

Co-creation processes and outcomes: Five lessons learned from literature

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EXECUTIVE SUMMARY OF THE LEARNING NOTE

The BELSPO BRAIN-be 2.0 BECODIGITAL project (2022-2024) researches, over a two-year period, the (pre-) **conditions** for effective and **inclusive digital co-creation in a federal context**. In connecting practical and scientific insights about digital co-creation, the project's results will materialise into a validated roadmap to support future co-creation initiatives using digital technologies or targeting public (e-) services. The **learning note** presented in this report, which has a focus on the co-creation outcomes, entails one of the stepping stones in the knowledge acquisition within the project and, hence, the build-up towards the roadmap.

Throughout this report, we present **five lessons learned** from co-creation literature, focussing on the processes and outcomes of co-creation initiatives. These lessons learned can serve as material to derive best practices from for practitioners within the co-creation field. For researchers, they can serve as stepping stones for further research into co-creation processes and outcomes. For the project, the lessons learned will inform the further course of this project.

Furthermore, in the annex, we provide an elaborate **annotated bibliography** in order to inform practitioners and researchers on our literature study. This may prove useful to delve into the world of co-creation literature. This annotated bibliography will also serve as the basis for further development within the project, such as an empirical paper into co-creation outcomes.

INTRODUCTION

Embarking on an exploration of co-creation literature, this learning note aims to distillate valuable insights into five pivotal lessons that not only encapsulate contemporary debates but also offer a forward-looking perspective. These lessons follow from an extensive literature study that resulted in the annotated bibliography provided in ANNEX 1. We decided to dedicate this learning note to the insights that can be gained from this bibliography as it would allow us to provide not theoretical but additionally practical understandings. The core of our literature study evolved around literature on co-creation outcomes. However, throughout our search, we found many contemporary debates around to be the foundation for any literature on co-creation outcomes. Hence, we decided to dedicate the learning note both co-creation outcomes contemporary debates as well as these contemporary debates. Below, we expand on the five lessons established out of the annotated bibliography.

As the co-creation landscape continues to evolve, the first three lessons critically engage with ongoing debates that shape the discourse. We start with the foundational lesson of defining co-creation, elaborating on the ongoing debate around the definition of the term and exploring its links with related concepts. Moving forward, the second lesson delves into the transformative impact of digital technologies on co-creation. In an era where technological advancements shape the contours of collaboration, understanding the implications, opportunities, and challenges posed by digital tools becomes essential. The third lesson takes a nuanced look at the dark side of co-creation, acknowledging that, like any powerful force, collaborative innovation is not without its challenges.

The fourth lesson, the most important part of our exploration, focuses on the outcomes of co-creation. Beyond theoretical frameworks and conceptual debates, understanding the tangible and intangible results of co-creation initiatives is crucial. The goal of this lesson is to move towards a comprehensive outcome framework on which the results of co-creation initiatives can be classified. We explore co-creation literature that focusing on outcomes, define the matrices on which we can base this classification, and provide a typology of a set of outcomes within this classification.

As we look forward, the fifth lesson underscores the importance of empirical research in advancing our understanding of co-creation. Rigorous empirical studies not only validate theoretical constructs but also provide practical insights for policymakers, businesses, and practitioners. This forward-looking perspective emphasizes the need for evidence-based practices and the continuous refinement of co-creation models based on real-world experiences.

In summary, this learning note navigates through the nuances of co-creation literature, offering lessons that span the spectrum of contemporary debates, technological influences, outcome considerations, and the imperative of empirical research. By distilling these insights, we aim to contribute to a more nuanced and informed approach to collaborative innovation in the dynamic landscape of co-creation.

1. FIVE LESSONS LEARNED

Five lessons learned derived from the literature study as shown in ANNEX 1: annotated bibliography.

1.1 LESSON 1: AFTER 20 YEARS, CO-CREATION IS STILL AN ELUSIVE CONCEPT

The first lesson focuses on the seemingly never-ending debate around the definition of co-creation. From our literature study, we found that indeed, even after a good 20 years since it first emerged, co-creation is still an elusive concept. Below, we reflect on this discussion, give our own attempt to define the concept, and explain why it is not necessarily a bad thing to have an ongoing discussion about the definition of co-creation.

The debate surrounding the definition of co-creation revolves around the dynamic and multifaceted nature of the concept. Co-creation typically refers to collaborative processes where individuals or entities work together to generate value, often in the context of product or service development (Brandsen & Honingh, 2018; Ansell & Torfing, 2021). However, the challenge lies in pinpointing the boundaries and nuances of this collaborative endeavor. Some argue that co-creation is inherently consumer-centric, emphasizing the active involvement of end-users in the design and innovation processes (Torfing et al., 2019). Others broaden the scope, reaching more in the direction of the public sector and extending co-creation to encompass diverse stakeholders (Osborne et al., 2016). Besides these more fundamental aspects of the debate, there's also ongoing discussion about the level of engagement required for an activity to be considered co-creation; some assert that mere feedback or customization may fall short, while others advocate for a broader understanding that accommodates various degrees of collaboration (Bentzen, 2022; Dudau et al., 2019).

In our attempt to define (digital) co-creation, we build on the work of Torfing et al. (2019, p. 802) and form the following definition:

A process through which two or more public and private actors (use digital technologies to) jointly seek to solve a shared problem, challenge, or task through a constructive exchange of different kinds of (digital) knowledge, resources, competences, and ideas that enhance the production of public value.

The definition of co-creation is also often linked to related concepts. One of such concepts is co-production. Works as early as the 1980's develop conceptualizations of co-production as shared-responsibility, multiple contributions of resources, and improving quality of public services (Brudney & England, 1983). Where some may use co-creation and co-production interchangeably, others find it important to highlight the separation of the two concepts when defining co-creation. Brandsen and Honingh (2018), for example, explain that co-production and co-creation share commonalities in that they involve direct input from citizens during the production phase, collaboration between service providers and citizens, and active citizen input in shaping services. But the two concepts are also different in multiple ways, such as in the stage of production cycle in which citizens are involved, strategies of involvement in implementation, and level of services addressed (Brandsen & Honingh, 2018). We agree with Brandsen and Honigh that the differences between the two

terms should be highlighted despite their shared commonalities and similarities in nature. We agree with this because we deem it of great importance that co-creation continues to be defined in comparison to related concepts. In terms of why we deem this of importance, we agree with the three objectives provided by Ansell and Torfing (2021). Their first objective is that while co-production was originally linked to the production of services, co-creation has broader applications in the field of public governance and encompasses a wider range of actors and activities. The second objective is to show how the concept of co-creation both builds on and extends the concept of collaborative governance, adding new dimensions to an already well-established literature. The final objective is to show how a strategic turn to co-creation introduces a new type of "generative governance" aimed at solving complex problems by building platforms that enable the formation of arenas for co-creation that bring together a wide range of public and private actors, including citizens, in creative problem-solving processes.

Continual discussion surrounding the definition of co-creation is crucial due to the dynamic nature of collaborative practices. As industries and technologies advance, the concept of co-creation adapts and expands, making ongoing discourse about its complex meaning necessary. The evolving nature of the digital era, with the rise of open-source platforms and social media, further complicates the discourse, adding new dimensions to the question of who gets to participate and contribute in the co-creation process. In this time of rapid development, ongoing discussions about the concept can foster a better understanding of the implications and best practices associated with co-creation. Additionally, the increased attention on co-creation as a concept has meant that it has somewhat evolved into a pervasive buzzword. While this popularity also makes for an increased recognition of the importance to involve users in value creation, the term has at times been loosely applied, risking dilution of its core meaning. The overuse of the term may lead to a superficial understanding, where organizations may claim to practice co-creation without fully embracing the depth of collaboration and shared value creation. Therefore, ongoing discourse about the exact meaning and value of co-creation also serves as a form of protection.

1.2 LESSON 2: DIGITAL CHANNELS FOR CO-CREATION HAVE BOTH STRENGTHS AND WEAKNESSES

In the second lesson, we discuss the digital paradigm that has emerged within the co-creation discourse. From our literature study, we found that whilst enthusiasm about the possibilities of digital technologies in advancing the co-creation field are not unjust, we do warn to not be blinded by enthusiasm and therewith overlook the challenges that come with a digital paradigm shift. Below, we explain what is meant with digital co-creation, reflect on the impact of digital technologies on the collaborative field, and dive into the strengths and weaknesses of using digital channels for co-creation initiatives.

Digital co-creation marks a paradigm shift in innovation and collaboration, leveraging the capabilities of technology to redefine how individuals and organizations collectively contribute to value creation. Based on Clifton et al. (2020), we define digital or ICT-enabled co-creation as:

The use of ICTs or digital technologies to support, enable, or enhance engagement in the co-creation of public services.

In an era dominated by digital connectivity, organizations are increasingly recognizing the potential of leveraging online platforms, social media, and other digital tools to engage stakeholders in the co-creation process. There are two common forms of digital co-creation: (1) facilitating traditional forms; and (2) establish new ways to co-create (Clifton et al., 2020). As organizations embark on the journey of digital co-creation, they are not only embracing the efficiency and scalability offered by technology but are also tapping into a wealth of perspectives and expertise. However, it is crucial to navigate potential challenges such as ensuring inclusivity, data security, and the need for a robust digital infrastructure to truly capitalize on the transformative potential of digital co-creation.

Lember et al. (2019) argue that the impact of digital technologies on co-creation requires an analysis of technological processes. The authors identify four types of technologies that can have an impact: detection, communication, processing, and activation. Detection technologies gather information on different aspects of social life, and data mining enables the analysis of large observational datasets. Communication technologies such as social media and blockchain create new opportunities for interaction, while processing technologies such as big data analytics and machine learning enable non-intrusive monitoring and prediction. Activation technologies, such as robotics and 3D printing, can indirectly influence co-production patterns. Rodriguez Müller (2020: p.6) then provides eight dimensions on which digital technologies can have an effect in the co-creation process:

- (1) Approach: Who initiated the process?
- (2) Level: Who are the involved actors?
- (3) Service cycle: At what stage of the service delivery is the process?
- (4) Provider vs. beneficiary: What is the distribution of power or responsibility?
- (5) Mode of technology: How does the technology shape the process?
- (6) Delivery mode: How are the services being co-created?
- (7) Service authority: What is the level of citizens' autonomy in the process?
- (8) ICT pillar: What are the functionalities of the used ICT?

Considering these dimensions of digital technologies is important as it enables a more comprehensive understanding of the impact of technology on various aspects of the co-creation process, such as communication, collaboration, and innovation, fostering more effective and tailored engagement. Additionally, as Lember et al. (2019) point out, it is also important to not forget that whatever the effects of specific technologies are, they are always contingent on the context and environment they are used in.

Even after establishing the types and dimensions of digital technologies in the co-creation process, there is still an increasing debate on how these technologies then will influence co-creation processes. Linders (2011), for example, found that digital technologies in the Information Age are increasingly empowering non-state actors to enhance their capabilities for self-organization and value creation, shifting the balance towards civil society and away from government. This increased active role of the public is conceptualized through the term 'We-Government' by the author. Within the We-Government, the government has a more facilitating role in which they empower the public to help themselves. The author found four forms of coproduction most affected by the Information Age: (1) citizen sourcing; (2) public-civic partnership; (3) government as platform; and (4) do it yourself government. On the other hand, Thijssen and Van Dooren

(2016) define a potential pitfall of online co-creation initiatives: younger generations being underrepresented in the processes of participation. Perhaps counter-intuitively, the authors find that simply going from offline to online participation reinforces rather than mitigates age bias. The implication for participation is that offering an online channel is not enough to entice younger generations to participate. On the contrary, the age bias might even become stronger (Thijssen & Van Dooren, 2016). These are just two of the potential strengths and weaknesses of using digital technologies in co-creation processes. In Table 1, we present an extended overview of strengths or enablers and weaknesses or barriers as found in two important recent articles; Rodriguez Müller (2020) and Clifton et al. (2020).

Table 1. Overview of strengths and weaknesses of digital technologies in co-creation processes. Based on Rodriguez Müller (2020) and Clifton et al. (2020).

Strengths/ Enablers	Weaknesses/ Barriers
More feasibility and relevance for both the co-production process and its outcomes	Uneven access for users (the digital divide)
Service quality can be enhanced through expertise and information otherwise not available	The adoption of technological advances might direct the power and control towards particular social groups such as highly educated, ICT-skilled citizens and take power and control away from specific groups with ethnic, social, and language differences
It is expected to increase inclusion, democracy, and participation	Tensions between privacy and openness, or between the expense of setting up a digital platform and the long-term savings it offers
Increased (financial) support to adapt co-creation to the digital era (i.e. adequate staff training)	Shortage of finance or inadequate technical skills of providers or users
Can serve as a tool to restore or increase trust between citizen and governments in the digital era	Anxiety and other negative emotions around digital technologies
Earlier involvement of citizens in ICT-enabled or digital co-creation processes (particularly design phase)	Increased complexity of regulations (i.e. privacy laws)
Constitute collaborative groups as a form of social capital	Fear for a disruption of traditional forms of social interaction

The integration of these strengths and weaknesses forms a complex tapestry that requires a thoughtful approach to maximize benefits while mitigating challenges. The feasibility and relevance of co-creation processes and outcomes can be enhanced by addressing the uneven access for users, acknowledging the

digital divide. While technological advances offer expertise and information for improved service quality, there is a risk of directing power disproportionately towards certain social groups, such as the highly educated and ICT-skilled, potentially marginalizing those with ethnic, social, and language differences. The aim to increase inclusion, democracy, and participation may encounter tensions between privacy and openness, as well as the financial burden of setting up digital platforms. However, increased financial support, coupled with staff training, can help adapt co-creation to the digital era. Initiating citizen involvement in the design phase can foster trust between citizens and governments, yet anxiety and negative emotions around digital technologies persist. Furthermore, the collaborative groups formed through digital co-creation can be seen as a form of social capital, but concerns arise about the potential disruption of traditional social interactions due to increased complexity in regulations, including privacy laws. In navigating these hybrid forms, a balanced and inclusive strategy is imperative to harness the strengths while addressing and minimizing the associated weaknesses. This means to address the digital divide which requires initiatives for equitable access and digital literacy. Efforts to mitigate power imbalances involve promoting diversity, inclusivity, and cultural sensitivity in co-creation initiatives. Additionally, addressing concerns about privacy, financial burdens, and potential social disruption requires transparent policies, cybersecurity measures, and ongoing education, which all emphasize this need for a balanced and inclusive strategy.

1.3 LESSON 3: THERE IS A DARK SIDE TO CO-CREATION THAT NEEDS NOT BE FORGOTTEN

Lesson three relates to what is dubbed as 'the dark side of co-creation,' a strand of literature that addresses possible pitfalls of co-creation. From our literature study, we found value co-destruction as a commonly associated topic within the realm of this dark side of co-creation. Below, we explain value co-destruction and provide an overview of contributing factors. Next, we dive into the discourse around value co-destruction and the dark side of co-creation and also reflect on the usefulness of this discourse.

Value co-destruction shines light on the idea that not all interactive relations of collaborative practices result in positive outcomes with a value-creating nature; sometimes, instead, such relations or practices may even lead to negative outcomes in which value is destructed rather than created (Järvi et al., 2018). Much like co-creation, the concept of value co-destruction incites debate regarding the reasons and causes contributing to its emergence. In a seminal work, Järvi et al. (2018) give eight factors that contribute to value co-destruction, as based on elaborate empirical data, as is shown in table 2.

Table 2. Overview of factors contributing to value co-destruction. Based on Järvi et al. (2018).

1	The absence of information	Both provider and user can contribute to it through incorrect or inadequate provision or processing of information
2	Lack of trust	Can occur when the user is unwilling to provide information, there is an inability to trust, or when the user acts selfishly.

3	Mistakes	Mistakes such as wrong assumptions or incorrect products can break relations between provider and user
4	The inability to serve	Can result from expensive offerings, inadequate user relationship management, false expectations, and slow processes
5	The inability to change	Can result from aspects such as changing rules, regulations, and user trends
6	Unclear expectations	Where users don't receive what they want and providers fail to deliver, due to unclear or inaccurate needs, resulting in difficulty in co-creating value between providers and users
7	User misbehavior	Misbehavior on the user side such as misuse of a product, incorrect storage of products, and disruptive behavior, can lead to value co-destruction by causing stress for providers
8	Blaming	Negative feedback can quickly spread on social media and impact a provider's reputation

This framework on value co-destruction laid out by Järvi et al. is further enriched by Engen et al. (2021), who identify four types of causes of value co-destruction: (1) a lack of transparency, (2) errors, (3) a lack of bureaucratic competence, and (4) an inability to serve. Lack of transparency includes a lack of information about a specific case and the service ecosystem. Errors refer to operational errors by individuals or machines. Lack of bureaucratic competence may refer to a poor understanding of the regulatory framework or difficulty of users to navigate the system. Inability to serve relates to inadequate customer relationship management, false expectations, or slow processes. Adding another layer to the discourse around value co-destruction, Loeffler and Bovaird (2018) contribute by underscoring the stakeholder-specific nature of perceiving benefits and costs in co-creation. They emphasize that what may be deemed a benefit for one stakeholder could be perceived as a cost for another, accentuating the subjective evaluation of these aspects within co-creation processes. Osborne et al. (2016) further deepen this understanding by recognizing resistance as an inherent and significant aspect of the co-creation process. For them, resistance serves as an active choice to not participate in service delivery. They explain that resistance, together with willingness (both as a conscious choice as well as through unconscious involvement), constitutes an integral part of the complex dynamics at play in collaborative efforts. This acknowledgment challenges conventional perspectives on collaboration, underscoring the importance of recognizing and navigating the inherent tensions and resistance that can influence co-creation.

Collectively, these studies provide a nuanced understanding of the complexities surrounding value co-destruction, underscoring its varied roots and implications in co-creation. Recognizing and understanding the concept of value co-destruction is important in the contemporary discourse around co-creation. As shown, the multifaceted nature of value co-destruction, stemming from factors such as information gaps,

trust deficits, and disintegration of resources highlights the influence it can have in co-creation processes. By trying to understand why and how value co-destruction occurs, stakeholders gain valuable insights into potential pitfalls that can compromise the success of co-creation and collaborative processes. Addressing these challenges becomes imperative for fostering sustainable relationships between service providers, users, and other stakeholders. Moreover, the acknowledgment of resistance and the subjective nature of value perception, which move away from a debate merely on benefits and costs, highlight the need for nuanced strategies in co-creation. In essence, considering value co-destruction is crucial for organizations, policymakers, and researchers alike as they navigate the complex landscape of collaboration, striving to optimize value creation and mitigate the risks that may undermine the very essence of co-creation processes.

1.4 LESSON 4: A REPRESENTATIVE OUTCOME FRAMEWORK OF (DIGITAL) CO-CREATION INITIATIVES IS NEEDED

In lesson four, we move our attention away from the co-creation process and dive into the outcomes of co-creation and collaborative practices. In our literature study, we focused on finding classifications of the diverse set of possible outcomes described. Below, we first delve into some of the different outcomes found within the literature. Then, we explain the matrices on which we base our classification and provide a typology of a set of outcomes within this classification.

Existing research has contributed valuable insights into the diverse outcomes that can emerge from digital co-creation initiatives. From our literature search, diverse studies contribute insights into their outcomes. For example, Bentzen (2022b) identifies three crucial outcomes – innovation, ownership, and trust – and shows that these outcomes are strengthened by continuous involvement throughout the later stages of co-creation. Discontinuous involvement, on the other hand, fail to produce innovation, ownership to solutions, and even risks hampering existing trust due to disappointed expectations and suspicions of pseudo-involvement among low-power actors (Bentzen, 2022b). Best et al. (2019), then, contribute to the discourse on outcomes by distinguishing between micro-level gains (e.g., more holistic support to service users, improved quality of life for service users, increased staff satisfaction, improved family relationships or increased voice of service users), meso-level outcomes (e.g., improved competition, monetary gains, reputational gains, increased economic outcomes, increased social inclusion for service users, new service innovation opportunities or improved legitimacy with funders), and macro-level outcomes (e.g., improved corporate and social responsibility). In terms of the relation between the purpose of co-creation initiatives and potential outcomes, the scoping review conducted by Rodriguez Müller et al. (2021) reveals that the reasons and purposes behind the implantation of co-creation processes can be categorized into four themes: (1) co-creation to improve public service provision; (2) to innovate; (3) to create new public services; and (4) user-driven co-creation. This work also emphasized the importance of establishing what potential outcomes can be linked to co-creation in order to justify its purpose. These are just a few insights from our literature but these studies, together with others included within the annotated bibliography in ANNEX 1, weave a narrative on the diverse set of outcomes, dynamics, challenges, and potential benefits of co-creation initiatives across various contexts.

However, a comprehensive overview of the various impact types along different outcome dimensions is currently absent in the literature. In the realm of public policy networks, the framework introduced by Voets et al. (2008) has gained increasing traction over the past decade. This framework presents three distinct lenses for evaluating the performance of policy networks, offering a comprehensive assessment. These lenses encompass product performance, which involves the tangible and intangible benefits derived from co-creation initiatives; process performance, which focuses on the procedural outcomes of co-creation efforts; and regime performance, which examines the robustness, resilience, and longevity of the relationships established during co-creation initiatives (Voets et al., 2008). By exploring these dimensions and mapping the various outcomes described in the literature within each dimension, we can unravel a wealth of benefits that form the foundation for successful digital co-creation projects and identify specific instruments and tools for improvement that can be applied in practice. Besides these three lenses, Voets et al. (2008) also offer three levels of assessment: the micro-level focusing on the performance of individual organizations; the meso-level focusing on the network as a whole; and the macro-level focusing on policy sectors, target groups, and geographical areas. In figure 1, we present our representative outcome framework, using the lenses and levels as established by Voets et al. (2008). This is followed by the typology of the outcomes within their distinguished lenses.

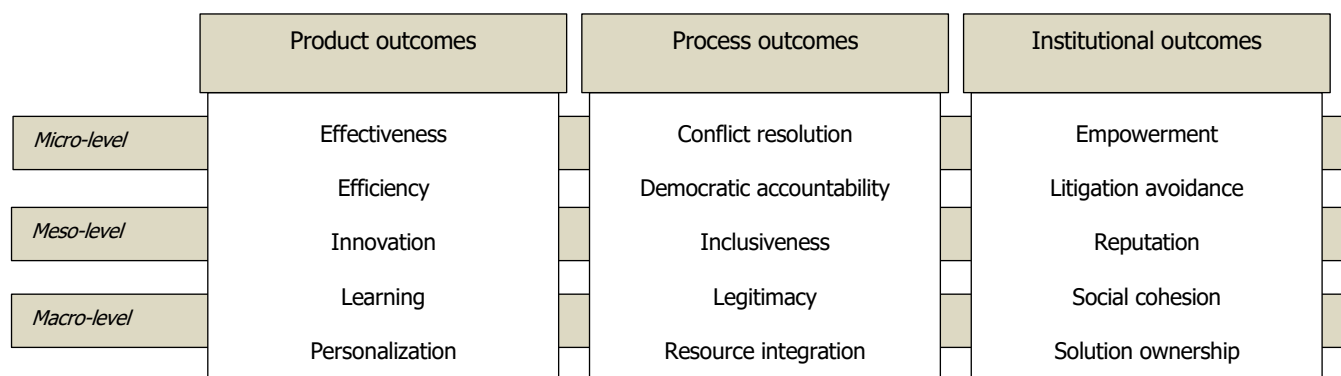


Figure 1. Framework for evaluating (digital) co-creation outcomes

Typology of (digital) co-creation outcomes

Product outcomes

- **Effectivity:** improve the effectiveness of services (Voorberg, 2015; Torfing, 2019; Irving, 2004; Klijn, 2010; Radtke, 2023; Amorim, 2020; Bentzen, 2022b; MacLean, 2022)
- **Efficiency:** enhance efficiency by streamlining processes (Voorberg, 2015; Torfing, 2019; Petrescu, 2019; Palumbo, 2018; Radtke, 2023; Bentzen, 2022b; MacLean, 2022)
- **Innovation:** to fuel innovation, driving novel ideas and breakthrough solutions (Bentzen, 2022a; Best, 2019; Torfing, 2021; Klijn 2010; Amorim, 2020; Nesti, 2018; Burgers, 2022)
- **Learning:** to foster a culture of learning, enabling continuous improvement and knowledge sharing (Voorberg, 2017; Irving, 2004)
- **Personalization:** to facilitate personalization, tailoring products and services to individual needs (Petrescu, 2019; Radtke, 2023)

- **Satisfaction:** to cultivate customer satisfaction, ensuring a positive user experience (Voorberg, 2015; Kang, 2019; Palumbo, 2018; Best, 2019; Amorim, 2020; Bentzen, 2022b; MacLean, 2022)

Process outcomes

- **Conflict resolution:** co-creation can be instrumental in resolving conflicts (Steen, 2018; Petrescu, 2019; Laud, 2019; Torfing, 2019; Palumbo, 2018; Järvi, 2018)
- **Democratic accountability:** co-creation can be instrumental in promoting democratic accountability by involving diverse stakeholders in decision-making processes (Voorberg, 2015; Best, 2019; Petrescu, 2019; Irving, 2004; Torfing, 2019; Steen, 2018; Radtke, 2023; Amorim, 2020)
- **Inclusiveness:** co-creation can be instrumental in affecting inclusiveness (Thijssen, 2016; Torfing, 2019; Steen, 2018; Radtke, 2023)
- **Legitimacy:** co-creation can be instrumental in enhancing legitimacy (Best, 2019; Røiseland, 2022)
- **Resource integration:** co-creation can be instrumental in making full use of all available resources by different stakeholders (Laud, 2019; Petrescu, 2019)
- **Transparency:** co-creation can be instrumental in ensuring transparency (Engen, 2021; Järvi, 2018; Steen, 2018; MacLean, 2022)

Regime outcomes

- **Empowerment:** empowerment of external stakeholders, enabling them to contribute meaningfully to decision-making processes (Engen, 2021; Laud, 2019; Järvi, 2018; Radtke, 2023; Sudhipongpracha, 2016)
- **Litigation avoidance:** co-creation can also reduce the likelihood of litigation through proactive collaboration (Irving, 2004)
- **Reputation:** co-creation may enhance the reputation of organizations involved, showcasing their commitment to inclusive practices (Best, 2019)
- **Social cohesion:** co-creation initiatives may also foster social cohesion, bringing diverse actors together for a common purpose (Voorberg, 2015; Torfing, 2019; Irving, 2004)
- **Solution ownership:** co-creation initiatives may engender a sense of ownership among external stakeholders in society (Bentzen, 2022a; Irving, 2004)
- **Trust:** co-creation initiatives may increase trust among external stakeholders in society (Bentzen, 2022a; Kang, 2019; Irving, 2004; Järvi, 2018; Clifton, 2020; MacLean, 2022)

1.5 LESSON 5: MORE EMPIRICAL STUDIES INTO (DIGITAL) CO-CREATION INITIATIVES AND THEIR OUTCOMES IS CRUCIAL

In the last lesson, we reflect on our literature study by bringing attention to what is yet to be done in terms of co-creation research. Many of the articles within our literature study specifically call for more empirical research into (digital) co-creation initiatives and their outcomes. Below, we reflect on this and also propose our take on what research can contribute to the field.

A first call for empirical research surrounds the contemporary focus on the use of new technologies. Conducting more empirical studies on the use of new technologies in co-creation is then crucial to advance our understanding of the dynamic intersection between technology and co-creation processes. In the rapidly evolving landscape of technological innovations, empirical studies offer valuable insights into the practical

implications, challenges, and opportunities associated with integrating these tools into co-creation initiatives. This imperative is underscored by recent developments in the field, as highlighted in Dudau et al.'s (2019) editorial introduction to a Public Management Review (PMR) issue dedicated to co-creation and co-production. The paper provides a comprehensive overview of various conceptualizations of co-creation, co-production, and co-design, shedding light on the prevalent "co-" paradigm. Dudau et al. (2019) contend that while the collaborative approach has become normative, there is a pressing need to formulate concrete research directions. The authors advocate for a systems-oriented perspective in understanding public services, emphasizing the co-creation of value among stakeholders. Notably, Dudau et al. (2019) specifically call for empirical research examining the impact of technological innovations on co-design and co-production. Lember et al. (2019) contribute to this discourse by asserting the scarcity of empirical studies probing into the effects of new technologies on co-creation processes. Their observation underscores a critical gap in the existing body of knowledge, emphasizing the urgency and significance of empirical investigations to illuminate the intricate dynamics between technology and co-creation outcomes. As technology continues to evolve, empirical studies serve as an essential compass, guiding both researchers and practitioners toward evidence-based insights, best practices, and informed decision-making in the realm of co-creation enhanced by new technologies.

Moreover, Osborne et al. (2016) highlight an empirical research gap in the realm of co-creation by underscoring the underdeveloped research angle concerning the lived experience of service users and its co-construction within public service systems. The authors assert that the intricate links between service delivery, individual experiences, and the broader life experiences of service users remain largely unexplored, necessitating further empirical investigation. This perspective sheds light on the need for a more nuanced understanding of the dynamic interplay between service provision and the subjective experiences of those utilizing public services. Empirical studies, therefore, become essential tools to delve into the intricacies of co-creation, providing valuable insights into how the lived experiences of service users are shaped and co-constructed within the broader context of public service systems. If research were to delve into this unexplored field, they contribute not only to the theoretical foundations of co-creation but also offer practical implications for enhancing the effectiveness and relevance of public services by incorporating the perspectives and experiences of those directly impacted by them.

We propose ethnographic research as a means to respond to this call for more empirical research into the lived experiences of service users. Ethnographic research methods serve as a potent catalyst for enriching the co-creation field by offering a holistic and immersive approach to understanding the dynamics of collaborative processes (Cremers et al., 2018). Ethnography involves prolonged engagement, observation, and interaction within the natural context where co-creation unfolds, allowing researchers to capture the intricate nuances that may be missed through more traditional methods (Cremers & Janssen, 2022). By embedding themselves in the environments where co-creation initiatives take place, ethnographers gain deep insights into the social, cultural, and contextual factors that influence the collaborative dynamics between stakeholders. This approach facilitates a nuanced understanding of the tacit knowledge, social interactions, and power dynamics that shape co-creation efforts. Ethnographic research not only unveils the

explicit elements of collaborative processes but also uncovers the implicit, unspoken aspects that contribute to the success or challenges of co-creation initiatives. Moreover, the emphasis on participant perspectives and the lived experiences of stakeholders makes ethnography a powerful tool for capturing the multifaceted nature of co-creation, providing valuable data for refining strategies, addressing challenges, and fostering more inclusive and effective collaborative practices.

In the remainder of the BELSPO BRAIN-be 2.0 BECODIGITAL project (2022-2024), we ourselves will also respond to this call by conducting empirical research on the outcomes of co-creation for which this learning note serves as the basis. In the next phases of the project, we will use a variety of research methods to empirically test and further develop the outcome framework as presented in lesson four. The first of these research activities builds on already conducted interviews with practitioners of several co-creation projects. Now, we will send out a baseline survey amongst participants of these initiatives in order to gain insights into their expectations and experiences of goals and outcomes of the co-creation projects. Following this, we will organize focus groups with a selection of these participants to further discuss their views on the outcomes of these projects. Within the focus groups, we also aim to address their lived experiences as a participant of a co-creation project in order to better relate the outcomes to the field in which the co-creation project was conducted. Secondly, we will organize a workshop with co-creation experts and practitioners to evaluate the outcome framework and further develop it. Next, as a third research activity, we will conduct a survey amongst the general population. In this survey, we will conduct a vignette experiment using animated videos as well as a conjoint experiment. Both these experiments serve to gain insights into the preferences of participants in choosing if and how to participate in co-creation outcomes. As part of this survey, we will also ask about the expected outcomes of different co-creation projects in order to gain insights into the relation between these preferences and outcomes of co-creation projects. Lastly, our fourth research activity involves around co-creation projects that are yet to start. In this phase, the outcomes framework will be tested and refined through surveys and focus groups on two co-creation project. We will ask both practitioners and participants to complete an initial survey before the start of the co-creation project and a second survey after the end of the project. We organize focus groups between these two survey moments in which we discuss the progress of the project and look at the expectations for the remainder of the project.

In conclusion, these research activities represent a proactive response to the imperative call for empirical research on co-creation outcomes. The foundation laid by this learning note serves as a catalyst for the subsequent phases of the BELSPO BRAIN-be 2.0 BECODIGITAL project, where our approach involving interviews, surveys, focus groups, and workshops will be employed to empirically test and refine the outcome framework presented in lesson four. By engaging with practitioners, participants, co-creation experts, and the general population, the project not only seeks to enhance our understanding of co-creation outcomes but also aims to contribute valuable insights into the preferences, expectations, and lived experiences that shape the co-creation landscape.

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ANNEX 1 – ANNOTATED BIBLIOGRAPHY

Adcroft, A., & Willis, R. (2005). The (un) intended outcome of public sector performance measurement. *International journal of public sector management*, 18(5), 386-400.

The article explores the **potential unintended consequences** that can arise when performance measurement systems are used in public sector organizations. The authors argue that while performance measurement systems can be a useful tool for improving organizational efficiency and effectiveness, they can also have negative consequences, such as creating a focus on achieving specific targets at the expense of other important goals, distorting behaviors, and leading to gaming or manipulation of data.

Ansell, C., & Torfing, J. (2021). Co-creation: The new kid on the block in public governance. *Policy & Politics*, 49(2), 211-230.

This article has three objectives. The first is to show that while co-production was originally linked to the production of services, co-creation has broader applications in the field of public governance and encompasses a wider range of actors and activities. The second objective is to show how the concept of co-creation both builds on and extends the concept of collaborative governance, adding new dimensions to an already well-established literature. The final objective is to show how a strategic turn to co-creation introduces a new type of "generative governance" aimed at solving complex problems by building platforms that enable the formation of arenas for co-creation that bring together a wide range of public and private actors, including citizens, in creative problem-solving processes.

Bentzen, T. Ø. (2022). Continuous co-creation: How ongoing involvement impacts outcomes of co-creation. *Public management review*, 24(1), 34-54.

This article looks at **three different outcomes of co-creation** initiatives: innovation, ownership of solutions, and trust. They define innovation as the development and practical realization of new and creative ideas that generate added value within a given context. They define ownership as the level of commitment and responsibility that individuals or organizations feel towards the solutions that have been developed. They define trust as the willingness to take the risk of making oneself vulnerable to another person or party in the belief that they will take care of your interests. The study shows that these outcomes are strengthened by continuous involvement throughout the later stages of co-creation. Discontinuous involvement, on the other hand, fail to produce innovation, ownership to solutions, and even risks hampering existing trust due to disappointed expectations and suspicions of pseudo-involvement among low-power actors. Hence, discontinuous involvement risks eroding not only trust, but also the future conditions for co-creation.

Best, B., Moffett, S., & McAdam, R. (2019). Stakeholder salience in public sector value co-creation. *Public Management Review*, 21(11), 1707-1732.

The article examines the **key determinants of stakeholder salience** (i.e., how much priority co-creation managers give to the claims or interests of different stakeholders in making decisions) and how this impacts value co-creation. In terms of outcomes of co-creation initiatives, this study distinguishes between micro-level gains (e.g., more holistic support to service users, improved quality of life for service users, increased staff satisfaction, improved family relationships or increased voice of service users), meso-level outcomes (e.g., improved competition, monetary gains, reputational gains, increased economic outcomes, increased social inclusion for service users, new service innovation opportunities or improved legitimacy with funders), and macro-level outcomes (e.g., improved corporate and social responsibility). The study also identified a number of challenges related to achieving these outcomes: e.g., misaligned expectations, government reforms, reputational risks, lack of boundary spanning capacity or rigid compliance requirements. An important

point this article makes is that perceptions of co-creation outcomes and challenges can differ between stakeholders and service users. The authors explain that the definition of value is context-specific and value co-creation is contingent on the entire service ecosystem and the diverging stakeholders within this ecosystem. Consequently, co-creation as a dynamic process may also contribute to the improvement and well-being of such ecosystems.

Brandsen, T., & Honingh, M. (2018). Definitions of Co-Production and Co-Creation. In T. Brandsen, T. Steen, & B. Verschuere (Eds.), *Co-Production and Co-Creation: Engaging Citizens in Public Services* (pp. 9–17). Routledge. <https://doi.org/10.4324/9781315204956>

Co-production and co-creation share **commonalities** in that they involve direct input from citizens during the production phase, collaboration between service providers and citizens, and active citizen input in shaping services. They exclude inter-organizational collaboration and passive citizen input. The two concepts are also **different** in multiple ways. Co-production is inherent in the delivery of certain services, while co-creation is associated with the general planning of a service at a strategic level. Co-production concerns citizen input during the implementation phase of the production cycle, while co-creation concerns input in the design of a service, which can be both individual or collective, depending on the level at which the service is addressed.

Brudney, J. L., & England, R. E. (1983). Toward a definition of the coproduction concept. *Public administration review*, 59-65.

This article is a seminal work on the **conceptualization of co-production**. It provides several important insights. First, it argues that co-production is a collaborative process between government and citizens in which both parties contribute their resources and skills to produce a public service. Second, it shows that this partnership is based on shared responsibility, mutual respect, and open communication. Third, it can occur at various stages of the service delivery process, including planning, design, delivery, and evaluation. Fourth, co-production can take different forms depending on the level of citizen involvement, the type of service being produced, and the distribution of power and responsibility between government and citizens. Finally, co-production has the potential to improve the quality and effectiveness of public services by engaging citizens in the design and delivery process and by fostering a sense of ownership and accountability among both government and citizens.

Clifton, J., Díaz Fuentes, D., & Llamosas García, G. (2020). ICT-enabled co-production of public services: Barriers and enablers. A systematic review. *Information Polity*, 25(1), 25-48.

This paper provides an overview of the main structural and cultural factors that act as enabler of barrier for ICT-enabled co-coproduction. The authors provide a definition of ICT-enabled co-production: the use of ICTs to support engagement in the co-production of public services. There are two common forms of ICT-enabled co-production: (1) facilitating traditional forms of co-production; and (2) establish new ways to co-produce. Structural government barriers: (1) shortage of finance (2) inadequate technical skills of staff (3) complex regulation (I.e. privacy regulations) Cultural government barriers: (1) resistance of professional staff to use ICTs in co-production Structural government enablers: (1) government selection of lower cost ICT solutions (2) adequate staff training (3) government support to adapt regulation to ICT-enabled co-production Cultural government enablers: (1) government solutions to restore trust between citizen and governments Structural citizen barriers: (1) demographic factors (I.e. older people and women tend to ICTs to co-produce less) (2) worries and negative emotions around technology Cultural citizen barriers: (1) lack of trust in government (2) specific ethnic, social, and language differences (3) fearing disruption of tradition forms of social interaction Citizen enablers: (1) earlier involvement of citizens in ICT-enabled

co-production (particularly design phase) (2) running tailored technical training (3) constitute collaborative groups as a form of social capital, which tends to strengthen trust.

Dudau, A., Glennon, R., & Verschuere, B. (2019). Following the yellow brick road?(Dis) enchantment with co-design, co-production and value co-creation in public services. *Public Management Review*, 21(11), 1577-1594.

This paper serves as an editorial introduction to a PMR issue on co-creation and co-production. This paper gives an interesting overview of the **different conceptualizations** of co-creation, co-production and co-design. The authors describe how the "co-" paradigm has become so normative that there is a need to break down the magic into concrete research directions, and emphasizes the importance of a systems' view of public services, where value is co-created between stakeholders. The authors call for research into the effect of technological innovations on co-design and co-production.

Engen, M., Fransson, M., Quist, J., & Skållén, P. (2021). Continuing the development of the public service logic: a study of value co-destruction in public services. *Public Management Review*, 23(6), 886-905.

This study identifies **four types of causes of value co-destruction**: (1) a lack of transparency, (2) errors, (3) a lack of bureaucratic competence, and (4) an inability to serve. Lack of transparency includes a lack of information about a specific case and the service ecosystem. Mistakes refer to operational errors by individuals or machines. Lack of bureaucratic competence may be a poor understanding of the regulatory framework or difficulty of users to navigate the system. Inability to serve relates to users being unable to get in contact with PSOs, often due to changes implemented by the agencies. The article provides **a definition of value co-destruction**: *Value co-destruction takes place between actors involved in a mutual relationship that is based on direct interaction. Value co-destruction happens when interacting parties fail to integrate resources in a mutually-beneficial manner, leading to the diminishment of value-in-use for one or more of the interacting parties.*

Hoque, Z. (2008). Measuring and reporting public sector outputs/outcomes: Exploratory evidence from Australia. *International Journal of Public Sector Management*, 21(5), 468-493.

The contribution that this article makes to our literature review is that it is important to **measure and report outcomes in a way that accurately reflects their impact**, which in the context of collaboration and co-creation can be challenging due to the involvement of multiple stakeholders and the difficulty of measuring short and long-term impacts. To effectively measure and report on co-creation outcomes, a robust performance measurement and reporting framework is needed that incorporates both quantitative and qualitative measures and is based on a clear understanding of the goals and objectives of the co-creation initiative.

Irvin, R. A., & Stansbury, J. (2004). Citizen participation in decision making: is it worth the effort?. *Public administration review*, 64(1), 55-65.

This article gives an insight in the **potential advantages and disadvantages of co-creation initiatives** (or citizen participation in decision-making). It differentiates between these (dis)advantages to **citizen participants** on the one hand and to **government** on the other hand. Moreover, impact of co-creation processes can relate both to the **decision-making process** itself and the **substantive outcomes** of the process. In terms of **advantages of co-creation**, the article proposes that involving citizens will produce better policy outcomes and improve public trust in government. It explores six main potential benefits of citizen participation. First, co-creation can educate and inform citizens, help administrators make better policy decisions, and lead to better social and environmental outcomes. Second, public actors may shift part of their decision-making

responsibilities to participatory groups to obtain acceptance and diffuse opposition from influential community members. Third, co-creation allows community activists to have regular contact with decision-makers and persuade them in a non-confrontational atmosphere. Fourth, co-creation initiatives can improve social outcomes by balancing input from diverse citizen participants. Fifth, co-creation initiatives can reduce the probability of litigation (but it can also be costly and may not always prevent legal disputes). Finally, co-creation initiatives can be useful for informing public officials of where volatile public backlash is likely to occur and winning the sympathies of influential citizens in areas where opposition to a given policy solution is strongest. In terms of **disadvantages of co-creation**, the article discusses several potential problems. First, the cost of public participation in decision making is often overlooked, and the per-decision cost of citizen-participation groups can be more expensive than the decision making of a single administrator, even if citizen participants' time costs are ignored. Second, co-creation organizers may need to gain the trust and friendship of citizens, particularly in communities where there is a lot of anti-government sentiment, but collaborative decision making may not be effective in larger communities where citizen participants represent only a small portion of the population. Third, the lack of payment for citizen participants in committees can result in strong and biased partisanship from those who can afford to participate, leading to inequality in representation and unfairness in the public participatory process. Fourth, participatory decision-making processes often have limited efficacy in changing policy and may backfire by increasing public dissatisfaction, leading to resentment and demoralization if citizen participants are misled into thinking their decisions will be implemented, but are ignored or taken under advisement without representation and authority to make decisions. Fifth, while some believe that citizen participation in decision-making leads to increased altruism, others see it as an opportunity for personal gain. Table 1 of the article shows the advantages of citizen participation in government decision making. The authors distinguish between two tiers of benefits to consider (process and out-comes) and two beneficiaries (government and citizens) in evaluating the effectiveness of the citizen-participation process. Table 2 of the article shows the disadvantages of citizen participation in government decision making, using the same tiers and beneficiaries as listed above.

Järvi, H., Kähkönen, A. K., & Torvinen, H. (2018). When value co-creation fails: Reasons that lead to value co-destruction. *Scandinavian Journal of Management*, 34(1), 63-77.

This article identifies **eight reasons for value co-destruction**, including (1) the absence of information, (2) lack of trust, (3) mistakes, (4) the inability to serve or (5) the inability to change, (6) unclear expectations, (7) customer misbehavior, and (8) blaming. For instance, the absence of information can lead to value co-destruction, and both the provider and customer can contribute to it through incorrect or inadequate provision or processing of information. Next, a lack of trust can also lead to value co-destruction, and it can occur when the customer is unwilling to provide information, there is an inability to trust, or when the customer acts selfishly. Third, mistakes (such as wrong assumptions or incorrect products) can also play a key role in the emergence of value co-destruction. Next, value co-destruction can also arise from the inability to serve, which can result from expensive offerings, inadequate customer relationship management, false expectations, and slow processes, or the inability to adapt to changing circumstances, such as changing rules, regulations, and consumer trends. Another reason for value co-destruction is the absence of clear expectations where customers don't receive what they want and providers fail to deliver, due to unclear or inaccurate needs, resulting in difficulty in co-creating value between customers and providers. Customer misbehavior, such as misuse of a product, incorrect storage of products, and disruptive behavior, can lead to value co-destruction by causing stress for providers. Finally, harmful or groundless blaming can be a reason for value co-destruction because negative feedback can quickly spread on social media and impact a firm's reputation. Figure 1 and 2 of the article provide the coding scheme used for the article's analysis. The authors also provide insights into how they

established this coding scheme and what their process of analysis was. This may be useful to look back to for our own empirical research. Same for their interview questions on page 75.

Kang, S., & Van Ryzin, G. G. (2019). Coproduction and trust in government: evidence from survey experiments. *Public Management Review*, 21(11), 1646-1664.

This article investigates whether (voluntary) **coproduction influences perceptions of citizens about trust** in government processes and outcomes. The findings of the experiments were weak, but the authors argue that there are still theoretical and empirical reasons to encourage further research on the topic. One of the suggestions they make is using satisfaction with or perceived value of public services as a dependent variable, rather than trust, may yield more similar outcomes to willingness-to-pay research. The article suggests that coproduction can influence how citizens view and value government services and institutions, and while the experiments found limited support for this hypothesis, future research can explore the possible effects of coproduction with stronger manipulations, larger samples, or alternative experimental designs.

Klijn, E. H., Steijn, B., & Edelenbos, J. (2010). The impact of network management on outcomes in governance networks. *Public administration*, 88(4), 1063-1082.

The article explores the **relationship between network management and outcomes in governance networks**. The authors argue that effective network management plays a crucial role in achieving positive outcomes in governance networks. This requires a combination of leadership, coordination, trust-building, and adaptiveness. The authors also make an interesting conceptualization of the different content outcomes and process outcomes that can emanate from such networks.

Laud, G., Bove, L., Ranaweera, C., Leo, W. W. C., Sweeney, J., & Smith, S. (2019). Value co-destruction: a typology of resource misintegration manifestations. *Journal of Services Marketing*, 33(7), 866-889.

The key contribution of this article is that it explains **different ways value co-destruction can happen**. The main antecedents for value co-destruction relate to a misintegration of resources during the co-creation process. The article argues that value co-destruction manifests itself in (1) a lack of resources to integrate, (2) blocked access to integrate resources, (3) unwillingness to integrate resources, (4) misunderstanding of how to integrate resources, (5) disagreement on how to integrate resources, (6) deceptive integration of resources, (7) negligent integration of resources, (8) incapacity to integrate resources, (9) excessive integration of resources, or (10) coercive integration of resources. The occurrence of these misintegration of resources can be linked to various potential causes such as power imbalance, lack of capacity, conflict, personal issues, biases, et cetera. Table 1 of the article provides possible useful examples of each manifestation of value co-destruction and states whether the disintegration of resources is accidental or deliberate.

Lember, V., Brandsen, T., & Tönurist, P. (2019). The potential impacts of digital technologies on co-production and co-creation. *Public Management Review*, 21(11), 1665-1686.

This article argues that the impact of digital technologies on co-production requires an analysis of technological processes. The authors identify **four types of technologies that can have an impact**: detection, communication, processing and activation. Detection technologies gather information on different aspects of social life, and data mining enables the analysis of large observational datasets. Communication technologies such as social media and blockchain create new opportunities for interaction, while processing technologies such as big data analytics and machine learning enable non-intrusive monitoring and prediction. Activation technologies, such as robotics and 3D printing, can indirectly influence co-production patterns. The article discusses **four elements**

of co-creation processes that could be impacted by these digital technologies: establishing direct interaction, motivating participants, bringing resources to the service, and sharing decision-making. Table 1 of the article summarizes for each of the four digital technologies how they affect these four components of co-creation and co-production processes. The authors define three potential effects of digital technology on co-creation processes: (1) augment or enable; (2) diversify; and (3) substitute for. The authors point out that whatever the effects of specific technologies are, they are always contingent on the context and environment they are used in. **Possible research angle:** The authors state that there is a lack of empirical studies into the effects of new technologies on co-creation processes.

Linders, D. (2011, June). We-Government: an anatomy of citizen coproduction in the information age. In *Proceedings of the 12th Annual International Digital Government Research Conference: Digital Government Innovation in Challenging Times* (pp. 167-176).

This paper examines whether the tools of the Information Age, such as the internet, make citizen coproduction of public services more viable and effective. An important contribution this article makes is providing an **extensive overview of the different forms of co-production** that exist depending on the **stages of the service delivery cycle** (i.e., planning/design, delivery/execution, and monitoring/evaluation) and on the **distribution of power and responsibility** (i.e., citizen to government, government with citizen, government to citizen, and citizen to citizen). Based on this typology, the article examines how the introduction of the internet and other digital information technologies has impacted these different types of citizen-government relationships. The author found that digital technologies in the Information Age are increasingly empowering non-state actors to enhance their capabilities for self-organisation and value creation, shifting the balance towards civil society and away from government. This increased active role of the public is conceptualised through the term '**We-Government**' by the author. Within the We-Government, the government moves towards a steer thatcher than race and has a more facilitating role in which they empower the public to help themselves. The author found four forms of coproduction most affected by the Information Age: (1) citizen sourcing; (2) public-civic partnership; (3) government as platform; and (4) do it yourself government.

Loeffler, E., & Bovaird, T. (2018). Assessing the effect of co-production on outcomes, service quality and efficiency. In *Co-production and co-creation* (pp. 269-280). Routledge.

This book chapter provides an overview of the **different effects co-production initiatives** may have on outcomes, service quality and efficiency. For instance, it argues that co-production can lead to increased public outcomes, both on personal well-being and collective outcomes, and can be economically evaluated (i.e., in terms of effectiveness). Moreover, co-production can also improve the quality of public services, but satisfaction may decrease if users lack expertise or feel forced to participate. Co-production may also improve the efficiency of public services by reducing organizational inputs or increasing organizational outputs. Co-production can also impact public governance principles (e.g., transparency, sustainability, integrity, ...), but such topics have been explored scarcely and mainly qualitatively. Finally, co-production can also increase social capital by improving social networks, reducing stigma associated with certain topics, and creating a greater sense of belonging in local groups and communities of interests. The chapter also briefly looks at the **potential costs of co-production processes**. These can include increased front-line staff and managerial inputs, investments in ICT-enabled forms of co-production, and in public infrastructure to allow citizens to make a greater contribution, as well as increased inputs of local councillors. In addition to this, co-production processes also involve increased inputs for learning about co-production opportunities and preparatory and training activities. The operational inputs increase due to more intensive co-production, and co-producing citizens may have to sacrifice their time and incur extra monetary costs. Co-producing citizens may also make monetary donations or experience

psychological costs when they have to make changes to their lifestyle or build new social relationships. The authors note that the assessment of whether something can be seen as a benefit or a cost of co-production is stakeholder specific, and what is a benefit for one could be a cost for others. This could be an interesting angle for empirical research. This book chapter gives some specific examples of outcome improvements as a result of co-production, which could be useful in an empirical paper.

Marvel, J. D. (2016). Unconscious bias in citizens' evaluations of public sector performance. *Journal of Public Administration Research and Theory*, 26(1), 143-158.

This article provides **insight into how evaluations of public sector performance can be biased by underlying attitudes of citizens**. The findings suggest that individuals' evaluations of public sector performance are influenced by their unconscious beliefs about the public sector; that the effect of information on individuals' performance evaluations will be short-lived; and that individuals' underlying beliefs about public sector performance will be difficult to change. What this article makes clear is that if citizens' evaluations are influenced by unconscious biases, this could also affect their perceptions of the outcomes of co-creation initiatives.

Osborne, S. P., Radnor, Z., & Strokosch, K. (2016). Co-production and the co-creation of value in public services: a suitable case for treatment?. *Public management review*, 18(5), 639-653.

The article seeks to integrate insights from both the PAM and service literatures to **differentiate related concepts** within the term "co-production" and link them to the co-creation of value through public service delivery. It distinguishes between four forms of co-creation based on the voluntary or involuntary nature and the locus of co-creation: co-production, co-construction, co-design, and co-innovation. Co-production involves involuntary and intrinsic technical co-creation between users and staff. Co-design involves voluntary and conscious co-creation to improve existing public services. Co-construction focuses on how the service experience integrates with the overall life experience of the service user. Co-innovation entails the voluntary co-creation of new public service delivery models through user involvement in the innovation process. The authors explain that co-production fails to challenge the basic premises of public service delivery related to the role of service professionals, stating that co-production still requires service professionals to initiate, control, and coordinate services for citizens. The authors refer to four ideal types of value co-created in public service delivery: (1) by meeting individual/ group social needs (2) by meeting community needs (3) by individual well-being created through (1) or (2) (4) social capital in an individual/ community that creates capacity to resolve problems in the future. The authors raise an interesting point about resistance within the public service delivery, they define it as as much part of the co-production process as willingness or unconscious involvement. This could be an interesting angle to look at 'the dark side' of co-production. The authors also point to a possibly interesting field of future research: the lived experience of service users and its co-construction within public service systems. The links between delivery, individual experience, and wider life experience of service users need further exploration.

Palumbo, R., & Manna, R. (2018). What if things go wrong in co-producing health services? Exploring the implementation problems of health care co-production. *Policy and Society*, 37(3), 368-385.

The article centers around the **challenges that can arise during the implementation** of co-production initiatives in healthcare. The authors discuss the potential benefits of co-production, such as increased patient satisfaction, better health outcomes, and greater cost-effectiveness. Consequently, they identify several challenges that can arise during the implementation of co-production initiatives. These challenges include issues related to power dynamics, conflicts of interest, communication breakdowns, and the difficulty of balancing competing demands.

Petrescu, M. (2019). From marketing to public value: towards a theory of public service ecosystems. *Public Management Review*, 21(11), 1733-1752.

This article is about **how the literature defines and understands different types of value** in public services. It argues that value is something that is based on people's opinions and is created when people interact with the service provider. In public services, the value depends on input from citizens and benefits both the individuals using the service and the community as a whole. This means that public value cannot be analyzed just at an individual level, but needs to be seen from a broader perspective. We need to look at how public services work as a whole system, and not just focus on the individuals or users involved. In specific, the article argues that values (and outcomes) can be examined at different levels: micro, meso, macro, individual, collective, societal, et cetera.

Rodriguez Müller, A. P., Casiano Flores, C., Albrecht, V., Steen, T., & Cromptvoets, J. (2021). A scoping review of empirical evidence on (digital) public services co-creation. *Administrative Sciences*, 11(4), 130.

This article critically explores public service co-creation literature through a scoping review. The review focuses on 25 empirical studies using a variety of digital, analog, or hybrid tools for co-creation. The authors found that the reasons and purposes behind the implantation of co-creation processes can be categorised into four themes: (1) co-creation to improve public service provision; (2) to innovate; (3) to create new public services; and (4) user-driven co-creation. Table 3 in the article provides an overview of which empirical studies found one or more of these purposes. The authors identified and classified the co-creation tools (digital, analog, hybrid) used in different phases of the co-creation process (co-design, co-delivery, co-evaluation). Table 7 of the article gives an overview of these co-creation tools and approaches. The authors state several challenges to public service co-creation: (1) the inclusiveness and equality of co-creation processes (for digital tools, this includes the digital divide) (2) difficulties in meeting the expectations of all involved stakeholders to achieve co-creative synergy (3) issue of power dynamics (4) concerns about the actual tangible and sustainable impact of co-creation.

Rodriguez Müller, A. P. (2020). Making smart cities "smarter" through ICT-enabled citizen coproduction. *Handbook of smart cities*, 1-21.

This book chapter provides a thorough review of ICT-enabled citizen coproduction. The authors lists 8 dimensions of ICT-enabled coproduction of smart public services: (1) approach; (2) level; (3) service cycle; (4) provider vs. Beneficiary; (5) mode of technology; (6) delivery mode; (7) service authority; and (8) ICT pillar. For each dimension, the author provides a definition and the different categories within the dimension. An overview of this can be found in table 1 of the article. The author provides three main advantages of ICT-enabled co-production: (1) more feasibility and relevance for both the co-production process and its outcomes (2) service quality can be enhanced through expertise and information otherwise not available (3) it is expected to increase inclusion, democracy, and participation The author also provides three main challenges of ICT-enabled co-production: (1) the digital divide referring to uneven access (2) the adoption of technological advances might direct the power and control towards particular social groups such as highly educated, ICT-skilled citizens (3) tensions between privacy and openness, or between the expense of setting up a digital platform and the long-term savings it offers

Røiseland, A. (2022). Co-creating democratic legitimacy: Potentials and pitfalls. *Administration & Society*, 54(8), 1493-1515.

This article explores **how co-creation can affect the legitimacy** of democratic processes. It argues that the benefits and challenges of co-creation depend on how we understand democracy

(e.g. deliberative, participatory or liberal), and that two challenges are the unequal resources available to citizens and the competing role of political parties. The article suggests that output-based co-creation (i.e., concrete problem-solving or practical service delivery) can improve legitimacy, but input-based co-creation (i.e., policy design and policymaking) may have conflicts with the traditional political system.

Steen, T., Brandsen, T., & Verschuere, B. (2018). The dark side of co-creation and co-production: seven evils. In *Co-production and co-creation* (pp. 284-293). Routledge.

The key take-away message from this book chapter is that optimism in co-creation and co-production can hide some **potential pitfalls**. The chapter discusses several potential negative outcomes, including rejection of responsibility, failing accountability, transaction costs, loss of democracy, reinforced inequalities, and co-destruction. For instance, relying on user engagement and citizen responsibility in addressing societal challenges can be seen as both enhancing collective action and rejecting government responsibility and accountability, particularly in the context of financial concerns and pressures for a smaller and more efficient government. Second, co-creation of public services can lead to a lack of clear responsibilities and accountability, requiring clearly outlined roles and financial processes, and potential issues with continuity, partnership fatigue, and litigation. Third, co-creation comes with high transaction costs, including process costs related to information asymmetries and participant behavior. Fourth, co-creation (but mainly co-production) also challenges the balance of representative democracy, participative democracy, and professional expertise and may not always meet the ideal democratic standards, while institutionalizing involvement of users may prevent them from taking a critical stance. A fifth potential pitfall is that co-creation may reinforce existing power imbalances and inequalities between government, civil society, and citizens, potentially leading to the domination of wealthier and highly educated individuals and groups, and preventing equal access to services and treatment. Finally, co-creation processes have the potential for co-destruction of value due to mixed results, misuse of role, controversial practices, and potential manipulation for less democratic ends, and may increase distrust if inflated expectations are not met.

Thijssen, P., & Van Dooren, W. (2016). Going online. Does ICT enabled-participation engage the young in local governance?. *Local Government Studies*, 42(5), 842-862.

This article explores a **potential pitfall of online co-creation** initiatives: younger generations being underrepresented in the processes of participation. The authors find that simply going from offline to online participation reinforces rather than mitigates age bias. The implication for participation is that offering an online channel is not enough to entice younger generations to participate. On the contrary, the age bias might even become stronger.

Torring, J., Sørensen, E., & Røiseland, A. (2019). Transforming the public sector into an arena for co-creation: Barriers, drivers, benefits, and ways forward. *Administration & Society*, 51(5), 795-825.

This article provides an **important definition of co-creation**: *a process through which two or more public and private actors attempt to solve a shared problem, challenge, or task through a constructive exchange of different kinds of knowledge, resources, competences, and ideas that enhance the production of public value in terms of visions, plans, policies, strategies, regulatory frameworks, or services, either through a continuous improvement of outputs or outcomes or through innovative step-changes that transform the understanding of the problem or task at hand and lead to new ways of solving it* (p. 802). The key take-away message of this article is that co-creation is not limited to a particular (functional) area of the public sector. It can take place in different areas, such as service provision, public problem-solving, and public regulation, and in different thematic areas of the public sector, including child care, elderly care, or infrastructure renewal. Like other forms of participatory governance, co-creation has both **potential benefits** and

potential risks associated with it. The potential risks include biased participation, difficulties with ensuring democratic accountability, and the potential for costly conflicts. On the other hand, the potential benefits include enhancing democratic participation and deliberation, fostering more efficient and effective solutions, and strengthening social cohesion. In terms of '**the dark side of co-creation**,' the authors point out that inclusion of marginalised groups in impact-driven co-creation has been proven difficult. See also: Young, 2000; Quick & Feldman, 2011. Potentially useful for empirical paper: "**the ladder of co-creation**:" (1) empower citizens to enhance their capacity to master their own lives and encourage them to co-create the services they are offering; (2) not only co-producing but also engage in creating value for other citizens (through voluntary work); (3) provide input into design of new tasks and solutions; (4) public and private actors engage in mutual dialogue in designing solutions and coordinating implementation; and (5) public and private actors participate in institutional arenas that facilitate collaborative innovation based on joint design and implementation processes. The authors define five systematic changes needed for co-creation to flourish in modern public service: (1) a more trust-based steering system; (2) a more long-term focus; (3) ICT developments need to enhance collaboration and innovation in the 'front office'; (4) a new culture that puts a premium on dialogue, curiosity, and openness; and (5) a stronger emphasis on input and output legitimacy.

Voets, J., Van Dooren, W., & De Rynck, F. (2008). A framework for assessing the performance of policy networks. *Public management review*, 10(6), 773-790.

A public network performance framework should include different dimensions and multiple levels of assessment. The **three levels of assessment** are: the micro-level focusing on the performance of individual organizations, the network level focusing on the network as a whole, and the community level focusing on policy sectors, target groups, and geographical areas. In addition to this, frameworks should focus on **three dimensions of performance**: product, process and regime. Product performance focuses on aspects such as efficiency and effectiveness. Process performance focuses on values like fairness, honesty, and mutuality and is measured by levels of trust and legitimacy. Regime performance is linked to the robustness and resilience of the government to operate in adverse conditions and to deal with future challenges, measured by survival and security.

Voorberg, W. H., Bekkers, V. J., & Tummers, L. G. (2015). A systematic review of co-creation and co-production: Embarking on the social innovation journey. *Public management review*, 17(9), 1333-1357.

There appears to be an underlying assumption that citizen involvement is inherently valuable, much like democracy and transparency. As a result, citizen involvement is normatively viewed as a fitting component of the process. This assumption is reinforced by several studies arguing that the sole purpose of co-creation/co-production was simply to involve citizens. In cases where objectives were mentioned, they were often linked to efficiency and effectiveness. Out of the 122 studies in this review, 52% did not mention any objective. Among the mentioned objectives, gaining more **effectiveness** was the most frequent (18%), followed by gaining more **efficiency** (11%), gaining **customer satisfaction** (8%), and increasing **citizen involvement** (7%). There were also a few studies that mentioned other objectives (4%). The article discusses several **organizational factors** that influence co-creation/co-production initiatives in the public sector. The first factor is the compatibility of public organizations in terms of inviting structures and communication infrastructure. The second factor is the attitude of public officials and politicians towards co-creation, with political and professional reluctance to lose control cited as a common barrier. The third factor is the influence of a risk-averse and conservative administrative culture, which may not see citizens as reliable partners. The fourth factor is the importance of clear incentives for co-creation, as administrators may not see the usefulness of such initiatives without a clear understanding of the benefits. The article also identifies several **citizen-level factors** that influence citizen participation in co-creation initiatives. First, citizens' personal characteristics, such as education and intrinsic values, affect their willingness to participate. Second, citizens need to feel a sense of ownership and perceive their

ability to influence public services. Third, social capital is essential for sustained citizen involvement in co-creation initiatives. Finally, citizens need to trust the co-creation process. However, in some cases, patients may be risk-averse towards co-creative initiatives, particularly if they perceive doctors and nurses as authority figures. Based on their literature review, the authors conclude that most studies on co-creation and co-production do not focus on the identification or evaluation of specific results of these processes. Of the studies that do discuss outcomes, the majority report an increase or decrease in effectiveness as a result of co-creation/co-production. Some specific examples are given, such as increased treatment quality in healthcare and increased knowledge about organic farming. However, there are also cases where co-creation/co-production did not result in positive outcomes, such as in Japanese garbage disposal. Out of 24 outcomes reported, the most common type is gaining more **effectiveness**, accounting for 59% of the reported outcomes. Increasing **citizen involvement** is the second most common type, accounting for 25% of the reported outcomes. The remaining reported outcomes are gaining more **efficiency**, gaining **customer satisfaction**, strengthening **social cohesion**, and **democratizing public services**, each accounting for 4% of the reported outcomes. Methodologically, the authors conclude that qualitative methods form the dominant approach in empirical studies on co-creation in the public sector, making context-specificity a highly accounted for attribute whereas generalisability is less common. Citizens were included as co-creators in three roles: (1) co-implementer; (2) co-designer; or (3) initiator. Out of 136 types of involvement, 50% had citizens as co-implementer, 28% had them as co-designer, and 9% as initiator (13% had no specific type of citizen involvement). Related to a lack of specification on co-creation outcomes, the authors found that there is often not a specific objective to why co-creation must be achieved or why it could be of importance. Therefore, they conclude that co-creation is a value in itself that contributes to an overall objective of increasing citizen involvement.

Voorberg, W., Bekkers, V., Flemig, S., Timeus, K., Tonurist, P., & Tummers, L. (2017). Does co-creation impact public service delivery? The importance of state and governance traditions. *Public Money & Management*, 37(5), 365-372.

The article argues that successful co-creation depends on the **state and governance traditions** of a country. The authors compared four countries (Germany, Estonia, the Netherlands, and the UK) and found that the way a government responds to challenges can be explained by its traditions. They suggest that understanding the specific details of a country is important for researchers who want to know how, why, and when co-creation is used. It's important for researchers to consider the context of a country when studying co-creation. Important to address in our empirical papers!

Voorberg, W., Bekkers, V., Timeus, K., Tonurist, P., & Tummers, L. (2017). Changing public service delivery: learning in co-creation. *Policy and Society*, 36(2), 178-194.

The co-creation outcomes addressed in this study are **learning** (i.e., frame adaptation) and **policy change**. The paper argues that the extent to which (and how) policy changes occur, is affected by the macro context of state and governance traditions in which actors and policy are embedded. The authors explain that there are two dimensions in which defining factors of state and governance traditions can be categorised: sharing of authority and culture of governance.

Wang, X., & Wan Wart, M. (2007). When public participation in administration leads to trust: An empirical assessment of managers' perceptions. *Public administration review*, 67(2), 265-278.

This study empirically assesses the argument that **public participation (as a form of co-creation) enhances public trust**. It starts from the general normative argument that better informed citizens can actively and constructively contribute to decision making on policy issues, regulatory requirements, and even service levels and that this improved information and involvement, in turn, helps to achieve better results. The authors find that public trust can be

increased through participation that produces high-quality services, enhanced ethical behavior, and institutionalization of ethics in government; however, consensus-building, public exposure to information, and managerial competence alone are not enough to win public trust.

