping the ROLE of the stakeholders

Define the roles of the stakeholders targeted:

How will they USE it?

How can they ABUSE it?

How do they INFLUENCE other stakeholders by using/abusing it?

How to map & evaluate?

Stakeholder mapping tool

Tip

Include external parties (preferably linked to the different categories in the 5H) in this exercise to get multiple perspectives, and a more complete view on who your stakeholders are.

Result

- ✖ An overview of the stakeholders involved, targeted and unintentionally affected
- ✖ The way they can use or abuse the framework, and how it can influence others

1. Explore

1.3 Evaluation of consequences per stakeholder

Analysis and matching with the consequences mapping

Stakeholder list ← **Consequences list**

Evaluating the AFFECT of the stakeholders

POSITIVELY Affected (benefits)	**NEGATIVELY Affected (risks)**
Degree of benefit (1-5)	**Degree of risk** (1-5)

How to map & evaluate?

Stakeholder mapping tool

Attention point

The consequences mapping does not attribute weights to each individual risk or benefit. Since the objective of this exercise is not making a risk-benefit assessment, but pinpointing the most crucial stakeholders for engagement, a rough estimate is sufficient. This estimate can be based on the amount of different risks for the stakeholder, and an estimate of the importance of these risks.

Tips & tricks

- ✖ The template from the stakeholder mapping tool mentions influence, which is here replaced by the role.
- ✖ Not every stakeholder needs the whole process, some stakeholders can be eliminated early on when relation to the innovation is neutral and of little influence.

Result

- ✖ The (expected) effect of implementation of the framework on different stakeholders

2. Involve

2.1 Prioritise stakeholders for engagement

Who to engage?

Prioritisation based on:

Degree of risk (1-5)

Degree of benefit (1-5)

Prioritise:
1. **High risk**
2. **High benefit**

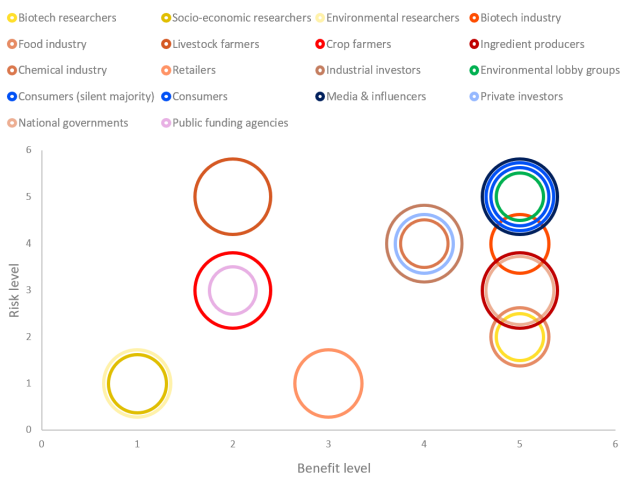
How to prioritise?

Stakeholder mapping tool

With calculation

Stakeholder	Benefits	Risks	R+B
Environmental researchers	1	1	2
Biotech industry	5	4	9
Food industry	5	2	7
Livestock farmers	2	5	7
Crop farmers	2	3	5
Ingredient producers	5	3	8
Chemical industry	4	4	8
Retailers	3	1	4
Industrial investors	4	4	8
Environmental lobby groups	5	5	10
Consumers	5	5	10
Media & influencers	5	5	10
Private investors	4	4	8
EU government	5	3	8
Public funding agencies	2	3	5

Visually



Attention point

The stakeholders identified as most crucial for engagement may be hard to reach and engage.

Tip

Include external expertise or channels to reach the intended stakeholders.

Result

- ✖ An overview of how and to what degree stakeholders are affected
- ✖ A priority list of stakeholders most relevant for engagement

2. Involve

2.2 Set up involvement strategy

How to engage?

In this phase, stakeholders are best engaged separately, as each group may require a different approach and communication strategy.

Mode of interaction

Mode of interaction is dependent on:

- ✖ The size and diversity of the stakeholder group
- ✖ Personal opinion versus professional stance
- ✖ Time and budget available
- ✖ Competition dynamics between members of the stakeholder group

Mode of interaction	Best used when	Attention points
Small group sessions: • **Co-creation sessions** • **Focus groups** • **Discussion groups**	• Participants are free to state personal opinions. • A constructive dialogue and discussion are possible, i.e. there is no competition between participants or their mutual challenges are bigger than competition effects. • The stakeholder is large and diverse, with many differences in backgrounds and opinions.	• Different and relevant profiles are present in a well-balanced group. • Ensure that everybody's voice is heard. • Create a comfortable and safe environment that ensures honest feedback. • The goal is to listen and capture different opinions, not convince.
One-on-one interactions (in-depth interviews)	• Participants speak from an official point of view, as representatives for an organisation. • Certain personalities are hard to engage in constructive dialogue (not respecting of others' opinions). • Competition and confidentiality issues between participants may hinder openness.	• These stakeholders have potentially high impact on the perception of consumers/society. • The goal is to listen, not discuss. • Pay attention to framing and expectation management.
Online input: • **Quantitative surveys** • **Open calls**	• The stakeholder is large and diverse, and has many differences in backgrounds and opinions. • There is limited budget for physical interactions.	• Target group (input providers)may not be sufficiently large, representative or diverse. • Use non-steering formulation of questions (surveys).

2. Involve

2.2 Set up involvement strategy

How to engage the right persons?

Profiling & recruitment

How you approach your recruitment (targeted versus untargeted) has a great influence on the profiles that participate in interactions.

	Pros	Cons
Open call (untargeted)	• Unlimited input • Non-discriminating	• Large self-selection bias • Missing out on hard to reach voices
Closed invitations (targeted)	• Representation of population • Also targets hard to reach voices	• Not everyone is invited • Might be difficult to engage targeted groups

Profiles to consider within stakeholder groups, proportional to the composition of the group:

- ✖ Age, gender and cultural diversity
- ✖ Various educational backgrounds (scientific & technological literacy)
- ✖ Openness towards changes / progressiveness

How to communicate & recruit?

Communication & recruitment toolbox

Tip

There might be many important stakeholders that are necessary to involve: a good strategy is crucial to make sure the different stakeholders are involved in the correct way. It might be useful to make use of external guidance to come to an effective strategy, and involve external parties with access to the stakeholder groups, a neutral position and a critical eye.

Attention points

- ✖ Objectivity needs to be safeguarded.
- ✖ In this phase it is not advised to mix stakeholder groups.
- ✖ Outline the power the stakeholders have in the engagement process in order to manage expectations correctly.

Result

- ✖ A strategy for involving each stakeholder group:
  - Who should be involved;
  - How should they be involved.

2. Involve

2.3 Roll-out involvement process

Setting up the central questions

1. What effect does the current framework have on you?
2. What are the potential implications of the proposed framework, both in general and for you specifically? Positive (benefits) / Negative (risks) / Neutral (changes)? Do you see any loopholes, potential for abuse, conflicts with other frameworks or counterproductive effects?
3. What are alternative ways to solve the same problem, and how do the risks and benefits compare?
4. How should the framework be communicated, and through which channels?

Setting up the sessions

Ideal group size:
8-15 participants.

The setup decides the reliability of answers:

- ✖ Indirect questioning and exercises
- ✖ Contextualisation: make concepts as 'tangible' as possible with examples, demonstration materials, real-world applications, …
- ✖ Stepwise approach

Your communication approach during the session influences input:

- ✖ Use simple terms to make sure everyone understands what is being discussed.
- ✖ Focus on 'why?'.
- ✖ Be as neutral as possible

Setting up flow and exercises?

Co-creation toolbox

Timeline

A streamlined process for a co-creation session should take about 6-8 weeks. Participants need to be invited 4-8 weeks prior to the session.

Attention points

- ✖ Those easiest to engage are not necessarily the most relevant.
- ✖ Avoid common biases and factors interfering with openness, such as peer pressure or politeness answers, judgement or intimidation through your set-up.

Tips & tricks

- ✖ A relaxed atmosphere supports honest input.
- ✖ Serve food and drinks for a welcoming environment.

Result

- ✖ Outcomes of the interactions with each stakeholder group

3. Assess

3.1 Identify hurdles & cues

Analysis: qualitative versus quantitative	
Qualitative	Coding and clustering List recurrent themes and ideas No quantification
Quantitative	Statistical analysis Clustering of open answers Correct for representativeness of the population

Hurdles

- ✖ Risk factors, negative consequences or unwanted side effects, including indirect & socio-economic effects
- ✖ Adoption issues & potential for abuse
- ✖ Bottlenecks, loopholes & counterproductive elements

Cues

Elements that could overcome the hurdles:

- ✖ Conditions for adoption & correct use
- ✖ Solutions and mitigation strategies for hurdles

Attention points

- ✖ The group is optimized to represent maximum diversity, but is not representative for your population.
- ✖ Do not attempt to quantify the data, even though it is tempting to do so. Clear (quantitative) tendencies should be interpreted as an indication that needs to be validated quantitatively, not as facts.
- ✖ Analysis of qualitative data is prone to bias: Be vigilant of your own opinions and biases, and do not to let them interfere with the analysis.
- ✖ Consider the implications and limitations of your set-up (see also in co-creation toolbox).

Tips & tricks

- ✖ Let at least two people analyse the data, and use AI as external validation.
- ✖ AI can support clustering and identification of recurring themes, but should never be the sole analysis tool.
- ✖ There is more data than what is being said, written or drawn:
  - Things not being said
  - The way things were said
  - Facial expressions, physical behaviour and body language.

Result

- ✖ A list of hurdles that could hinder the effectiveness and adoption of your framework, and cues that could form the basis of strategies to overcome them

3. Assess

3.2 Validate hurdles & Prioritise

Validation is essential to verify the data from the assess phase, which is based on qualitative data and cannot be quantified

Validate with:

- ✖ New surveys can validate the qualitative findings and allow for quantification
- ✖ Research on the effects of similar frameworks in other regions

Prioritise:

- ✖ Focus on the most likely and important hurdles.
- ✖ What can be tackled in the proposed framework, and which elements need further investigation or evidence?
- ✖ What should move to the co-design phase?

Attention points

- ✖ A literature search can provide information on similar research, but can be outdated or give different results due to cultural differences or slight nuances in the case.
- ✖ The target group needs to be relevant and representative.
- ✖ Keep in mind there is are significant biases in surveys.

Tips & tricks

- ✖ There are plenty of market research companies with access to large pools of consumers with a diversity of profiles, who can also provide support in the set-up of surveys.
- ✖ For validation with other stakeholders than consumers, such as farmers and industry, collaborate with clusters and representative organisation to collect sufficient data.
- ✖ Open-ended questions give better information on spontaneous thoughts and priorities than closed questions, and are now easy to process with AI.

Result

- ✖ Validated and quantified results
- ✖ Most important hurdles and cues (with the most potential impact)

4. Co-design

4.1 Setting up a co-design plan

Identification of relevant actors:

- ✖ Relevant stakeholders can be identified using the initial stakeholder mapping from the Explore phase:
  - Stakeholders within policy and regulation fields
  - Stakeholders directly impacted by the framework
- ✖ Additional relevant stakeholders, such as:
  - Experts (relevant for the topic and who can help with the lifting/solving of the hurdles)
  - 'Unusual suspects' giving new perspectives (such as historians or experts in human behaviour)

How to communicate & recruit?

Communication & recruitment toolbox

Setting up an engagement and communication strategy:

- ✖ Outlining the best mode of interaction with the stakeholders:
  - Mixed group sessions
  - Single stakeholder group sessions
  - One-on-one Interviews
- ✖ Strategy on how to approach and engage the pinpointed stakeholder groups:
  - Appropriate channels for recruitment
  - What's in it for them

Setting up co-design sessions?

Co-design toolbox

Attention point

Sharing findings with other stakeholders is crucial in this phase, but may be difficult in a competitive environment.

Tips & tricks

- ✖ Ensure a clear incentive to attend, for example by providing information they require or linking the session to another event.
- ✖ Involve external party with access to the stakeholder groups.

Result

- ✖ Ways to overcome the hurdles for acceptance & to avoid negative perceptions and associations via strategic decisions for implementation and communication

4. Co-design

4.2 Find solutions, improvements & mitigation strategies

Basic approach to finding solutions

- ✖ Use a methodology that triggers thinking beyond the obvious.
- ✖ Share data and information that was gathered and analysed during the Assess phase.

	Pros	Cons
Online	• International participation	• Open discussions may be difficult • Interactions are less spontaneous
Offline	• More in-depth interactions	• Requires significant time engagement from participants • Restricted geological spread of participants

Setting up co-design sessions?

Co-design toolbox

Hurdles | **Cues**

CO-DESIGN PROCESS

Solutions

Suggested by affected stakeholders in the Explore phase

Solutions, improvements & mitigation strategies

From all stakeholder groups

Attention point

Participants may find it hard to think 'outside the box' of the current regulatory and cultural context. You can use tools from co-creation, such as scenario thinking, to overcome this.

Tip

Predefine different solution categories, as it will help people think beyond the usual solutions.

Result

- ✖ Improvements and alternative approaches to the current proposal

4. Co-design

4.3 Validate and test

Solutions can be validated in different ways, depending on the case, the resources and budget and time available.

Often it is sufficient to implement the standard feedback rounds. For bigger changes, complete revisions and new legislations, it could be interesting to validate using regional try-outs or simulations. Or the validity of the revised proposal can be can be checked by re-engaging with your initial stakeholders.

General guideline for validation:

Theoretical validation for improved frameworks	Feedback rounds
Check whether the improved proposals have the desired result	Small scale (regional) try-outs & simulations
Check whether the found solutions answer the needs	Re-engage with initial (affected) stakeholders

Result

- ✖ Validated solution for the most crucial hurdles for the effectiveness and adoption of the new framework

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