

Co-creation processes and outcomes

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EXECUTIVE SUMMARY OF THIS REPORT

The BELSPO BRAIN-be 2.0 BECODIGITAL project (2022-2025) researches, over a three-year period, the pre-conditions, technologies, and outcomes of **inclusive digital co-creation in a federal context**. The summary report presented in this document goes over research done by WP3 within the project, which focused on the **outcomes**.

Throughout this report, we present **the outcome framework** from co-creation literature. These outcomes have been tested using surveys, interviews, focus groups, and a conjoint experiment. These lessons learned can serve as material to derive best practices for practitioners within the co-creation field. For researchers, they can serve as stepping stones for further research into co-creation preferences and outcomes. For the project, the lessons learned will inform the further course of this project.

1. THE OUTCOME FRAMEWORK

Carrying a co-creation project can lead to many different outcomes at various levels. Indeed, existing research has contributed valuable insights into the diverse outcomes that can emerge from digital co-creation initiatives. For example, Bentzen (2022) identified three crucial outcomes, namely innovation, ownership, and trust, underscored by continuous involvement but undermined by its discontinuity. Best et al. (2019) explored stakeholder salience's impact on value co-creation, recognizing micro, meso, and macro-level gains and highlighting challenges in expectations and government reforms. Irvin and Stansbury (2004) delved into the advantages and disadvantages of co-creation, emphasizing better policy outcomes through citizen involvement but acknowledging potential challenges such as cost and bias. To regroup and classify the outcomes into a practically usable framework, we follow the approach of Voets et al. (2008), who have developed a framework to characterize the performance of policy networks. Three types of outcomes are described, each at three levels of assessment (i.e., in the form of a 3x3 matrix).

Table 1. Structure of the outcomes framework.

	Micro level	Meso level	Macro level
Product outcomes			
Process outcomes			
Institutional outcomes			

Levels of assessment. The micro level refers to the individual participants in the co-creation projects (i.e. individuals participating as citizens or service users, but also individuals participating as representatives of an organization such as an official of a public service organization). The meso level refers to the public service system or co-creation network in which the individuals and organizations involved participate (so this does not include the political or administrative leaders if they are not directly involved in the co-creation project). The macro level refers to the broader group of citizens, organizations and actors, including those who do not participate in the co-creation project but are directly or indirectly affected by it (e.g., citizens, political leaders).

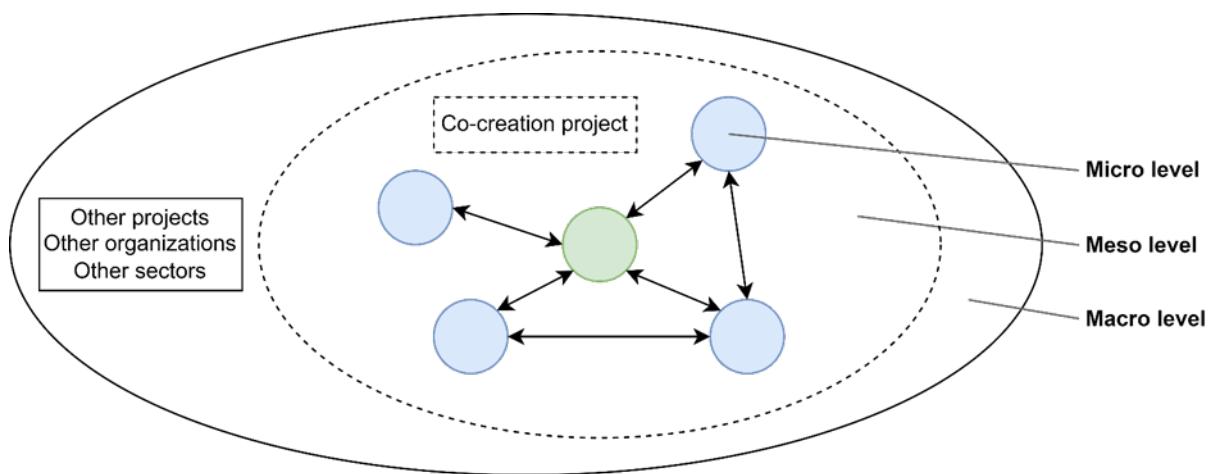


Figure 1. The three levels of assessment of co-creation outcomes.

Types of outcomes. The Product type is concerned with the efficient attainment of the goals of the co-creation. These goals can change during the co-creation process. The Process type relates to the democratic quality of the co-creation. Lastly, the Institutional type encompasses the relational aspects of the co-creation.

The tables below list 18 co-creation outcomes identified by thoroughly reviewing recent scientific literature. Each outcome is defined for each assessment level with a question that a co-creation practitioner can ask to evaluate the extent to which the outcome has been reached for this level. These tables can be used ex ante as a checklist to get an overview of possible outcomes, select high-priority outcomes, and plan actions toward reaching these outcomes. They can also be used ex post to evaluate a co-creation project against the outcomes deemed important. More precisely, the different levels and types of outcomes all serve their own purpose when it comes to practical application of the framework. The micro-level applies to the experience of individual participants and can therefore be used as an evaluation guide for citizens. The meso level applies to the co-creation network and is most useful for practitioners as a tool during the setup of an initiative. The macro level is most useful for political and administrative leaders, and researchers, to determine the positive influence of co-creation outside of their network. While product outcomes map the direct goals of an initiative, the process outcomes can be seen as the tools (or even conditions) to achieve the product outcomes. Institutional outcomes are also important measures for success, although achieving these is often a byproduct of an effective co-creation initiative.

1.1 PRODUCT OUTCOMES

The explanation for product outcomes from a classic performance point of view (Voets et al., 2008) and is influenced by the perspective of New Public Management. Product outcomes are derived from production-oriented logic by emphasizing the attainment of direct goals through an efficient and effective process. The product outcomes can also be described as the pre-determined goals of co-creation.

Table 2. List of product outcomes.

Product outcomes	Micro level	Meso level	Macro level
Effectiveness (Voorberg et al., 2015; Torfing et al., 2019; Irvin and Stansbury, 2004)	Have the individual needs and expectations of participating users been met?	Have the shared objectives or goals been achieved?	Do external stakeholders and community members perceive the policy problem to be better addressed?
Efficiency (Voorberg et al., 2015; Torfing et al., 2019; Petrescu, 2019)	Do participating users perceive the benefits to exceed the costs?	Has the initiative led to an efficient or cost-saving solution?	Has the initiative improved the efficiency of service delivery or resource allocation?
Innovation (Bentzen, 2022; Best et al., 2019; Torfing et al., 2021)	Has the initiative introduced new ideas, solutions, or methods that benefit users?	Has the initiative introduced new ideas, solutions, or methods	Has the initiative introduced new ideas, solutions, or methods that benefit the

		that can be applied by policymakers?	public service system beyond the initiative?
Learning (Voorberg et al., 2017; Irvin and Stansbury, 2004)	Have users acquired new knowledge, skills, or insights?	Did the initiative contribute to policymakers learning about participants' needs?	Have users, organizers, and policymakers acquired new knowledge, skills, or insights that can be used beyond the initiative?
Personalization (Petrescu, 2019; Radtke et al., 2023)	Have individual users been able to customize or tailor the co-produced solutions to their needs and preferences?	Did the initiative contribute to a solution that better fits the wants and needs of different groups?	Did the initiative contribute to service delivery that better fits the wants and needs of different groups?
Satisfaction (Voorberg et al., 2015; Kang and Van Ryzin, 2019; Palumbo and Manna, 2018)	Are individual users satisfied with the solutions?	Did the initiative contribute to satisfaction on the policy issue among participants?	Are stakeholders and the broader community satisfied with the outcomes and experiences of the initiative?

1.2 .PROCESS OUTCOMES

While the New Public Management view on co-creation is useful in assessing the direct goals, there are other important dimensions in co-creation outcomes as well. The process and institutional outcomes find their basis in the work by Hood (1991). A significant second aspect of co-creation are the process outcomes, which help protect values such as fairness, honesty, and mutuality. How a process is organized and experienced are, beyond outcomes in itself, also sometimes conditions for effective product and institutional outcomes.

Table 3. List of process outcomes.

Process outcomes	Micro level	Meso level	Macro level
Conflict resolution (Steen and Tuurnas, 2018; Petrescu, 2019; Laud et al., 2019)	Were conflicts between users addressed and resolved fairly and effectively?	Have mechanisms been put in place to resolve conflicts during the process?	Has the initiative contributed to resolving conflicting opinions in the broader community?
Democratic accountability (Voorberg et al.,	Were users held accountable for their ideas and actions?	Were decisions made democratically by users?	Did the initiative contribute to the government's ability to

2015; Best et al., 2019)			defend decisions on a democratic basis?
Inclusiveness (Thijssen and Van Dooren, 2016; Torfing et al., 2019; Steen and Tuurnas, 2018)	Were all relevant users given equal opportunities to participate?	Have mechanisms been put in place to ensure all relevant participants were involved?	Did the initiative ensure that the voices of different groups were included in policymaking?
Legitimacy (Best et al., 2019; Røiseland, 2022)	Was the initiative perceived as legitimate by users?	Were the digital tools and methods used considered legitimate?	Did the solutions provide a legitimate basis for decision-making?
Resource integration (Laud et al., 2019; Petrescu, 2019)	Could users bring in valuable knowledge and experience?	Were the resources of participants integrated effectively?	Did the initiative enable citizens to contribute valuable knowledge to policymaking?
Transparency (Engen et al., 2021; Järvi et al., 2018; Steen and Tuurnas, 2018)	Were users provided with sufficient information about decision-making?	Have mechanisms been put in place to provide participants with information about the digital process?	Did the initiative contribute to transparency in policy creation and governmental decision-making?

1.3 INSTITUTIONAL OUTCOMES

The third outcome type is tied to the resilience and robustness of the system in which co-creation takes place. By affecting the beliefs and behavior of participating users during and after co-creation, the institutional outcomes can also be described as long-term effects or byproducts. Although institutional outcomes are often not pre-determined and intended, they are still important for the continuation of the system in which co-creation takes place.

Table 4. List of institutional outcomes.

Instit. outcomes	Micro level	Meso level	Macro level
Empowerment (Engen et al., 2021; Laud et al., 2019; Järvi et al., 2018)	Has the initiative improved users' competence to navigate the legal and administrative system?	Has the initiative enhanced users' ability to defend their interests against the government?	Has the initiative contributed to citizens' ability to defend their interests against the government?
Litigation avoidance (Irvin	Has the initiative helped avoid litigation	Have mechanisms been put in place to avoid litigation	Has the initiative helped avoid litigation between

and Stansbury, 2004)	between users and the government?	between users and stakeholders?	the government and citizens?
Reputation (Best et al., 2019)	Has the initiative improved the reputation of the organizing entity?	Has the organization of the initiative improved the reputation of the government?	Has the initiative improved the reputation of the broader policy sector?
Social cohesion (Voorberg et al., 2015; Torfing et al., 2019)	Do users feel a sense of commonality and shared purpose?	Have mechanisms been put in place to create a sense of commonality in the initiative?	Has the initiative promoted social cohesion and community building?
Solution ownership (Bentzen, 2022; Irvin and Stansbury, 2004)	Do users feel a sense of ownership over the solutions developed?	Have users been informed about who owns the solutions and their implementation?	Do community members feel a sense of ownership over broader policy issues?
Trust (Bentzen, 2022; Kang and Van Ryzin, 2019; Irvin and Stansbury, 2004)	Has the level of trust between users increased?	Has the level of trust in the policy issue improved?	Has the level of trust in the public service system or network increased?

Below, we provide a practical and visual guide demonstrating how the outcomes framework can be used.

2. PRACTICAL APPLICATION OF THE OUTCOME FRAMEWORK

In this part we provide a practical and visual guide demonstrating how the outcomes framework can be used. For practitioners in co-creation outcomes, looking at the outcome framework through the meso lens is most useful for application.

2.1 GOALS

Product outcomes are goals of the co-creation initiative, and can be separated into two types:

1. Solution-focused: Effectiveness, efficiency, or innovation
2. Citizen-focused: Learning, personalization, or satisfaction

Depending on what the upfront determined goals are, practitioners can organize the process in different ways. While for solution-focused goals there might be more benefit in maximizing the amount of citizens willing to join, for citizen-focused goals the positive effects or outcomes for citizens should be maximized.

We asked 1119 Belgian citizens which forms or design characteristics they would be most willing to participate in, and which they believe would lead to the best (personal) outcomes.

2.2 WILLINGNESS TO PARTICIPATE AND DESIGN PREFERENCES

Willingness to engage in co-creation varied significantly based on contextual attributes, including channel type, level of governance, and phase of the process. Key findings include:

- The channel type was the most important determinant of citizens' willingness to participate, accounting for 41,3%.
- Citizens were most willing to participate in hybrid-channel, local-level, and co-deciding (e.g. voting on existing ideas) initiatives.
- Whether an initiative was binding or non-binding was not a significant factor in their decision to participate.

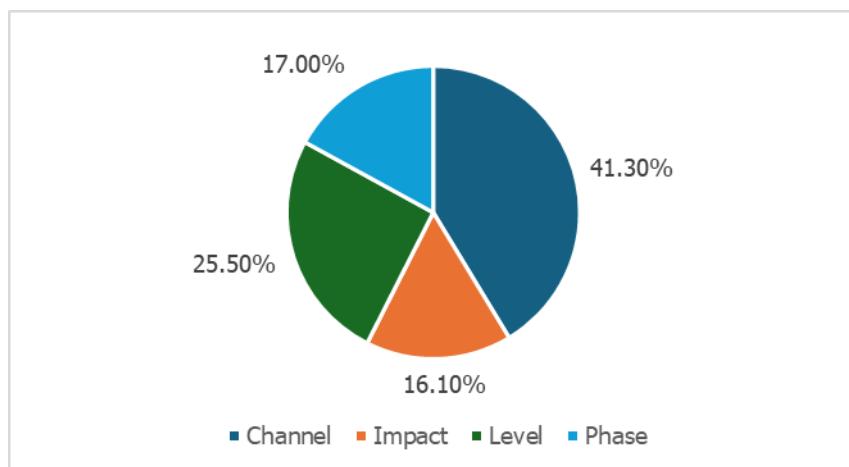


Figure 2. Relative importance of design characteristics.

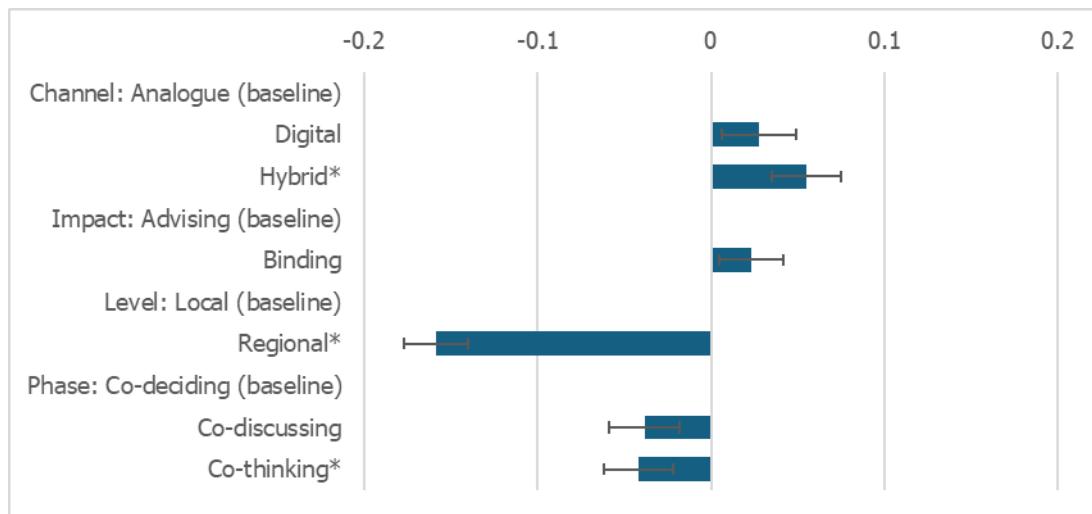


Figure 3. Conjoint results of willingness to participate. * Indicates significance in results

We also filtered our results on groups that are traditionally underrepresented: Those with low levels of education, low motivation, and low political interest.

- Those with low education had a no channel preference and rated all channel types more or less equal.
- Those with low motivation and low political interest preferred the digital channel.

- Those with low motivation also had a significantly less strong preference for local initiatives than the general population, although they still somewhat preferred it over regional (Flanders/Wallonia level) initiatives.

2.3 OUTCOMES AND DESIGN PREFERENCES

Although most citizens were willing to participate in hybrid, local, and co-deciding co-creation initiatives, they did not think that these design characteristics also led to the highest outcomes. We asked respondents on their expectations of product outcomes, process outcomes, and institutional outcomes. The most significant result were on the institutional outcomes, illustrated in the graph below. This was measured with the question: "Which initiative do you think will improve your trust in government the most?"

- Respondents expected analogue (or in-person) co-creation initiatives would lead to better outcomes.
- Local and binding initiatives, which respondents also preferred to participate in, were expected to lead to better outcomes than regional and advising ones.
- Although a significant majority of the respondents were willing to participate in co-deciding initiatives, they did not think the co-deciding phase would also lead to better outcomes.

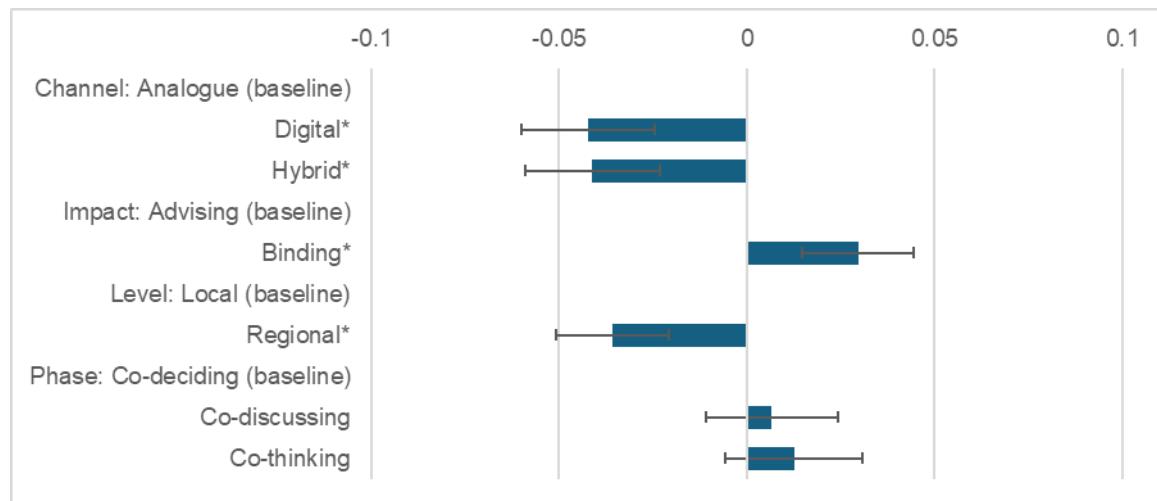


Figure 4. Conjoint results of trust (institutional outcome).

These results showcase the outcome perceptions for co-creation initiatives that involve one phase. Additional to our conjoint experiment, we also asked respondents about their outcome perceptions through a video experiment. In this experiment, respondents saw 4 phases of co-creation (co-thinking, co-deciding, co-discussing, and co-implementing), and were asked about how they expected the product outcomes, process outcomes, and institutional outcomes to be on a Likert scale. Respondents were divided into four groups:

- Group 1 saw four analogue co-creation phases.
- Group 2 saw the first two phases (co-thinking and co-deciding) digital, and the last two phases (co-discussing and co-implementing) analogue.
- Group 3 saw the first two phases (co-thinking and co-deciding) analogue, and the last two phases (co-discussing and co-implementing) digital.
- Group 4 saw four digital co-creation phases.

The results for this showcased small differences between the hybrid options and the digital options (groups 2, 3, and 4), and a strong negative effect for the analogue option (group 1). The first hybrid option (D-A) was perceived to have the most positive product and institutional outcomes, while the digital option was perceived to have the most positive process outcomes.

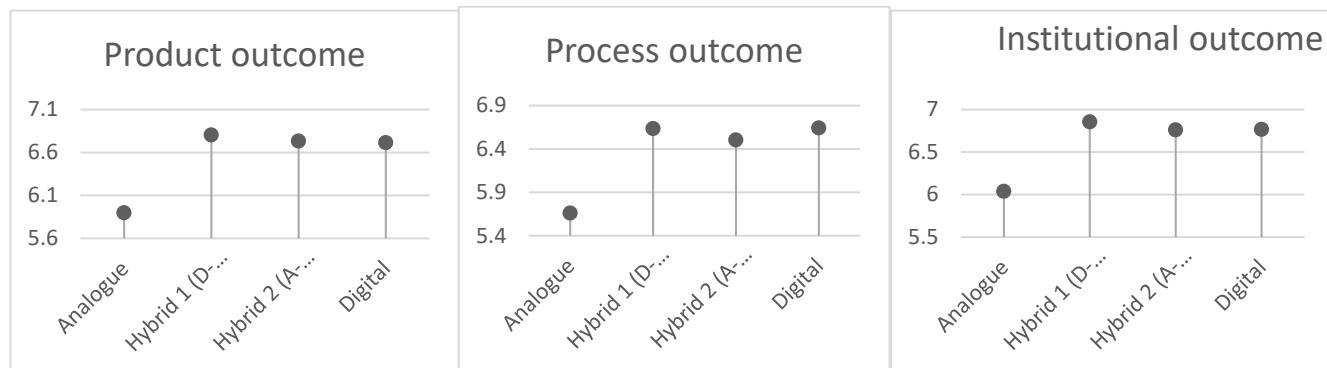


Figure 5. Video experiment results.

2.4 THE PROCESS

The process outcomes are important factors to keep in mind in the organization of an initiative. Citizens were asked which outcomes they considered the most important when participating in a co-creation initiative. They considered the way the process was organized (process outcomes) the most important, more important overall than achieving goals (product outcomes) or long-term effects (institutional outcomes). Citizens rated transparency the most important individual outcome.

To improve the process outcome of inclusiveness, certain design characteristics of co-creation can be utilized that appeal more to underrepresented groups.

2.5 EFFECTS

Institutional outcomes can also be seen as the (side)effects of co-creation. Although it is difficult to plan for participants to feel an increased sense of empowerment, social cohesion, or trust in government, these can be long-term effects. Although these are often not the main goal of initiatives, they can still be improved through deliberate choice in design characteristics.

EVALUATION OF CO-CREATION

The micro lens of the outcome framework refers to the experience of individual participants. For this reason, the micro lens of product outcomes, process outcomes, and institutional outcomes can be used as a guide when asking participants to evaluate their experience in the co-creation initiative.

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