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Value processes and lifecycles in networks for public service innovation

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ABSTRACT

Public administrations, to innovate public services, seek strategies beyond market-like mechanisms and claim for clear paths such as lifecycles. This research bridges service management theory and theory of public management to further how networks for public service innovation mediate public value creation; the study, by integrating both theories and the public service logic approach, discusses the dynamic interactions throughout networks evolution (lifecycle). A theory is elaborated, advancing the relevant role of networks lifecycles in public service innovation lifecycles. The research, lastly, offers several propositions to improve (meta)governance of networks for innovation of public services.

KEYWORDS Public services; innovation; networks; lifecycle; service management; public management

Introduction

Governors and public senior managers have laid a general claim from research on process outlines, such as services lifecycles, or service evolutions, to enhance their network strategies for public service innovation (Co-VAL 2021). The reason behind this claim is the absence of conceptual lifecycle pathways outlining the maturation process of networks and service innovation, and the potential effects of one (network) lifecycle over the (service innovation) other.

The definition of those lifecycles, and the illustration of their interactions, must be grounded in the dual role of public service users as users (‘resource integrators’) and citizens (‘with broader, societal interest’), which is extensively explored under the public service logic (PSL) literature by Osborne and his team (Osborne 2018; Osborne and Strokosch 2013; Strokosch and Osborne 2016). These authors and others (Grönroos and Svensson 2008; Grönroos and Voima 2013) assert that service users, on their dual condition, are the value creators, and public service organizations (PSOs) only provide value-supporting processes. In agreement with them, this research contends that it is the users the ones that create value and the experience, and the PSOs only develop opportunities to co-create value with them (Grönroos 2018; Johnston, Clark, and Shulver 2001; Osborne 2018) (customer service logic) and not for them (provider service logic).

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The analyses of the loci and definitions (Verleye et al. 2017) of public value creation logics have overseen the identification of such loci when the PSOs act through networks of different stakeholders for the innovation of public services. [Morphologically, these networks emerge as collaborative efforts of multiple actors aiming to co-create public value through new services, organizations, or processes (Desmarchelier, Djellal, and Gallouj 2020). Functionally, these networks coordinate between market and hierarchical modes (Kolleck 2014; Powell and Grodal 2005) based on trust, reputation and mutual dependence (Desmarchelier, Djellal, and Gallouj 2020; Peralta and Rubalcaba, 2021a) and differentiate from other coordination modes such as public private partnerships (Carbonara and Pellegrino 2020; Roumboutsos and Saussier 2014).] One might think of two intertwined types of dynamics complicating the exploration of how and where value is created in a network context. On the one hand, Grönroos and others (Grönroos and Voima 2013; Osborne 2018) introduced the notion of the dynamic interactions between the PSOs, the networks and the citizens. Building on this notion, we offer that the evolution of the interactions follows the network's progress, or network lifecycle. Alongside this lifecycle, value creation shifts from one locus (decision-makers and PSOs) to another (network partners).

On the other hand, the services, or value proposals, innovation lifecycle (Lawrence, Zhang, and Heineke 2016; Schmenner 2004; Zhang et al. 2014) might influence public value creation and where value might be created. Unfortunately, the few academic references of service lifecycles described the evolution of services as products. None explored the lifecycle of services as services, when innovated by public networks. Thus, our research remarks that the dynamic interactions between network partners must also affect the service (value proposal) evolution, the creation of value, and the loci where value is finally created, from users as network partners to the rest of users.

For purpose, this research aims to present, one, a shared view of service management theory and theory of public management by building a conceptual framework for the role of networks for public service innovation and their lifecycle. Second, departing from service management theory notions – goods logic and service logic – the paper extends the understanding and application of the PSL-based management by analysing the networked strategy in the public services context.

Our findings have important implications for the broader domain of public management practice. After the two-decade succession of global events (e.g. economic crises, COVID-19 pandemic), coupled with regional and local events, administrations and governments are seeking options to successfully cope with those events and associated uncertainties. At one time, they sought market mechanisms and simplistic linear solutions based on efficiency and productivity gains. Yet citizens' frustration, detachment, and opposition peak with every new 'efficient', but failing – in their opinion – solution. More recently, by the hand of the public service logic (PSL) and the new public governance, other strategies have emerged. Within them, networks of multiple actors might play a predominant role in the innovation of public services, meeting a combination of goals that include the citizens', public organizations', and the state's.

Our theory and findings contribute to enhance the understanding of the innovation of public services to meet the citizens, public organizations, and state goals, from the PSL stance; the research advances service management theory and theory of public management by presenting a conceptual framework that bridges both. The research answers the practitioners call for deeper comprehension of how value is created, through network

and service innovation lifecycles, in the context of public services (Hodgkinson et al. 2017). This is not to say that current description of how value is created is insufficient, but rather to help avoid public policies that do not ponder lifecycles into their design and execution – e.g. when a plan to maximize impact of a given innovation is executed by a declining-stage network, it very likely leads to the plan failure due to such misalignment. In other words, public innovation using the networked strategy becomes contingent on networks' evolution. To provide a solution to this matter the research poses the question on how service innovation and network lifecycles consolidate service management theory to align lifecycles in public innovation, and with its answer serve as sources of new tools for public service management. Consequently, the research explores these sources consolidating a set of propositions that conclude the paper. Summarizing these propositions, one, networks for the innovation of public services mediate value creation. And two, activities of governors – elected politicians and public managers – support public value creation through networks.

Approach and method

Our main research question is how the lifecycle of networks for the innovation of public services influences (mediates) the relationship between innovation actions and activities and their outcomes and innovations. [We have quantitatively explored the creation of public networks for service innovation in two earlier papers, (Peralta and Rubalcaba 2021a, 2021b) Subsidiarily, we ask what the service innovation lifecycle, when networks innovate services, is, and how the service innovation and network lifecycles theoretically relate to each other.

Our research results include the following: (1) a theoretical model of the mediation effect of networks for innovation of services, between the actions of public policy- and decision-makers, and the users and stakeholders of public services. (2) An enumeration of the lifecycle areas (stages) of public service innovation. And (3) a representation of the sequence of the lifecycle areas (stages) of networks to effectively integrate networks as a PSL-based strategy for service innovation.

Of course, many sceptics will doubt of a successful presentation of our conceptual approach, given the multitude of elements involved in the evolution of networks and services. Consequently, and in order to achieve the research results, the research is set up as follows:

- (1) Our conceptual framework is initiated by fitting networks in the context of public service innovation and explaining the framework's stance on how networks create value. The research uses a back and forth referencing technique departing from Hodgkinson et al. (2017), Osborne (2018), Desmarchelier, Djellal, and Gallouj (2020), Lawrence, Zhang, and Heineke (2016), and Zhang et al. (2014).
- (2) The framework outline is complemented by a view of the metagovernance interactions between the state and the networks by using a similar referencing technique departing from Bell and Park (2006).
- (3) Next, the framework is strengthened by deepening on the value processes linking networks with value creators, when two potential value creation loci emerge – i.e. users within the network, and rest of users. Here, the research referencing technique departs from Osborne (2018).

- (4) Finally, the framework is completed with our theories about the service innovation lifecycle and its areas or stages, and the network lifecycle.

Value creation in networks for public service innovation

It has been argued that public service organizations (PSOs) carry no differences with private service organizations (Grönroos 2018). Others argue notable differences in their contexts and services, service orientation, and service logic (Osborne 2018). When it comes to public networks with a focus on service innovation, authors report notable differences as well (Hodgkinson et al. 2017). Public networks seem to apply a public service logic (PSL) (Osborne 2018) and create value splitting it in three levels (domain, sphere, and network), whereas private networks apply a service dominant logic (Lusch and Vargo 2006) and locate value creation on the customer (Habermas 1989).

Following our outline for the paper, we first introduce our general conceptual framework. Our three-level theory of value creation by the public networks departs from the Public Service Network Framework (PSNF) (Hodgkinson et al. 2017). The PSNF described a domain-level consisting of the activities of PSOs and their managers (including elected politicians) adding, creating and destroying value, or leaving it uncaptured, influenced by service policy (e.g. health, mobility, social services, employment). The PSNF goes on proposing that value, or interest, is further shaped at the sphere-level (Habermas 1989) by the ‘societal outcomes’ (Hartley et al. 2016; Moore 1995) – a sort of ‘bottom line’, but wider and deeper in scope than just the market because they embrace the welfare of the general public (Benington 2011), the political system and the governance structures. Throughout the COVID-19 pandemic, for example, health PSOs, have tried to cope, at the domain level, with previously unseen masses of infected patients flooding health facilities and depleting their resources, yet providing COVID patients with the services they needed according to their condition. These PSOs added services, created new services, destroyed (or postponed) services, and very likely left many patients unattended. At the sphere-level, health PSOs clearly have tried to fulfil their conventional societal outcomes beyond the health context, helping cope with a threat to the public welfare, political system and governance (at a huge cost, undoubtedly).

For these authors, it seems evident that the tension between (public) value creation and value shaping shifts the actual ‘creation’ of value from the domain-level to the sphere-level, and back. To this extreme, Hartley and colleagues wondered ‘what counts as valuable?’ and ‘what is value?’ (Hartley et al. 2016). The answers from PSNF: value seems to arise from the activities (domain-level) and is supported or contested by the interests of, or the abandonment by, decision-makers and citizens (sphere-level). Conversely, interests and abandonment drive further addition, creation, or destruction activities – and consequently, more or less value added, created, destroyed, or uncaptured. As Hartley et al. (2016) advised, this dynamism integrates the political processes and the citizens’ participation with the managerial processes.

With networks, the back-and-forth dynamic between the domain and the sphere levels appears quite evident for some authors. The ‘contested democratic practice’ (Benington 2015), distinctive of networks, creates value engaging different agents and groups, from different organizations, institutions, and social

contexts. Most of us assume that, in the context of networks, the new, added, destroyed, or uncaptured values follow from including, excluding, leveraging, and downplaying different voices (agents) with different conceptions of public outcomes and innovation types (Peralta and Rubalcaba, 2021a, 2021c).

Another implication of Benington's appreciation is that voices within a network organize socially, in projects with different types of engagements and measurements. Lastly, in an earlier work (Peralta and Rubalcaba, 2021a), our research demonstrated that agents and groups consolidate their relationships (functioning modes) through trust, conveniently documented by all sides. We can then affirm that voices (agents), social elements, and functioning modes evolve into the criteria forming the network-level.

Drawing on the network-level of our model, two main theoretical perspectives are introduced. One, an inside look, building on the core elements that generate the public networks for service innovation (refer to Peralta and Rubalcaba, 2021b). The network-level emphasizes the networks nature in what Lusch, Vargo, and Tanniru (2010) describe as value networks, rather than service systems. Advocates of this latter nature declare that service systems emerge as sets of dyadic interactions at the organizational level. The dyadic perspective studies the relations between each of the network partners with each of the other partners, and relates to the goods dominant logic of the new public management (NPM) regime.

In agreement with Lusch et al., beyond one-on-one relations and within the contexts defined by different combinations of the networks criteria, we argue that the interactions within a network for public service innovation describe a value network (Lusch, Vargo, and Tanniru 2010) or a system of systems. Our perspective is connected to the PSL and the new public governance (NPG). The value network underscores the many-to-many relations (Gummeson 2006; Patrício et al. 2011), and the calling to all partners to collaborate, integrating resources, to create value for themselves.

Second perspective, an outside look, clarifying the role of a network for service innovation as a mediating unit. Our research positions this level between the domain- and sphere- levels – dominating (e.g. in the case of the development of the COVID-19 vaccines (Kumar et al. 2021)), or influencing (e.g. the arrangements against COVID-19 in the UK (Slater 2022), or developing countries (Hayman and Dennehy 2021)) their relationship. The mediation of the network-level might reinforce, neglect, or even reverse, the dynamism between the domain and sphere levels. Consequently, we claim that a network, besides creating value for its agents, acts as a mechanism to create public value and find an answer to what is value and what is valuable in public service innovation.

To their benefit, this research predicts, the intervention of networks must simplify the sphere-level. The political system reportedly turns to networked regimes favouring democratic legitimacy to stimulate efficiency and effectiveness in the public sector through bottom-up value creation (Sørensen and Torfing 2016). Governance might be adopting co-creation, and skilfully seeking a balance between co-creation and oversighting and command, featuring the PSL. And citizenship increasingly alludes to citizens, and other stakeholders, willing to engage and enrich the *collaborative* and the *public* in collaborative public service innovation. The networks then emerge as a service innovation practice to enhance trust, efficiency, effectiveness, social justice, and democratic legitimacy.

Metagovernance of public networks for service innovation

Per our method outline, the study follows on with the second antecedent of the evolution of public networks and their service innovations. Politicians and public managers (the domain-level), despite their potential benefits, see networks with caution. Many see networks as difficult to grasp and filled with non-technicalities and uncertain behaviours (Bell and Park 2006). Consequently, those at managerial and political positions often opt for top-down developed solutions. Researchers, public officials, and conventional teams seem more secure following the new public management (NPM) approach to innovation of public services (e.g. Carbonara and Pellegrino 2020). As Hartley (2014) warned, they rather enter in market competition and use private sector managerial modes of governance, than promote devolved forms of government that might complicate the achievement of the results they desire. In short, the metagovernance of networks for public service innovation might turn into an issue (Peters 2010).

Giving credit to these warnings, others have expanded on the governance of networks. As a form of governance (Meuleman 2009), networks organize themselves – self-organization (Rhodes 1996) – with hierarchies and heterarchies still operating. The functioning modes between the agents denote a ‘negotiated decision making’ (Jessop 2002) form of coordination. The state, with its own unique resources, partners with the rest of the agents as equals. Public resources (legislative power and economic strength) equate other private resources (knowledge, expertise, availability), all equally relevant for the success of the network.

The government, however, retains its roles as prime source of collective intelligence and legitimacy, coordinator of the networks with the wider ecosystem, and responsible for balancing the other actors self-referentiality with its own self-referentiality (Altman and Nagle 2021; Dunsire 1996; Jessop 2002), and the competing institutional logics (Hansen et al. 2021).

We offer then that through metagovernance – or the government of governance (Bell and Quiggin 2006) – the elected politicians and managers should re-articulate governance within the networks. Negotiations and agreements within the networks happen in the ‘shadow of hierarchy’ (Jessop 1997; Scharpf 1994; Whitehead 2003). Politicians and senior public managers cast control, influence, and command over the self-coordination (political organization) of a network to relate it to the changes in political control and authority. Metagovernance, then, facilitates the surge of ways of network arrangements, without devolving the legitimate state functions into these arrangements.

To describe how the state activates metagovernance tactics, several authors (Ansell and Gash 2017; Bell and Quiggin 2006; Jessop 1997; Sørensen and Torfing 2016) have enumerated multiple tactics, applicable to networks. From setting ground rules to enact self-coordination, ensuring compatibility of the political organization with the political authority, shaping expectations by defining the problem and its urgency, acting as intermediary in disputes among partners, rebalancing power and influence within the network, to assuming political responsibility and sponsorship of the agreements and solutions. All of them underscore the need to engage elected politicians and managers (the domain-level) as network actors acting on their dual roles described here.

Value processes

The third antecedent of the evolution of networks for public service innovation that our investigation outlined are the value processes between the network-level and the sphere-level. We have read strong positionings related to the value processes between the domain-level and the sphere-level. The traditional NPM perspective, in place since the late 1970s, insists on the creation of value by the PSOs that is then delivered to the users or citizens to satisfy their needs (Chen, Walker, and Sawhney 2020; Trischler, Dietrich, and Rundle-Thiele 2019).

With the advent of the service dominant logic, the user emerged as part of the co-production of the service (Brandsen and Honingh 2015; Lusch, Vargo, and Tanniru 2010). The argument is that the PSO only proposes service offerings with the potential to create value for the citizens (Osborne 2018). From the use the citizens make of the service offerings, or the effect they make on their lives – hence, the differentiation between value-in-use and value-in-context (Osborne 2018) – they create and determine the measure of value. Value, then, arises as long as the PSOs and others – dominating the process – offer resources, and citizens integrate them all with an impact (or lack of it) in their lives and the societal context (Anker et al. 2015).

We agree though with the PSL argument, as ‘value can only ever be created by the service user’ (Osborne 2018). We also agree that value, rather than performance, is the key metric (Grönroos and Voima 2013; Moore 1995). And in the general context of public service innovation, co-creation of public value represents the interactive creation of this value by the service users – dominating the process – facilitated by the PSOs and the rest of their suppliers. Value, as value-in-context, is then determined as a many-to-many type of outcome.

One might even argue that networks for public service innovation should be seen as one of those suppliers. But we feel differently. The network-level in our model makes explicit the dual condition of networks. First, in the innovation network context, the identification of who creates value extends beyond the end users. On the one hand, it has been said that the partners of a network must satisfy their self-referentiality (Dunsire 1996) before any other. Each of the partners first create their own value, in a reflexive, dynamic way, with the other partners (acting as suppliers) – the one-to-many creation advocated by the service-dominant logic. We add that in doing so, they create a certain context, the network. The network induces a second measure of value, for the partners, connected to their experience within the network – the many-to-many creation described by PSL. On the other hand, we concede that, once those two measures of value are high enough, the networks, as another supplier, make their service offerings to the end users. It is then when they integrate within the value-chain of the end users.

The networks for public service innovation that we are describing also integrate (some) end users. The service delivered by these networks is then co-created with peers of the rest of end users. The logical outcome is that all (or most) of the end users would react similarly to the service delivered by the network. Thus, many infer that value would be created more efficiently and effectively. But we differ. The sphere-level shows that public policy and governance interests, and therefore, the end users related to them, also create their own values – here, we claim that the value creation process between the network-level and the sphere-level is multi-linear, or nonlinear, for each string.

The immediate consequence is that networks for public service innovation should involve the range of actors that, coordinating as equals, create value for themselves, and for the network context that they must build together. This includes citizens and service end users and policy and decision makers, and specialists and experts of conventional co-production networks.

Adding to the question of who creates value in the presence of a network, a second insight of the network-level, overseen by many, is the inefficient determination of value by the partners, or the network, because of citizens or users unwilling to participate in it, or simply unaware of it. Such deficient determination of value dictates two additional types of value: value destroyed and value uncaptured. Value destroyed relates to the Schumpeterian ‘gales of creative destruction’ metaphor, which in turn evokes NPM linear production, based merely on incremental and disruptive technical innovation types. Value uncaptured (Yang et al. 2017), or missed, denotes the potential value that has been left indefinite because of under-utilized resources, insufficient expertise, lack of scope (missing voices or partners in the network) or awareness, or misalignment of the elements of the sphere-level. Henceforth, we argue that the value processes between the network-level and the sphere-level originate four types of value: value-in-use, value-in-context, value destroyed, and value uncaptured.

Managing the lifecycle of service innovation

According to our outline, once our study covered the antecedents of the evolutions of networks and public services, we concentrate now on those evolutions. One might think that the relationship between the domain-level and the sphere-level might be fully mediated by the network-level. In fact, when it comes to service innovation, the research has described how the domain-level operates over the sphere-level, activating different value processes through network metagovernance tactics and the self-coordination of the networks. Conceptually, this mediation effect lacks the dynamic mechanism that the co-creation approach predicts (Osborne 2018).

To validate that prediction, and understand the dynamic mechanism between the three levels of our framework, we turn to the professional service operations management. Specifically, the dynamic knowledge-based work addressing the internal and external drivers of the adaptation of services (Lawrence, Zhang, and Heineke 2016). Historically, studies of service private firms concentrated in explaining how individuals have applied their knowledge to the problems of their clients, tailoring solutions through customization rather than efficiency (Schmenner 2004; von Nordenflycht 2010).

With the Theory of Swift, Even Flow (Schmenner 2004) underpinning performance analyses of services and service innovation, one could think of a path or lifecycle to increased service innovation productivity by reducing variation and throughput time. Pretty much resembling a product-process matrix. But if our approach is PSL-based, can we think of the application of an evolutionary process, like the path or lifecycle described by Schmenner, to service innovation and to networks for the innovation public services?

We anticipate that the answer evokes two considerations. One, for the service innovation lifecycle, PSL acknowledges that value is created by the user or citizen. Therefore, variation and customization of new public services should be the main drivers to maximize this value, as predicted by Schmenner. Thus, the stages of the service innovation lifecycle could well be similar to Lawrence et al.'s (Lawrence, Zhang, and Heineke 2016), from the completely new (or adapted) service to the, at length, more predictable and less variable and minimizing throughput time mature service. The other, the network itself has its own lifecycle, which in turn should reflect on the lifecycles of the service innovations that it delivers. Our research conceptualizes both in the next sections.

The lifecycle of public service innovation

Lawrence and colleagues described the transition of services from innovation to commodification, grounding their conclusions on the new service development framework (Froehle and Roth 2007). (The product lifecycle management models differ from this approach [Zhang et al. 2014], concentrating on the technical progress of a product or project, from concept to post-sale service and retirement, rather than on the evolution of its value proposal.) Following Lawrence and colleagues, we theorize four areas (stages) in the development (or update) of a new service like circles (Figure 1). We also advance that the end of one area will start the beginning of the next once a certain degree of inertia is gained after several cycles within the same area.

Lawrence and colleagues framework explained the first area as new service development. We speculate that this area results from the creativity of the individuals in the network – the combination of individuals with different backgrounds in the networks for public service innovation enriches the process and outperforms other, more conventional, types of networks. One might agree with us that variation should be high at this stage, as the multiple voices within the network extend experimentation and introduce different angles, potentially leading to a deeper and wider understanding of a problem and its potential solutions. And with every cycle of experimentation and development, network partners might gain a clearer picture of the problem, associated

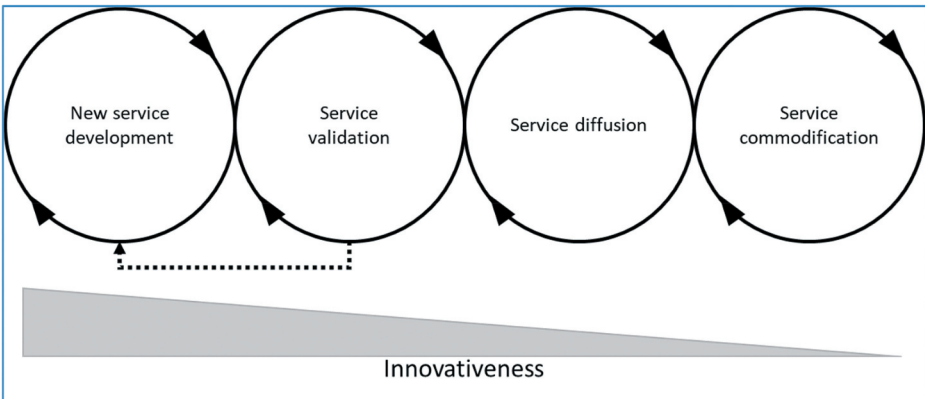


Figure 1. The four areas of the theoretical lifecycle of service innovation. Innovativeness wanes with increased codification of the service.

drivers and consequences, users (maybe underrepresented in the network) affected, and may lead to shifts in the priority of the problem to address, or a problem replacement altogether.

Next area, in Lawrence and colleagues opinion, is validation of the service. The validation area serves a first purpose: to understand how the users create value with the network propositions. Partners achieve a second, equally important goal through it: they refine the recognition of the differences between different users (segments or niches) personalizing the propositions.

We hypothesize that network partners must validate the problem and its potential solutions. The goals include the confirmation of problem and solution effects, and commitment and support from external sources. One would expect that knowledge asymmetry among network partners, but also with professionals, motivates different types of validation. Therefore, we propose that the trajectories to validate a problem-solution must start with partners themselves, as creators of value. And continue with the rest of the users, who populate the sphere-level – including professional organizations, accreditation agencies, or legal or political or moral or ethical conventions. Then, elected politicians, decision-makers and public organizations in the domain-level must vet the trajectories. The consecutive phases within this area, we pose, might well end in the return to the first area, and the process restart. A final requirement in this area identifies and validates sources of value destroyed and value uncaptured – mostly related with established stakeholders who see their position threatened, or under-represented communities (within the network).

Coming next, Lawrence and colleagues hypothesized on the diffusion of those propositions. In the diffusion area, we claim, partners codify the services for each segment deemed relevant. Necessarily, codification connects directly with the goals of the policy- and decision-makers, rather than just the citizens or users. Some services will aim for masses, others for small niches. And our investigation finds this a crucial difference with private sector service innovation lifecycle. Public services aim for public (users, including politicians) value, rather than growth and repetition. Thus, codification means the ability to detach the delivery of the service (commodification) from the originating network (personalization). Additionally, codification must allow the transfer of the service from the network to the agency that will own the rest of the service lifecycle. When scaling up a service, complementarily, the network should identify additional sources of value destruction overseen at validation, because of the limited scope (number of niches or segments) of that stage.

The final area, in Lawrence and colleagues framework, is the commodification of the service. They advised that this phase opposes customization. Following them, and others (Schmenner 2004; von Nordenflycht 2010), one might equate this area to a conformance stage. We concede that, under the premises of the goods dominant logic or the service dominant logic, the owner of the service might aim to lower costs and maximize quality and performance. This might be the case if the service were merely a construct made of technical characteristics. But we contend that the development of services through networks of multiple actors mainly grasp users non-technical value and value-in use. Under the PSL, we hypothesize that the commodification predicted by technical conformity seconds the value created by the user, and value metrics must drive technical efficiency metrics.

We also agree that commodification leads to incremental service innovation along three courses of action: improving accessibility to the service, freeing up resources as lower skilled people and even machines can deliver the service, and combining commodification with customization. Although we feel these strategies might generate controversy between the service owner and the network, our study maintains the idea of the collaboration between the network-level and the domain-level to maximize the value created by users on the sphere-level.

The lifecycle of networks for public service innovation

Paralleling the development of new services, networks might also experience evolutionary processes (Figure 2) – lifecycles – from inception to closure (Zhang et al. 2014). We contend this evolution echoes the development of new services for novel networks. In the case of more mature networks, their development separates from the evolution of new services. Throughout the new network development area, we posit that partners join, whether invited or voluntarily, to develop new services by applying their knowledge. They get recruited and recruit other (permanent and temporary) partners, functional and organizational mentors, and specialists on every stage of the service innovation lifecycles. Then, partners try to organize functionally (Zhang et al. 2014), applying creativity to gain organizational support, integrate knowledge, identify knowledge gaps, and determine how to proceed further, even outside organizational boundaries. Rather than technical learning, this stage bears fundamental non-technical learning – mostly social and relational learning, and networking. Networks, throughout this area, cycle, once and again, trying to find certain stability to concentrate on the service innovation lifecycle.

Any researcher of network evolution might agree that the next area in the evolutionary process is the validation of the network. We theorize that it implies the confirmation of several root partners within the network. They truly commit

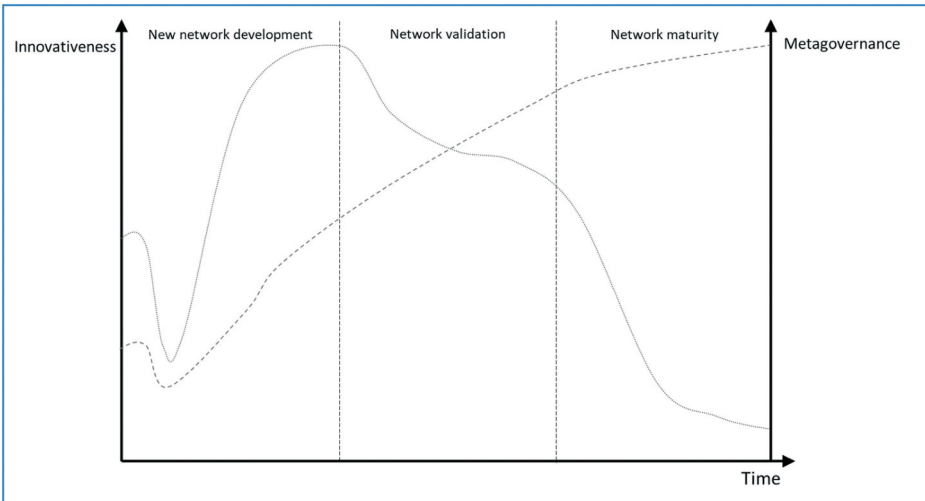


Figure 2. Theoretical lifecycle of networks for public service innovation. Note: Dotted-line: hypothesized evolution of network innovativeness. Dashed-line: hypothesized evolution of network metagovernance.

to the success of the network. It is time to validate the way to reach agreements, and the *court of appeals* in case of discrepancies. Further, they must strengthen the discussion method to empower the partners with the lowest voices. This is the time to unite and present a common face to seek support, find champions for the coming diffusion of the new services, and bridge to the organization that might own the new service delivery once the service reaches the agreed maturity stage.

It could be assumed that, after validation, comes the maturity area of the network. We argue that it is then when the network truly governs itself. Trust and relations among partners consolidate and a new organization is born. If the network has a long-term mission, then, it will transfer any service in the diffusion area to the next owner, and will concentrate on another new service – if the network is short-term, the partners will wrap up the network after that transfer. As its final act, the network can assist in resolving potential threats to the diffusion and commodification of the service (e.g. professionals who see their status endangered or obsoleted, users needing special codification).

Networks, however, might close before reaching maturity. The fact is that networks must face closure. Whether anticipated or spontaneous, we theorize that networks for public service innovation are temporary arrangements – clearly, some may devolve into permanent public or private agencies. Once the network is finished, we argue though that both, the domain-level and the sphere-level, would be at different stance, considering their pre-network positions. We anticipate that governors and public servants, having participated in that network, might approach service innovation activities with a more complete toolbox, and the relationships with peers with a broader relational understanding – plus new contacts. Citizens and professionals having partnered in public service innovation might gain a deeper understanding of public responsibilities, benefiting as well from improved technical and relational learning, and contacts.

Finally, we describe a recurring blurred area of network evolution. The inactivity, languishing stage showcases networks that, after a period of excitement about the collaborative work and ambitious goals, stall over time. Nothing will really be achieved, and no progress will be made. This stage develops independent of the others. Networks end in this languishing stage after replacements of supporting governors, other urgencies take over the priorities that motivated the networks, irreconcilable discrepancies among partners, or many others. Naturally, some of these networks will revive, maybe with new goals. But most of them will face closure, as described earlier.

The combined effect of the service innovation and network lifecycles

The two lifecycles, that is, the service innovation and the network evolution, might reflect parallel trajectories, particularly with short-lifecycle networks. But we predict a different evolution pace for each, assuming that networks (of either sort) might need to launch more than one, and often several, new service projects throughout their own lifecycles. Yet a young network will have it difficult to develop any service beyond the new service development area, because of its own immaturity – Live Vaagaasar (Live Vaagaasar 2011), (Zhang et al. 2014) and others describe the trial and error process in young networks that fine-tunes knowledge,

skills, aptitudes and performance within multiple stakeholder networks. Therefore, we theorize that young networks relate to projects on the earliest phase of the service lifecycle, and more mature networks coordinate projects in any area of the service lifecycle.

Regarding the innovativeness of the service development projects of public networks, many would have the impression that, given the conglomerate of elements that the network-level reflects, they should mark high on that scale – National Systems of Innovation (NIS), and Regional Innovation Systems (RIS) are raised under this perception (Desmarchelier, Djellal, and Gallouj 2020). Conversely, we theorize that the more mature the network, the more it and its partners will comply with the domain-level and the sphere-level (Figure 2) – this is in line with findings reflecting how excess stakeholder heterogeneity may impede (non-linear) innovation processes (Jiang et al. 2022). In our view, this is a logical result of the metagovernance and value processes between the three levels. In short, with more maturity, a network complies more with what is established, becomes less innovative, and likely leans more to incremental innovation.

In summary, we ground our analyses of the effect of networks for public service innovation on the conceptual framework depicted in Figure 3. This framework allows grasping the mediating effect of the network-level between the domain-level and the sphere-level. This macro-perspective serves when the government decides for a networked strategy to innovate its services. Figure 3 highlights the effect, and places the (network and service innovation) lifecycles as main drivers of the mediation induced by networks.

From the mediating role of networks to the network lifecycle

With this paper, we bridge service management theory and theory of public management by presenting conceptual frameworks for the role of networks for public service innovation, and the service innovation and network lifecycles. Departing from service

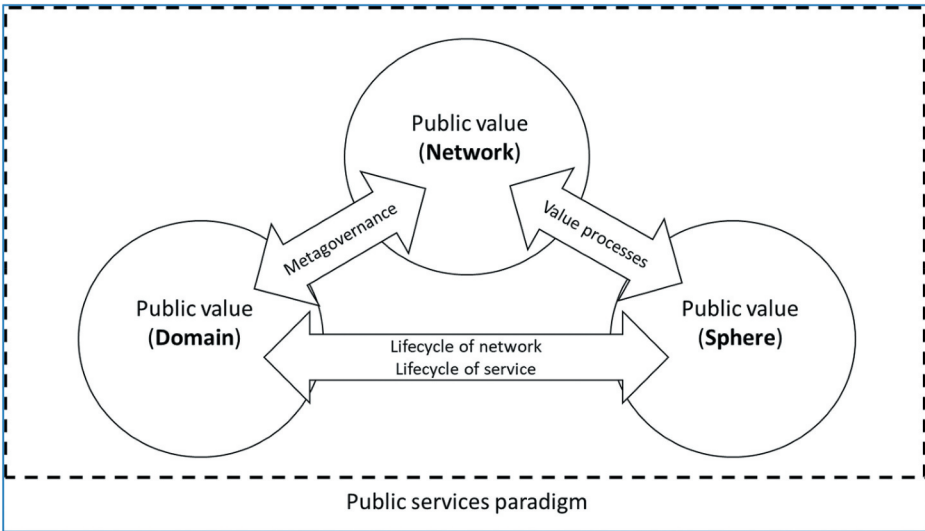


Figure 3. Theoretical framework of networks for innovation of public services.

management theory notions – goods logic and service logic – we have extended the understanding and application of the public service logic (PSL), as a form of public management, by analysing the networked strategy in the public services context.

Specialists on service management theory questioned it for its failure to properly consider the contextual differences and insights that differentiate service delivery. To contribute specific boundaries, practical value, and validity to service management theory, Hodgkinson et al. (2017) defined a framework – the Public Service Network Framework (PSNF). PSNF describes the interactions between the governors (elected politicians and senior public decision-makers), represented by the public domain-level, and an extended base of users of public services, represented by the sphere-level (Habermas 1989), which includes the welfare of the general public (Benington 2011) and other ‘societal outcomes’ (Hartley et al. 2016; Moore 1995).

Although we generally agree with PSNF, we contend that the networks for the innovation of public services need further contextualization to build a long-range theory. With our research, we successfully capture the multiple dimensions that are relevant to the innovation of services through networks, in the public sector. It follows the PSNF, enlarging it by making explicit a network-level that adds between the domain- and sphere-levels.

Nevertheless, our revised framework (Figure 3) differs from PSNF in two key respects. One, the concepts underscoring the dynamic between the levels of the framework, which we name ‘lifecycle of the service innovation induced by public innovation networks’. Part of the innovation dynamics in our model is driven by the evolution of the services through the interactions between network partners, and between network partners and the rest of the value creators. The other, the ‘evolution (lifecycle) of networks for innovation of public services’ mediates value processes between value creation in the public sphere-level, and the activities of the public domain-level. Complementing the service innovation lifecycle, the evolution, or maturity, of networks completes our notion of the dynamics of the innovation process.

Propositions for the role of the service innovation and network lifecycles in public service innovation. Concluding remarks

Zooming in their lifecycle stages, we argue that networks balance their interests and commitments to outcomes and innovation types differently throughout their evolution towards maturity and closure. Some authors have already described a similar narrowing, or ‘purification’ (Djellal and Gallouj 2005), effect – a shrinkage of the innovation types – as networks mature. If confirmed, we believe that this purification stems from the increased number of implementation barriers that networks face (Torugsa and Arundel 2016), specially throughout the validation and maturity stages. It could also originate in the path dependency that locks-out new services (Windrum 2013). Hence, our first proposition from the research already done, and inspiring future research in the same area:

Proposition 1: depending on their maturity, networks concentrate differently in the achievement of outcomes and the development of innovation.

By exploring P1, researchers might improve the understanding of how value is created in the context of public service innovation, when this creation of value is mediated by networks of multiple stakeholders, how network maturity affects value creation and how administrations can successfully sustain value creation through networks for public service innovation. In high uncertainty times such as today's, decision-makers and governors seek alternatives to cope with uncertainty and ambiguity, lack of trust, and citizenry detachment, through strategies beyond the conventional market mechanisms, and efficiency and effectiveness measures. Networked strategies try to answer the, sometimes fierce, opposition from citizens, spontaneously or formally, organizing against reduction of public services. They defend high standards of living and public services despite reduced economic budgets or increased inefficacy of administrations to adapt to crises, pandemics, digitalization, or any other emerging (global, local, or individual) trends. Any of these trends shifts value, and our P1 would improve decision-maker and user understanding on such shifts.

We believe that our model succeeds in capturing the relevant areas of network and service lifecycles, such that each area (stage) represents significant differences in the inter-relation of the domain-level and the sphere-level. These differences fuel the tension between value creation and value shaping that shifts the actual value 'creation' from policy- and decision-makers and managers to citizens and their (more or less) democratic arrangements, and (more or less) formal agreements, and back. Therefore, we pose a proposition for future investigations:

Proposition 2: the stages of the service innovation and network lifecycles capture significant differences for policy and decision-making that are a consequence of the intervention of networks for service innovation between value creation and value shaping activities.

Indeed, investigations stemming from P2 will deepen why policy- and decision-makers use young networks for innovation-enhancing metagovernance strategies – e.g. seeking creative destruction, altering established ecosystems, copying other governments' initiatives. Complementarily, research will describe why continuous-improvement metagovernance strategies might fit with mature networks – e.g. adding new ways of prospecting the voice of the users, exploring supplementary monitoring practices, celebrating network cases to exemplify another type of public governance.

We contend that to put PSL in practice a broadening of service evaluation turns into a necessity. Moreover, it is a common belief that monitoring and performance measurement promoted by the predominant goods logic is far more effective than PSL-based measures. Thus, the goods logic in basic services (e.g. water, health, education) predominates. We argue that PSL-based measures are far from flawed, or less effective than conventional indicators, for evaluating the public networked strategy. Thus, we propose for next research:

Proposition 3: metrics based on the PSL convey a sounder and clearer reference to tap the range of interactions building on the three levels (domain, network, sphere), interconnections (metagovernance, value processes), and dynamics (service innovation and network lifecycles) of the networked strategy for public service innovation.

Researchers, led by P3, can reinforce the use of networks studying PSL-based metrics that connect the value creation and value shaping areas through networks, different types of interactions and evolving trajectories (Figure 2). In short, PSL-based measures must assure their superiority for service innovation evaluation by unveiling a view of the value creation process that remains hidden for conventional metrics – i.e. our framework's view.

Our model's three levels and dynamic interconnections support a new perspective for policy- and decision-makers. The levels and dynamism combine in different forms throughout the service and network lifecycles. The elected politicians and decision-makers must manage the different combinations of components, resulting from (1) segmenting the actors, and (2) their different integration alongside the network lifecycle. Beyond the ideal of networks self-governance, the metagovernance of these combinations over the consecutive stages of the networks evolution must aspire to anticipate the effects on each stage in the creation of public value. Specifically, each stage of the network lifecycle guides metagovernance processes to guarantee the creation of value by the (networked and non-networked) users, and their support from the network. Accordingly, we advance a future research string:

Proposition 4: metagovernance of networks for public service innovation highly correlates with the stages of the network lifecycle, and the characteristics of metagovernance significantly change with each stage.

In addition, research must address the important issue of the dual role of users, as users and providers, when the PSOs act through networks of different stakeholders. This is to say that in networks the different loci of value creation and definitions of public value (Osborne 2018; Verleye et al. 2017) of the customer service logic and the provider service logic meet. Thus, questions like how the service innovation and network lifecycles transform (networked and non-networked) user roles and context for value production, or how the interaction between sphere-level and domain-level influence user value creation, from the user perspective. This paper concentrates on the networks side, and their simultaneous value creation loci, leaving the impact analysis from the users stand for future research:

Proposition 5: the service innovation and network lifecycles transform (networked and non-networked) user conditions and context for value production, and the interaction between sphere-level and domain-level influence user value creation.

A question that surfaces from our research's insights refers to the transitions between the areas or stages of the services and network lifecycles. With Figures 1 and 2, we depict them as well-identified moments, as the milestone of a project or the satisfaction of an a-priori condition. Still, the moments when the transitions occur might turn into much longer intervals, as retreat periods for discussions and reflections. A second voluntary limitation in the paper is the identification of the cognitive and emotional drivers of the agents involved in each area or stage – individuals may start or stop participating in the network or in the service development at different stages, and through a self-defined process.

To summarize, our research represents a continuation in the development of a general model for studying service innovations using public networks of multiple stakeholders. We realize, though, some remaining issues. New experiments should integrate the agenda suggested by our propositions for further development of the service innovation general model. These should concentrate on the analysis of the services lifecycle and the interactions between service innovation and network life-cycles. Such research programmes will help visualize how networks develop new services, facing complex projects to address societal problems, and how they balance this commitment with the requirements from value creators. And indeed, this research programme will enrich PSL, probably reassessing what is being theorized about value creation and service innovation, including their key drivers and dynamics. Notes

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