

"Ready to innovate?" Exploring the Innovation Capabilities of Public Agencies

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Abstract: Digital transformation has taken hold of the public sector. This process requires openness, participation, and resilience. In this transition phase, public agencies do not just have to maintain the daily business and its delivery, they also need to foster the organization of the future, work on their culture and experiment new paths to pursue a public value creation. Innovation and entrepreneurship are thus needed. To what extent are public agencies capable to innovate? In this ongoing research paper, we present preliminary results of the explorative study "Ready to innovate?", conducted with board members of Swiss Federal Offices and State-affiliated companies. Focusing on the three pillars of collaboration, learning culture, and leadership, we present a literature overview and discuss first descriptive results. We show that the public leaders perceive the learning culture as least developed which is particularly true for aspects in direct connection to the digital transformation. The paper sketches further activities in the field, aiming at contributing to the broader discussion of public sector transformation.

Keywords: public sector innovation, leadership, learning culture, collaboration.

1. Public Sector Innovation: An Introduction

«Innovation and entrepreneurship are thus needed in society as much as in the economy, in public-service institutions as much as in businesses.» (Drucker 1985)

Public servants and academics dealing with digital transformation in the public sector today know that endeavoring is not just the digitalization of services and processes, but establishing a new way of thinking and working together; this process is about openness to new solutions, participation from the different stakeholders (e. g. citizens as prosumers), and the organization's resilience in case of unexpected events such as the COVID-19 pandemic (OECD 2017, Dunga et al. 2020, Open Government Partnership 2020, Marti et al. in press).

While the main target remains public value creation (Crosby et al. 2017), public agencies, in addition to ongoing budget cuts, are increasingly facing new societal challenges, and citizens',

media' and companies' expectations (Boukamel et al. 2019). Despite a well-established New Public Management thinking in the public administrations (Marti et al. in press), recent empirical work show that innovation is likely to be more adaptive, sustainable and accepted when it comes from the organizations' own capacities (Meijer 2018). To enhance this kind of innovation, leaders need to understand which competencies and skills are needed and in what way, given cultures and contexts, enable such capabilities. Unfortunately, there is still little empirical work done so far in this area.

With the explorative study "Ready to innovate?" we want to provide a pulse measurement of innovation capabilities among Swiss public agencies. The idea is to understand how to support the ability to innovate. We examine ideas, practices, and objects, that individuals or organizations perceive as new and thus as an innovation (Arundel et al. 2019, COI 2019, Eurostat/OECD 2018, Dunga et al. 2020). This ongoing research paper is structured as follow: In chapter two we present a literature overview in the area along the pillars collaboration, learning culture, and leadership. We then sketch the overview of the methodological approach of the explorative study. In chapter four we present preliminary results (descriptive analysis). We conclude by proposing further activities.

2. Innovation Capabilities in the Public Sector: A Literature Overview

In the public sector too, we can distinguish between innovations that concern products and services (Torfing 2016), and those that affect processes and the organization (de Vries et al. 2016). Additionally, innovations in the public sector can relate to the governance, respectively the policymaking (Dunga et al. 2020). This study relies primarily on the model proposed by Dunga et al. (ibid.) who argue that an innovative administrative culture arises and can flourish when certain preconditions are met.

2.1 Cross-Boundary Collaboration as a Fruitful Setup for Innovative Activities

The first pillar consists of a lively collaborating culture. Collaboration takes a crucial role not only in the digital government research area (cf. e.g. Gil-Garcia 2012, Neuroni et al. 2011) but also in innovation processes in general. We currently face increasing demands of citizens towards their government, and a backlog of reforms. Torfing (2016) identifies an approach to collaborative-innovation as an adequate measure to tackle the lack of innovation of the current status quo (Dunga et al. 2020). Exchanging knowledge and competences inside and outside of organizations, openness and transparency are all aspects that stimulate mutual learning and a holistic understanding of complex problems in the given ecosystem (De Vascancelos et al. 2018). Thus, information about the organization (including understanding of the causes of a problem or approaches to its solution) is provided and new ideas can easily be suggested. Furthermore, open and transparent governments generate higher trust among citizens (Open Government Partnership 2020).

Yet, employees and leadership encounter numerous difficulties in the application of a collaborative culture. Among other barriers, Torfing (2019) lists the inclusion of relevant actors, a lack of tradition of collaboration in general, clear roles and failed past experiences and asymmetries in power as common barriers. Only with a sense of urgency present, efficient decisions such as which

resources to use and which relevant actors to collaborate with, are made. Yet, to increase innovation capabilities, a fruitful setup for innovative practices should not depend on outside stimulations.

2.2 Learning Organization as an Inspiring Context for Innovative Public Servants' Mindsets

Establishing a learning culture lays further ground to successful long-term digital transformation and innovation practices. Based on Dunga et al. (2020) we identify a successful learning culture in organization as the second crucial pillar to enable an innovative culture among administrations. Learning is initially based on making mistakes and dealing with failure when trying something new (Bason 2010). Public administrations are particularly known to avoid these kinds of scenarios. Since mistakes can't be avoided, they should be approached consciously (ibid.) and therefore be legitimized on an organizational level (Maier et al. 1997). A successful learning organization addresses failure and even provides space for mistakes to happen (Bason 2010).

Public organizations act risk averse as their products or services are expected to be adequate by citizens and risk impacts them directly (Boukamel et al. 2019). Furthermore, successful outcomes of risky decisions don't come with rewards like in the public sector and therefore not very tempting (Albury 2005). Giving way to experiments and coping with risky strategies are two important aspects of a successful learning culture (Bason 2010). Learning is strongly intertwined with knowledge management (Daglio et al. 2014). Finally, diverse skillsets and collaborative partners hugely improves a creative perception of work. This might take additional effort to cope with the resulting 'creative tension', as diverse actors try to solve a problem simultaneously (Albury 2005). In the long run, however, organization with an inclusive mindset are more resilient to outside and inside tension (Ritz et al. 2019).

2.3 Leading the Organization of the Future: Leadership Competencies and Styles

Public leaders face the challenge to make day to day procedures more flexible and induce transformative change by including technology and data (Dunga et al. 2020). Leadership needs to evolve from a New Public Management thinking to a culture of long-term stable co-creation platforms which allow an ongoing learning process (Ansell et al. 2016, Virtanen et al. 2020). A thriving leadership is thus considered as the third pillar to facilitate innovation.

Literature highlights certain styles and competencies of leadership which have proven particularly vital to this transformative change (e.g. Borins 2019). Public leadership needs to develop an extensive understanding for new areas with a positive impact on collaboration: Private public partnerships and understanding the benefit to co-create public value are a good example (Virtanen et al. 2020, cf. also 2.1). Competences, such as the willingness to deal with one's own weakness, a will to collaborate with other stakeholders and trust the team are vital for this process (ibid.).

3. "Ready to innovate?": The Methodological Approach

The research question of our explorative study is as follow: To what extend do public servants have the necessary conditions in order to act innovatively from a public leader's perspective on the federal level? To measure the capacity appropriately we developed a questionnaire for administrative servants, based on the insights from an extensive literature review (see chapter 2). In order to verify these theoretical assumptions, we then conducted two semi-structured interviews with two representatives of either academia or the public sector. With this two-step approach we ensure to maximize the value of the questionnaire in a practical context.

The presentation of the results reflects the structure of our survey. It consists of 39 questions separated in four main themes, including the three pillars discussed in the literature section (innovation capability) and aspects of public sector innovation in general (types, triggers, outcomes, barriers of innovation). We sent the survey to every principal- and vice-director of all Swiss Federal Offices (full census, N Offices = 48) and state-affiliated enterprises, by name SRG SSR, Swisscom, RUAG Holding AG, SBB CFF FFS, Post, Suva (N Enterprises = 6). The sample of the explorative study therefore embraces the leaders of both public agencies and para-public entities (N Public Sector Leaders = 225). We chose to focus on the leadership level, since this sample group is likely to be informed about both the working conditions of the individual employees and about the characteristics on the organizational level.

4. Preliminary Results

In this chapter, the survey results are compared and analyzed. We aim to answer our research question stated in chapter 3. With two reminders and a survey duration of three weeks, we generated a return of 20.9% (47 responses). The chapter is split into four main sections, reflecting the structure of the questionnaire into the four main themes of innovation.

4.1 Innovation and Public Leaders: Overview

In this first part of the survey, participants were asked to assess their awareness on the following aspects on innovation in the Swiss public sector, namely the types of innovations, triggers, effects, and barriers. We further asked about their personal relation to innovation and digitalization.

The predominant part of the responding leaders considers themselves having a rather good knowledge (5 or higher on a scale from 1-7) of "innovation" (90%) and "digitalization" (87.5%).¹ In the daily business, 95% indicate to be "often" or "permanently" in touch with innovation. Therefore, we consider public leaders to be generally aware of and dealing with innovation. While just 5.3% specify that their own organization needs to catch up with digitalization, the leaders see much potential in the public sector in general, with 84.6% thinking that it should be more innovative.

¹ "Innovation" defined as: "Practices or objects perceived as novelty by individuals or organizations". "Digitalization" defined as: "The digital transformation of an organization with all the developments that go with it".

Table 1 shows the five most prevalent types and triggers of innovation which the respondents identified in their organization. The most important types of innovation in the respondents' organizations are new internal processes (23.1%), followed by new management or organizational methods and new products or services (20.4% each) (cf. Table 1).

Table 1: Types of innovation and different triggers (question asked for the top three types and triggers).

Type of innovation	%	Trigger for innovation	%
New internal processes	23.1	More tasks with equal resources	16.9
New product or service	20.4	New technology	15.4
New organizational or management method	20.4	Desire/need of citizens, users or clients	13.1
New concept to identify problems	13.9	New tasks or priorities	13.1
New method of communication or marketing	9.3	Problem or crisis requiring quick Reaction	7.7

An initial summary of the evaluation shows that the most frequently mentioned triggers and effects follow the New Public Management priorities (efficiency and effectiveness). Approaches of digital transformation and New Public Governance come in second (triggers) and third (impacts). With regards to triggers, the most significant barriers suggest that more time and not necessarily more financial resources are needed to strengthen the innovative power of public employees. The much-discussed risk aversion in the public sector is perceived as (only) the fourth most significant barrier. Fear of exposing oneself by supporting an innovation (error culture), on the other hand, is not among them. The lack of know-how, particularly regarding the digitization skills of the employees, has a more restraining effect. Overall, the most significant obstacles indicate that innovation has not yet achieved the status needed to be integrated in government actions. This suggests that there is little room for innovation. The results across all aspects discussed show that the most frequently analyzed types of innovation, triggers and outcomes in research are also the most important in practice (cf. De Vries et al. 2016).

4.2 Establishing Collaboration as a Culture

This section discusses whether collaboration culture in the respondents' organizations can support innovation, according to the public leaders' perception who participated in the survey. Overall, public leaders do estimate their organizations to have a collaboration culture (3.31). The required tools and instruments are in place (3.22), with para-public organizations scoring slightly higher (3.6 each). An overview of the necessary framework for successful collaboration is presented in Table 2. The respondents show very strong support for openness and transparency (3.9), followed by a common goal (3.74) and a protected space (e. g. to commit mistakes) as well as clear roles (both 3.56).

Table 2: Necessary Framework for successful collaboration from the public leaders' view on a Likert-Scale ranging from 1-4.

	Openness & Transparency	Common Goal	Protected space (e. g. to commit mistakes)	Clear roles	Orientation towards user
Mean	3.9	3.74	3.56	3.56	3.51
Std. deviation	0.307	0.442	0.552	0.68	0.644

The responding leaders estimate the highest collaboration within the same organizational unit (3.69) and the lowest with citizens and users (2.51). Despite the New Public Management mentality, the promotion of collaboration follows the same "internal collaboration preference" (3.54 versus 2.36). Additionally, the results show that concrete tools and instruments in the perception of public leaders are more often used by larger organizations (≥ 75 employees) in absolute numbers, but vice versa when a similar question is asked in relative terms. This might explain why smaller organizations are considered by their leaders to have a slightly more developed collaboration culture (cf. Table 3). Workshops with external or internal partners and pilot projects (2.74) are the most frequently employed instruments. When collaborating with external partners, the most frequent tools are public consultations and focus groups (2.66 each). Further, smaller organizations seem to employ tools and instruments more often.

Table 3: Collaboration culture in the respondents' organizations rated on a Likert-scale ranging from 1-4, split by large (≥ 75 employees) and small organizations.

	Collaboration is established	Required methods and instruments are available	Estimated importance of collaboration for innovation
Mean large / small Organization	3.29 / 3.47	3.17 / 3.4	3.88 / 3.67
Std. deviation large / small organization	0.624 / 0.64	0.868 / 0.632	0.448 / 0.617

In summary, the results suggest that the public sector possesses a good level of collaboration, when evaluated from the public leaders' point of view. However, we identified unused potential around collaboration with external partners. This kind of collaboration is also the least promoted one by the respondents' organizations according to their perception.

4.3 Learning Organization

The general culture of experimentation and risk (2.95, cf. table 4) as well as the overall learning culture between the employees (3.07) are both at a relatively satisfying level, according to the

perceptions of the responding leaders. Nevertheless, amongst the observed pillars, this one shows the lowest score.

Table 4: Perceived experimentation and risk culture in the respondents' organizations: overall (aggregated mean), high and low score item.

Descriptive	Experimentation and risk culture Overall	Openness to new and unusual solutions	Living with instead of eliminating risks
Mean	2.95	3.22	2.47
Std. deviation	N/A	0.584	0.951

In both cases, larger organizations seem to have a culture more favorable for innovations (experimentations and risks: 3.1 / 2.71; learning culture 3.17 / 2.91) which is substantially due to more implementation of suggestions by stakeholders (3.13 / 2.67) and employees informing themselves more about new technologies (3.52 / 2.93) and being more ready to adapt themselves to technological changes (3.09 / 2.47). This second finding suggests that larger organizations have a learning culture more favorable to cope with the digital transformation. This issue seems to be noticed by the leaders of smaller organizations who recognize their most important need for action in the training of the digital mindset of their employees (2.13 where 4 indicates no need for action).

Similar to the collaboration culture, improvement could particularly be achieved by more interaction with stakeholders (overall mean 3), hence with external partners besides others. The ongoing digital transformation (cf. 4.1) seems to be especially challenging for the employees of smaller organizations. This crucial matter, however, could presumably be fixed with adequate training. Another possible lever is the risk culture - this aspect got the overall low score (2.95) of the aspects of all three pillars taken together. Yet, the mentality to live with instead of eliminating risks is not prevalent (2.47) and resources are not reserved to try, experiment and test (2.87).

4.4 Leadership Skills and Styles

We asked the public leaders to choose between one of three sets, each consisting of two or three values that fits their focus the most in order to achieve their organizations' goals.

Table 5: Percentage of respondents agreeing with either one of three sets of principles to achieve their organizations' goals.

Principles to achieve organizations' goals	%
Trust, collaboration and participation	73%
Effectivity and efficiency	24.3%
Legality, continuity and experience	2.7%

As Table 5 shows, the vast majority opted for trust, collaboration and participation (73%), rather than effectivity and efficiency (24.3%) or legality, continuity and experience (2.7%). This suggests a rather innovation-oriented mindset of the public leaders in general according to the academic literature.

In more detail, the leaders indicate to reflect much on themselves, on their roles and competences as well as on their strengths and weaknesses (aggregated mean of these three items: 3.39). While the motivation to further training in general is compared to these values rather low (2.74), 71% of the public leaders spend at least six days, 29% more than 10 days per year for training or conferences. Promising seen from our field of study is that the motivation for training in public innovation is (at least) slightly higher than for training in general (2.82). In a final, open question the participants were asked to tell what spurs innovation from a leader's perspective. One of them answered to "promote the personal initiative" and that "incentives are missing".

5. Conclusion and Further Activities

With this study we firstly provide an explorative data analysis on how public leaders perceive innovation and organizational innovation capabilities among Swiss public agencies and para-public enterprises. The preliminary results endorse the literature positions in terms of types of innovation, triggers, and outcomes. With regards to the innovation capabilities, they attest a good score to the collaboration and a very good score to the leadership pillar. However, the learning organization, especially regarding skills directly linked to the digital transformation, could strengthen the external collaboration with citizens and users.

Additional research is needed to better understand the extent to which public agencies are equipped with the necessary conditions to conduct innovative activities. Future activities shall address the different federal levels and comprehend possible diversities. Applied researchers need to identify good practices and understand the various mechanisms behind the success. Additionally, exploring the topic just from a leadership perspective could be reductive. Moreover, the sample considered itself to have a rather good knowledge of innovation and digitalization and also deals with it on a regular basis which could affect their perception in a positive manner. Enlarging the dataset would enable to identify patterns, depending for example on organization size or digital mindset.

When working and reflecting on the public organization of the future, digitalization and innovation topics need to be aligned for one main purpose: How does the public agency of the future look like and for what does it stand for in the digital transformation? Which capabilities and skills are needed when it comes to generating public value as well as openness, participation and resilience?

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