TROPICO
Transforming into Open, Innovative and Collaborative Governments

ANNEX TO THE POLICY BRIEF - ENHANCING INNOVATION THROUGH PUBLIC-PRIVATE COLLABORATION (DELIVERABLE 7.3)

Extended list of policy recommendations

Work Package 7

Chesney Callens, Koen Verhoest, Dries Van Doninck, and Emmanuel Dockx
University of Antwerp
Antwerp, Belgium

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No.726840
Follow us online www.tropico-project.eu
Follow us on Twitter @tropico_project

Disclaimer	This document reflects only the authors' views and neither the Agency nor the Commission are responsible for any use that may be made of the information contained therein

WP7 Team	Chesney Callens, Koen Verhoest, Dries Van Doninck, Emmanuel Dockx, Jan Boon University of Antwerp, Antwerp, Belgium
Contributing partners	Lena Brogaard, Roskilde University (RUC), Denmark Erik-Hans Klijn and Vidar Stevens, Erasmus University of Rotterdam (EUR), the Netherlands Lourdes Torres, Vicente Pina, Sonia Royo and Jaime Garcia-Rayado, University of Zaragoza (UNIZAR), Spain Steven Nõmmik and Veiko Lember, Tallinn University of Technology (TUT), Estonia

This document is an annex to the TROPICO deliverable D7.3 - Policy Brief. It develops the list of recommendations included in the policy brief.

Table of Contents

Introduction

In our research in TROPICO Work Package 7 (WP7), we have investigated the conditions that affect collaborative partnerships in creating innovative public services, and conducted 19 case studies of collaborative eHealth projects in five countries (Belgium, Denmark, Estonia, Spain, and the Netherlands).[1] A policy brief (TROPICO Policy Brief D7.3) was published to make findings and recommendations available to practitioners in a condensed format. In the present document, an Annex to the policy brief, we provide an extended list of recommendations for policy and practice on how innovative ICT-enabled public services can be developed and implemented by different types of collaborative partnerships. Some findings and recommendations indicated in the policy brief and in this annex find support in recent empirical research on collaborative innovation, and where relevant we refer to this research (see Verhoest et al., 2019, 2020; Verlinden and Verhoest, 2020; Dockx et al., 2020[2]).

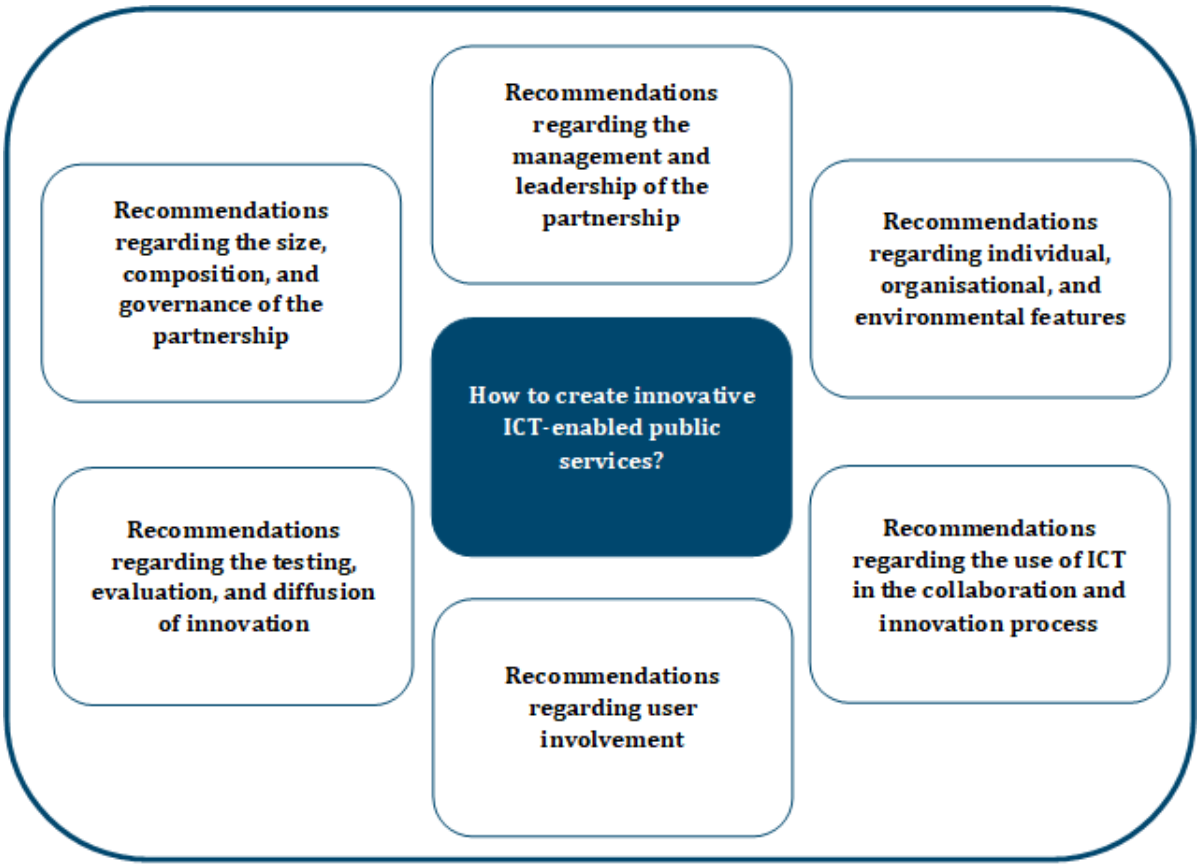
The policy recommendations are structured according to six different types of features of collaborative innovation, as displayed in Figure 1. First, recommendations concerning the **size, composition, and governance** of the partnership are provided. These recommendations focus on how partnerships can exploit the broad variety of actors in such collaborative arrangements, and how they need to be structured to allow an optimal use of the present actors. Second, recommendations regarding the **management and leadership** are provided. These recommendations revolve around the question of how coordinators (or other actors) lead and manage the complexities in the partnership. Third, recommendations regarding **individual, organisational, and environmental features** are provided. These recommendations focus on which characteristics and behaviours of individuals and organisations are desirable in collaborative innovation processes, and how the partnership might seek support for the innovation from the external environment. Fourth, recommendations regarding the **use of ICT** are given. These recommendations provide advice on how ICT can be effectively used in the partnerships to stimulate the collaboration and

[1] For other WP7 publications, see the TROPICO website

[2] Recent research by the involved research teams includes the BRAIN-funded project Public Sector Innovation through Collaboration (PSI-CO) which studied 9 cases and surveyed more than 800 federal public managers in Belgium (https://www.uantwerpen.be/en/projects/PSI-CO/project-results/) and a research project on 'Agile government' (https://www.steunpuntbestuurlijkevernieuwing.be/publicaties).

innovation processes. Fifth, recommendations considering the **user involvement** are formulated, as users are important stakeholders in collaborative innovation processes. Finally, recommendations regarding the **testing, evaluation, and diffusion of innovation** are formulated. These recommendations are particularly interesting for those who want to implement service innovations.

Figure 1: Recommendation for collaborative innovation



1. Recommendations regarding the size, composition, and governance of the partnership

Recommendation 1: Design an appropriate governance structure for the partnership

A partnership structure should encourage creative processes as well as goal-alignment. Ideation and interaction are crucial components of every collaborative innovation process, and they should be stimulated by the partnership structure in which the innovation process is deployed. A thoughtful consideration of the components of this structure and governance (e.g. project teams, steering committees, etc.) is crucial to allow synergistic interactions between the partners to stimulate mutual learning, trust, and goal alignment. Project teams can be established to increase the interactions between specific groups of actors, activate certain actors, or manage conflicts between actors. The project structure might allow for both centralised and distributed governance (and hence stimulate particular styles of decision-making), but this choice should be conditioned upon the project goals and the participant profiles.

Recommendation 1.1: *Foster frequent connections and interactions between actors*. These interactions facilitate the exchange of information inside and outside meetings, and thus enhance learning. Collaboration enables the development of new ideas through the interaction between actors with different perspectives and knowledge bases. Intensive interactions can be stimulated by the design of the governance structure. One way to do this is by creating multiple small groups, where interconnections between the actors are high, that come together and interact on a certain topic (see also Verhoest et al. 2019, pp. 52 and 107). The exploration of new ideas and solutions requires a certain autonomy of the actors. To create this autonomy, project groups in the governance structure that gather around one specific topic should be able to organise themselves (structure of meetings, choice of leader). They should also be granted a mandate to make certain decisions, as having to ask for feedback of superiors can slow down and stall the interaction process.

Recommendation 1.2: *As a coordinator, stay connected to all levels and groups of the governance structure.* While a governance structure can foster interactions and streamline decision-making, many interactions occur parallel to the official meetings in a more informal

way. The coordinator must avoid becoming isolated and has to stay in touch with these informal interactions to keep track of what is going on in the network (see also Verhoest et al., 2019, p. 107).

Recommendation 2: Adapt the partnership's governance to its size and type

Depending on their size and type, partnerships will need different types of governance to create highly innovative services. In our research, we distinguished partnerships coordinated by a government and partnerships coordinated by societal actors. We also made a distinction between contractual and non-contractual partnerships. Our research showed that in small government-coordinated partnerships that are contractual in nature (e.g. when private partners have been selected through a procurement process), a centralised governance is advantageous. However, large, societally coordinated, contractual partnerships benefited from introducing distributed governance, with a focus on joint decision-making and equal responsibilities among partners.

Recommendation 3. Consider the diversity of actors when initiating the partnership and collaborative actions

In a collaborative innovation partnership, actors with diverging motives, perspectives, interests, resources, and internal processes are brought together to solve complex problems. However, this initial diversity determines the interdependencies and influences the collaborative process, its dynamics, and its potentialities. The diversity of actors needs to be considered when selecting partners or determining a course of action to coordinate the partnership.

Recommendation 3.1: *Select partners who have the resources and capabilities necessary for the innovation process.* Each partner needs to bring an added value to the partnership. Be mindful, however, of the cost of this added value. Actors get involved in a partnership to satisfy their own drivers and motives. These need to be clear for the coordinators, as they are responsible for aligning the goals of all partners. Make sure that the partners can relate to the objectives of the partnership, and that their own interests are aligned with these objectives. The participation of actors has to create value for these actors, as well as enrich the partnership. Inadequate goal alignment is detrimental for the collaboration. The actors

initiating the partnership should perform a prior mapping of the potential partners, considering their skills, knowledge, and interests/drivers, in line with the resources needed.

Recommendation 3.2: *Select competent coordinators and support them during the innovation process.* The coordinator is the cornerstone of every collaborative partnership. Coordinators particularly need skills which allow them to connect people and to establish compromise. However, in collaborative innovation processes, the coordinator also needs to boost the creative processes of exploration and learning. The coordinator's decisions and activities need to be backed by a clear mandate and an adequate support, in terms of resources, from the various partner organisations. There can be more than one coordinator in a collaborative partnership, and leadership can be shared. In that case, it is important to have a common understanding of who is responsible for what.

Recommendation 3.3: *Select partners with a positive attitude towards innovation.* Partners with a positive attitude and a creative mind-set will be more likely to think out of the box and be more considerate and responsive to new ideas. This stimulates exploration and learning and enhances the idea generation phase in the innovation process. Also, entrepreneurial and dynamic partners (e.g. agile, specialised start-ups) can easily adjust to complex situations and sudden changes occurring in collaborative partnerships, take fast decisions without lengthy bureaucratic procedures, and will be open to new ideas, which makes them ideal partners in complex public-private collaborations (see also Verhoest et al., 2020, p. 149).

Recommendation 3.4: *Attune the composition and size of the partnership to the objective of the collaboration*. The number of partners in the partnership may affect the innovativeness of the created outcome. Large partnerships (i.e. more than ten partners) bring together more knowledge and ideas. This creates more synergy opportunities that might cause more mutual learning, which is needed to develop new ideas. As such, large partnerships will stimulate idea generation. However, they are generally more complex to manage, and, because of the large number of different partners, a lack of trust between the partners might occur. In contrast, small partnerships (i.e. less than ten partners) have an interactional advantage over large partnerships, as they have lesser complexities, and closer interaction with all the partners is easier. Trust between the partners is typically higher in these partnerships. However, because

of the smaller group of involved partners, less (diverse) knowledge and ideas are brought into the partnership, which limits its potential to produce new ideas.

Likewise, partnerships with actors who are familiar with each other build trust, and this can streamline decision-making and information exchange. Partnerships with many different actors with different backgrounds and divergent knowledge bases and experiences can foster the generation of new and explorative ideas. Actors being too diverse can hamper decision-making as they will not understand each other. In innovation projects with a fixed and clearly defined goal, a network with some similarity between actors can be appropriate, as the strong ties between actors build trust more quickly and decision-making is more fluent. In innovation projects where novel ideas have to be generated and solutions have to be explored, a greater divergence in perspectives and knowledge can create synergy and foster creative idea generation (see also Verhoest et al., 2019; Riche 2020).

Recommendation 3.5: *Manage the 'relational capital' in the network.* Actors who have worked together before develop trust more easily. This can simplify the collaboration process and foster information exchange, which contributes to learning. However, actors who know each other too well can lead to a situation where they do not explore certain perspectives as a result of group thinking. This can be detrimental to the innovation process. Generally, interactions between actors that have worked together before are simpler, but it is nonetheless important to include new perspectives (see also Verhoest et al., 2019).

Recommendation 3.6: *Enhance interpersonal trust between the partners.* Encouraging open and transparent two-way communication between the partners is an important enabler for the innovation process (see also Verhoest et al., 2019; Verlinden and Verhoest, 2020, p.125). Trust has to emerge through frequent encounters between individuals – both in formal and informal meetings – in which they learn about each other's intentions and behaviour (see also Riche, 2020). Feedback about participants' ideas and perspectives is crucial to stimulate learning processes throughout the innovation process.

Recommendation 3.7: *Gather the right expertise based on the purpose and the objective of the partnership.* To develop ICT-enabled innovative public services, the right ICT, sectoral (e.g. medical in the case of eHealth services) and technical knowledge bases must be combined.

Legal knowledge can be important to avoid or resolve conflicts and to simplify the collaboration process.

Recommendation 3.8: *To enhance successful user involvement, be mindful of the social skills of the actors and their position within the sector or within the organisation.* Ensure that they can approach users and connect with them to create an environment where they can openly share their feedback and share user experience.

2. Recommendations regarding the management and leadership of the partnership

Recommendation 4: Specify the demands and mutual expectations, costs, and risks

Stipulating the demands, mutual expectations, costs and risks in an agreement or contract between the collaboration partners is one way to do this, but such an agreement should avoid stifling creativity and be flexible enough to exploit unexpected opportunities. Specifying the desired outcome helps to align the diverse goals and objectives of the partners. However, proper contract management is important not only to ensure a desirable outcome, but also because it helps to connect partners and to make *a priori* agreements with them regarding their engagement and commitment in the project. It reduces risks and uncertainties and increases the accountability between the partners. Incorporating demands in a contract is especially relevant in cases where partners have a lot of responsibility, or when the partners are better protected due to the contract.

Recommendation 4.1: *Combine contractual incentives to stimulate innovation, and output specifications which specify the desired demand.* However, sufficient design freedom should be preserved by reducing restrictions on creative solutions and formulating output specifications instead of specifying how to achieve the outcome.

Recommendation 4.2: *Use a contract to clarify the exact demands of each partner.* Actors who are asked to do more than they expected might lose their trust in the collaborative process. A contract can also specify which partner will have to invest financial resources. Further, the contract is also a means to select the appropriate partners – partners whose interests and

motivations are aligned with those of the partnership and who are willing to invest the required resources.

Recommendation 5: Manage the interactions between the partners

Managing the interactions between the involved partners is important to ensure goal alignment, transparent communication, trust, mutual learning, and several other crucial interpersonal processes. It ensures that the collaboration benefits from the full added value of each individual partner. A combination of the following strategies is beneficial: Coordinators can explore the ideas and perspectives of all the partners, connect them, introduce governance structures that stimulate interactions (such as project teams) and apply process rules clarifying how the collaboration will be deployed.

Recommendation 5.1: *Stimulate the exploration of new knowledge and ideas.* Various perspectives, knowledge bases, and ideas come together because of the unique context in which collaborative innovation emerges (i.e. a multitude of diverse actors). Active exploration of this diverse set is crucial to exploit the potential of the collaborative partnership and stimulate innovation. Furthermore, encourage the partners to learn from external contexts.

Recommendation 5.2: *Experiment with different methods to explore ideas from partners.* In most projects, meetings are by far the most frequently used instrument to discuss ideas and develop the concept for the innovation. However, other methods such as focus groups with external experts, co-creation sessions with users, or proof of concepts (POCs) with a large variety of stakeholders might be even more effective in creating new insights and ideas (see also Dockx et al., 2020, p. 19).

Recommendation 5.3: *Connect the resources and interests of the collaboration partners.* In complex scenarios such as collaborative innovation, multiple resources and interests come together and sometimes contradict each other. The coordinator needs to connect these differences to provide an optimal breeding ground from which learning can emerge.

Recommendation 5.4: *Use process rules to structure the collaborative innovation process and help solve complexity.* Examples are rules on how partners can enter or leave the partnership, how information exchange occurs, and how decision-making occurs in the partnership.

Recommendation 6: Combine the use of contractual and interactional stimuli to create highly innovative services

Our research indicates that Recommendations 4 and 5 should be combined to stimulate the creation of highly innovative services. The two types of management (contract management and network management) work on slightly different dynamics and mechanisms in the collaborative innovation process, which increases the beneficial effects of a combination of those management types. Contract management is especially important in the early phases of the collaborative innovation process, as it aligns perspectives and demands before the project is initiated. This ensures a proper climate for collaboration. However, not all complexities can be foreseen *a priori*, so managing the process as it unfolds is crucial to stimulate the collaborative innovation process. Network management, for example, especially focusses on enhancing the interactions between the collaborating partners. However, not all mentioned conditions are equally important when combined with each other. Our research shows that, for example, the combination of contractual output specifications with contractual incentives (directed towards stimulating innovative outcomes) and exploring network management strategies allow the creation of highly innovative services.

Recommendation 7: Ensure a leadership balance between flexibility and a clear focus on the desired outcome

In collaborative partnerships, variation (i.e. diversity of perspectives, skills, knowledge, etc.) is an important factor in stimulating learning processes, which is crucial for creating innovation. Leadership that encourages the exploration and usage of this diversity, therefore, enhances the innovation process. However, variation also causes complexities. Leadership capable of controlling these complexities and streamlining the innovation process towards the desired outcome is, therefore, essential. A balance between these different types of leadership is recommended.

Recommendation 7.1: *Lead the partnership by supporting differences of opinions, mobilising resources and time to try new things, encouraging learning from other contexts and the use of new approaches, and creating an atmosphere in which failure is forgiven (generative leadership).*

Recommendation 7.2: *Lead the partnership by emphasising accountability, setting objectives and metrics of success or failure, silencing voices which distract from the purpose, asking partners to invest more time and energy, and establishing specific targets and deliverables (administrative leadership).*

Recommendation 7.3: *In partnerships which are highly explorative (a lot of experimentation and creative discovery), both generative and administrative leadership are needed to create highly innovative services.* These kinds of leadership can be shared between the coordinator and other partners in the partnership. Both leadership types should be used to a different extent in a smart way throughout the collaborative innovation process (more emphasis on generative leadership when exploring the problem and solutions, and on administrative leadership when deciding and implementing the innovation).

Recommendation 8: Support transformative learning, consensus-building, and commitment

When combining transformative learning and consensus-building with commitment, partnerships can provide highly innovative (i.e. 'new') but also practically realisable services, as they then combine the search for divergent ideas with the willingness to stay close to desirable outcomes of the represented organisations or the users.

Recommendation 8.1: *Establish a climate within the partnership that stimulates learning.* Encouraging actors to be open to the ideas of other actors helps in building a learning environment, where new knowledge and ideas emerge. This can be done by stimulating experimentation and trial-and-error behaviour, or by introducing new (external) knowledge in the partnership. It should be clear to the participating actors that learning is of utmost importance in the innovation project. Sanctioning partners for failed ideas should, therefore, be avoided. Exploration and experimentation should be encouraged.

Recommendation 8.2: *Encourage consensus-building.* Actors should be encouraged to work towards a joint consensus instead of continuously trying to defend their own viewpoints, because of the interdependencies between them (i.e. no actor is in the position to reach the end goal on its own; they rely on each other). Consensus-building helps in managing conflicts and increasing goal alignment between partners.

Recommendation 8.3: *Foster reciprocal interactions and trust-building between actors.* Transformative learning and consensus-building between actors with divergent perspectives and knowledge can only happen if information is shared between them. Trust is needed for information sharing, and this is built through reciprocal interactions (see Riche 2020; Verhoest et al. 2019: 109).

Recommendation 8.4: *Stimulate commitment through managerial activities (like network management strategies, and contract management).* These activities can ensure commitment for the implementation of the innovation by emphasising the collaborative value for each partner. The behaviour of the coordinator of the network can empower and motivate actors to make progress towards the implementation of the innovation. Encouraging the partners' commitment to implementing the innovation is crucial, as it ensures that all actors are willing to spend resources to adopt the innovation. It is easier for the partners to let other partners implement the created innovation and adopt it later, when it has proven its worth. This, however, undermines the collaborative innovation efforts. If no actor is willing to take the risk of implementing something new, the innovation will not get adopted. Also, a situation where one partner claims ownership over a jointly developed innovation should be avoided. Partners engage in collaboration to pursue goals in ways they are not able to on their own. A delicate balancing act is necessary between the actors' individual goals, and the common, shared goal of the partnership. A proper balancing of these dynamics creates synergy and value for all partners as well as for the collaboration.

3. Recommendations regarding individual, organisational, and environmental features

3.1. Recommendations directed towards the individuals and organisations in the partnership

Recommendation 9: Ensure that the benefits of innovation through collaboration are clear for the participating organisations

Collaborative innovation is a fruitful way to produce new services, but it is also a very demanding (in terms of time, resources, and energy) and, sometimes, slow process. If innovation of similar quality can be generated without establishing a partnership, organisations should first try to create the innovation in-house.

Recommendation 9.1: *Ensure that the partners are motivated by the content of the project.* Projects improving service delivery or efficiency, innovations addressing a pressing need, or innovations in line with previous policy initiatives contain project-related drivers that motivate actors to implement an innovation of good quality.

Recommendation 9.2: *Ensure that the private partners have economic incentives to participate in the project.* Private partners must ensure that they develop new business opportunities. Hence it is important that the collaboration provides these partners with an opportunity to improve their own expertise, develop or refine their services/products or strengthen their reputation in a certain field, so that the partnership can capitalise on the partners' capabilities and efforts.

Recommendation 10: Select carefully who will represent your organisation in the partnership, and support these representatives

The skills and capacities of the individuals in the partnership are crucial for the success of the collaborative innovation. Individuals selected as representatives of your organisation in the partnership should have capacities to connect with others, to connect ideas, to think creatively and freely in search of solutions, but also be consensus oriented. The organisations should also support their representatives in the partnership, by giving them room to think freely within a clear mandate and stimulating their engagement in the collaborative partnership (Verhoest et al., 2020, p. 144).

Recommendation 10.1: *Assign specific working time to the employees involved in the collaborative partnership and give the assigned employees a mandate for their work in the collaborative partnership* (see Lingier and Steen, 2020, p. 65). Strong organisational support legitimises the choices of the representatives and increases the likelihood that innovative ideas will be implemented. It also increases the commitment of the involved actors to generate outcomes of high quality, as the supporting organisations count on these outcomes. Supporting the organisational representatives does not mean controlling their every action. On the contrary, facilitating individual freedom for the representatives while encouraging their maximal engagement stimulates divergent, out-of-the-box thinking and promotes synergistic interactions (see also Verhoest et al., 2019).

Recommendation 10.2: *Provide specialised training to the employees assigned to collaborative innovation projects.* Even when employees are selected for their creative thinking, ability to learn, or collaborative or connective talents, additional training can be relevant to refine knowledge and skills, and to encourage the right mind-set of the employee (e.g. searching for compromise instead of pushing through ideas) (see also Verhoest et al., 2020, p. 144).

Recommendation 11: Commit resources to the collaborative partnership

One of the reasons why collaborative partnerships stimulate innovation is the synergies between different resources. These resources must be committed by the organisations before they can generate any stimulus for the innovation process.

3.2. Recommendations directed towards stimulating support from external individuals or organisations

Recommendation 12: Secure support from the external environment before or during the project

Securing external support for the innovation process is especially important for collaborative partnerships, as they frequently cut across distinct policy fields or domains of public life. Partnerships should combine the support from the collaborating organisations, elected

politicians, the media, and the broader policy sector. Many of the cases investigated in our research, that had successfully created highly innovative services, had secured these four sources of external support. In some cases, only a combination of two or three types of support was sufficient (political and managerial support; managerial, media, and sectoral support).

Recommendation 12.1: *Establish support from the higher management of the collaboration partners to receive a mandate to engage fully in collaborative innovation processes.* When the higher management supports the innovation process, the collaborating actors can receive more room to explore new possibilities. Further, they can receive a mandate to make decisions, which avoids interactions getting hampered or stalled when asking for superiors' feedback.

Recommendation 12.2: *Establish support from the broader policy sector* (e.g. the health sector) to prevent future opposition to the created innovation (e.g. eHealth innovation). Many future users are clients of other organisations in the broader policy sector. Securing the support from these organisations ensures both competitive advantage and collaboration opportunities in the future.

Recommendation 12.3: *Ensure that the relevant, leading elected politicians are putting interest in and supporting the partnership.* Informing and making the relevant minister, mayor, councillor, or alderman aware of the progress of the project can help establish political support. Further, in case of a deadlock with public actors, the elected politician can interfere and resolve the deadlock and grant the coordinator legitimacy.

Recommendation 12.4: *Seek media support in cases where the innovation is meant to be used by a large part of the population.* Well-designed and well-targeted communication through the media on the advantages of using the innovation will be crucial for the eventual uptake of the innovation by these users.

4. Recommendations regarding the use of ICT in the collaboration and innovation process

Recommendation 13: Use ICT to enhance collaboration

ICT tools are indispensable to foster collaboration between the partners. They can enhance interactions between actors and help overcome the practical barriers to communication. ICT can also help visualise and structure innovative ideas to generate support and understanding of these ideas, support the sharing of data, and facilitate mutual learning by combining and connecting information and knowledge (e.g., in databases).

Recommendation 13.1: *Balance face-to-face contact with online contact.* Although ICT tools make communication and interaction easier and more convenient, face-to-face contact is still relevant to build trust between the partners. A lot of the more subtle communication signals (e.g. facial expressions) which are crucial to build trust among the partners are hindered or sometimes even absent when using online communication channels (see Lingier and Steen, 2020; Riche, 2020). Our research shows that ICT stimulates the creation of innovation in contexts where there is a lot of trust between the partners. A possible explanation might be that ICT reduces the need for face-to-face contacts (necessary for trust-building), but trust therefore needs to be present for ICT to have positive effects on the creation of innovation.

Recommendation 13.2: *Use ICT to include users in the innovation process.* ICT tools can be used to develop prototypes and testing environments that involve users, by creating digital environments in which ideas can be tested (e.g. simulations and demonstrations of eHealth tools). These tools can help support users in their use of technologically sophisticated innovations. ICT can also be useful when gathering feedback from a diverse and large group of users.

Recommendation 14. Take the existing ICT infrastructure into account in the innovation process

The existing ICT infrastructure has a significant influence on digital innovation processes. As many innovations aspire to ease the exchange of data and information, it is important to consider compatibility and interconnection when developing applications. The presence of the existing ICT infrastructure can also shape innovative outcomes, as many technological

innovations use the available ICT infrastructure for their functionalities. For example, in the eHealth sector, many European countries already have regional or national data sharing platforms that are useful for the new eHealth services. Connecting new services to existing platforms ensures interconnectivity and interoperability, which should increase the usability of the new services. It should also make the new services sustainable as they become part of a larger system which keeps adapting to the current needs.

5. Recommendations regarding user involvement in the collaboration and innovation process

Recommendation 15: Involve users in the different phases of the innovation process

Users are key stakeholders with essential experiences regarding the usefulness of certain services. They can generate added value in the problem definition, idea generation, idea testing, idea implementation, and idea evaluation stages of the innovation process, and might be involved in one, multiple, or all these stages. Their contributions might be to advise the partnership, to co-produce with the partnership, or to lead certain aspects of the innovation process. Extensive user involvement is facilitated by adopting a governance structure in which the users have a specific role.

Recommendation 16: When involving users, grant them real power in the innovation process

User involvement is only effective if it entails an active engagement of users (letting them voice their preferences, test the innovation, co-produce, etc.) and if the innovation process is influenced by the users (i.e. the innovation is modified using user feedback). If user input is not considered, this will generate distrust in the innovation and can hamper its implementation. Our research indicates that intensive user involvement needs to be combined with a lack of user barriers, especially if users have a high level of relevant knowledge, to create innovative services.

Recommendation 16.1: *Stimulate intensive user involvement.* Exploit user involvement as much as possible by involving users in the (conceptual and/or technical) development of the innovation, by making them part of the decision-making process, or by giving them substantial

power to steer the innovation process. This implies a lot of responsibility from the users, which stimulates their engagement and enhances the innovation process.

Recommendation 16.2: *Select users with relevant user knowledge.* Intensive user involvement is difficult, as the partnership has to manage an additional set of actors in an already complex innovation process. Intentionally selecting users with a lot of relevant knowledge that might help in the innovation process is crucial for extracting the most of their involvement.

Recommendation 16.3: *Eliminate barriers to user involvement (i.e. lacking knowledge, representation, information, or having too many rules and procedures).* Proper user involvement should consider its potential barriers. As with the selection of the other partners, users need to bring an added value to the innovation process. They need to possess knowledge which is useful for the partnership (e.g. experiences of using specific services). An appropriate selection of users should also ensure that they are well represented. Underrepresentation will lead to a misalignment of the created services with the end users. Furthermore, as with the other partners, users should receive the relevant information from the partners, to allow them to optimally engage in the innovation process. Lastly, the partnership and involved organisations should prevent any barrier to user involvement due to organisational rules or procedures. This will not only slow down the progress made by the users, it will also hamper the commitment of the users to invest time and energy in the innovation process.

Recommendation 17: Aim to align the viewpoints of the users and partners regarding the intensity and motives of user involvement

Our research indicated differences between the viewpoints of collaboration partners on how users should be involved in the innovation process. The same is true for the users themselves. These differences should be considered, in order to manage the expectations of collaboration partners and users about user involvement in such projects.

Recommendation 17.1*: Be aware of the differences between the viewpoints of the collaboration partners regarding the motives and intensity of user involvement.* Some partners believe that user involvement is a useful tool to enhance the quality of the end product (the created public services). In this view, users are present in the partnership to give feedback

about the services and share their user experiences. However, the other partners believe that user involvement is a means to enhance the collaboration and innovation process. By bringing in additional stakeholders to the collaborative innovation process, according to these partners, new ideas might arise. Thus, users play an important role in enhancing the collaborative advantage of innovation partnerships. As such, some collaboration partners might want to involve users as external quality reviewers, while other partners might want to involve users more extensively, as collaboration partners. It is important to actively uncover these different viewpoints and to discuss them with the collaboration partners, because too wide a divergence might hamper the user involvement and its effectiveness.

***Recommendation 17.2**: Be aware of the differences between the viewpoints of the users regarding the motives and intensity motives of their involvement.* It is crucial to uncover how users themselves think about their involvement and its conditions. According to our research,[3] some users believe that they are like the customers of a product (the new public service) and that they need to give feedback on that product. Other users, however, believe that user involvement is a way to collaborate and co-create with the collaboration partners in the partnership. A third group of users believes that user involvement is only a minor contribution to the broad and complex innovation process. From this viewpoint, users should be particularly involved to make sure that the partnership is not creating something that goes against the rights and interests of the users. These differences in viewpoint might change the expectations of users regarding their involvement in the partnership. Protecting their own interests does not require a very intensive form of user involvement. Co-creation, on the contrary, does. As such, it is important for the partnership to uncover the behind user involvement. With this knowledge, the partnership can choose between different types of user involvement (going from less intensive types such as informing the users to more intensive types such as co-creation).

[3] Our research used Q-methodology to extract different discourses of users regarding their viewpoints on user involvement.

6. Recommendations regarding the testing, evaluation, and diffusion of innovation

Recommendation 18: Test ideas on a smaller scale or in a controlled environment

Ideas are generated through interactions and subsequently selected for implementation. Innovative ideas implemented in a real-world environment can involve technical, organisational, and institutional barriers. Testing allows returning to the idea generation or idea selection phase, to further refine the ideas and overcome the identified barriers. It is also a useful instrument to generate user feedback on the developed ideas, which can be used to align the innovation with working procedures and improve usability. It also submerges the innovation in a real-life situation, providing feedback on its applicability for that environment, but at the same time shielding it from the negative consequences (e.g. high competition). It also stimulates the interactions between partners, as it illustrates the anticipated effects of the solution and may bring about discussion and mutual learning. Lastly, testing can enhance motivation and commitment to implement the innovation because a successful test can be seen as a 'quick win'.

Recommendation 18.1: *Involve relevant stakeholders during the idea testing.* A testing environment operates as a selection environment in which bad ideas are abandoned and relevant ideas are retained. Therefore, a testing environment should include not only the partners who created the innovation but also external stakeholders, such as the end users. Testing the innovation also immediately shows the results of the innovative endeavours. For both the collaboration partners and the sponsors, observing the results is important to remain engaged in the project. Long projects without visible results are detrimental to the sustainability of the collaboration.

Recommendation 18.2: *Adopt arenas of experimentation in which temporary de-regulation creates space for innovation.* Especially in contractual partnerships in which the demands are clearly formulated, it may be difficult to encourage partners to explore and experiment, as they are bound by contractual demands that would consider a failed experiment as a failure to deliver the demanded solution. By formally adopting an arena in which experimentation is allowed and encouraged (e.g. a 'proof of concept' arena), and which is primarily present to

learn and test ideas without directly subjecting them to the contractual demands, experimentation and exploration is stimulated.

Recommendation 19: Establish a thorough follow-up and evaluation once the innovation is implemented

Many partnerships are disbanded after the innovation is implemented, with little opportunities to properly assess the collaborative innovation process and the impact of the innovation. Such a follow-up is especially useful in innovation processes, as the created services are new, and the impact is incomparable with similar services. Thus, the impact of the innovation should be measured, to increase its potential for diffusion in other contexts. The partnership and individual partners should learn as much as possible from the experiences from the innovation process, when it has been successful as well as when it failed (see also Verhoest et al., 2019, p. 15; Verlinden and Verhoest, 2020, p. 133).

Recommendation 20: Consider diffusion opportunities once the innovation is implemented

As innovations are new products, services or practices, they might be relevant not only in the context in which they were created. Diffusion of innovation is also a reality check for the creators, as the innovation is now applied in an environment different from that in which it was generated. Innovation diffusion acts as proof for a more general application of the innovation, which is beneficial for the partnership and the implementing organisations, as the innovation becomes a strategic asset (i.e. they have a strategic advantage as opposed to later adopters, because these organisations possess the knowledge and capabilities needed to create the innovation and which the later adopters do not).

References

Dockx E., Verlinden S., and Verhoest K. (2020). Wendbare overheid: Overheidscultuur gericht op flexibiliteit, innovatie, leren en samenwerking (WP4). Report as part of 'Steunpunt Bestuurlijke Vernieuwing' project. Antwerpen: Universiteit Antwerpen.

Lingier P., and Steen T. (2020). New Ways of Working and Collaborative Innovation (WP7). Report as part of the 'Public Sector Innovation through Collaboration' (PSI-CO) project. Leuven: KULeuven.

Riche, C. (2020). Learning through Interaction: Insights from Eight Collaborative Innovation Networks in the Belgian Public Sector. Doctoral Thesis, Faculty of Economic, Social and Political Sciences and Communication UCLouvain.

Verhoest, K., Steen, T., Aubin, D., Moyson, S., Fallon, C., Langbroek, T., van Dijck, C., Riche, C., Thiry, A., and Callens, C. (2019). Policy brief (Deliverable 3.6). Publication as part of the 'Public Sector Innovation through Collaboration' (PSI-CO) project. https://www.uantwerpen.be/images/uantwerpen/container43865/files/Policy%20brief%20wp%203%20psico.pdf

Verhoest K., Steen T., Langbroek T., Van Dijck C., Dockx E., Riche C., and Lingier P. (2020). Gap Analysis on Capacities for Collaborative Innovation in the Belgian Federal Administration: survey outline, descriptive and explanatory analyses (WP6). Report as part of the 'Public Sector Innovation through Collaboration' (PSI-CO) project. Antwerpen: Universiteit Antwerpen.

Verlinden S., and Verhoest K. (2020). Innovation Architecture for Collaborative Innovation (WP8). Report as part of the 'Public Sector Innovation through Collaboration' (PSI-CO) project. Antwerpen: Universiteit Antwerpen.