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**Canadian Federal Public Administration and the COVID-19 Crisis:
Lessons to Be Learned for the Upcoming Digital Transformation**

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The mission of the ENAP *Chaire de recherche en exploitation des ressources informationnelles* is to study, question and develop the governance instruments necessary to strategically utilize information and data in the digital universe. These instruments are mainly represented by public policies, administrative policies and practices, the organizational culture and technological solutions. Research activities will focus on studying solutions to enable the integration of new digital behaviours and technologies to ensure the optimal utilization of information and data in organizations and society in general.

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1. Introduction

As it is the case with all public administrations, the Canadian Federal Public Administration swiftly mobilized to provide assistance to the Government of Canada amidst the COVID-19 crisis that has been shaking the entire world for the past few weeks (Fillion, 2020; *The Canadian Press*, 2020). Beyond daily decisions made by the Executive since the beginning of the crisis and which will continue to be made in the future whether or not there is a pandemic, two distinct elements have caught our attention from the administrative perspective of governance and information management: namely connectivity and computability. These fundamental factors, which will be analyzed more extensively throughout the various post-mortem assessments, are certainly less pressing and less apparent in the current context given the emergency to take actions. Nevertheless, they remain paramount to the capacity of our public administrations to meet citizens' expectations nowadays and in the future.

With reference to the operational functioning of public administration, does the ongoing crisis allow us to learn a few lessons for that upcoming future?

Firstly, the importance of such an analysis originates from the fact that it is through the approaches of circulating (connectivity) and analyzing (calculability) information and data that leaders can make the best decisions for their citizens and also organize the tasks to be undertaken so that they are efficient and effective.

Secondly, the analysis we have conducted is established on the observations and documentation available during the COVID-19 crisis with regard to the ability of the Canadian Federal Public Administration to work digitally, i.e. with the available digital technologies, the communications and analyses made operational by these digital tools as well as the collaborative and remote working methods that they make possible.

Thirdly, the purpose of our current concise analysis is not to make a formal ex post evaluation of how digital technologies have been used to support the COVID-19 pandemic crisis management. Instead, our objective is to highlight some weak identifiable elements that could serve as potential levers to foster the digital transformation of the Canadian Federal Public Administration in the future. If there are explanations and reasons behind the weaknesses identified, it is worth underscoring these elements for us to learn lessons for the future.

2. Contextual Background

Unsurprisingly, after the biological and health reasons that are specific to the emergency, the predominantly fundamental issue remains that of information. The questions asked since the beginning of the COVID-19 crisis are an obvious demonstration of the crucial importance of information. For instance, these questions seek to know when were the authorities informed that the country was facing a problem; the reasons which justified keeping the international borders open until the decision was made to close them; or even forecasts of mortality or dates of resumption of economic activities and the criteria used to make such decisions. Another example is that the Canadian Federal Public Administration was marshalled to organize itself promptly in order to design and make federal assistance available to workers and businesses, or to take charge of the repatriation of Canadian nationals abroad (Buzetti and Vastel, 2020; *The Canadian Press*, 2020). Similarly, federal employees had to coordinate with one another in order to redeploy their duties by teleworking remotely (Nardi, 2020; Venturelli, 2020; Paquette, 2020). A final illustration is the ability to track people affected by the virus through the use of apps. In a nutshell, multiple forecasts, data analyses, work organization, service delivery, population monitoring and tracking, and other informational uses of data for speedy and informed decision-making have characterized the crisis from its very beginnings (Rocha, 2020; Blouin, 2020; Thommeret, 2020). Rightly or wrongly, some blames have already been brought up against the authorities for the management of the crisis and other accountability criticisms will be carried out during the post-crisis period for a multitude of reasons which have a common cause: the available information (Finlay, 2020). From there, it is possible to analyze what governments have been able to do with it and subsequently the actions that will have resulted from these analyses. First and foremost,

governmental decisions always depend on the available information. Then comes the use we can make of it and what we decide to do with it.

Nowadays, the digital world within which society in general and organizations in particular are evolving creates new expectations regarding the capacity of governments to respond to public problems. Citizens use digital technologies for themselves and see the possibilities they offer. Although there are still several debates on certain aspects of these digital uses such as the protection of personal information, emergencies seem to take precedence over these considerations. In any event, the question to ask here is more to try finding out the level of use of digital technologies within the daily functioning of the federal administration, and its level of preparation to use such digital tools at their full potential. Assessing such a situation would be particularly complex in normal times. However, the circumstances we have been experiencing for the past few weeks are becoming a kind of real-time laboratory where everyone must expeditiously deploy the capacity of such digital technologies.

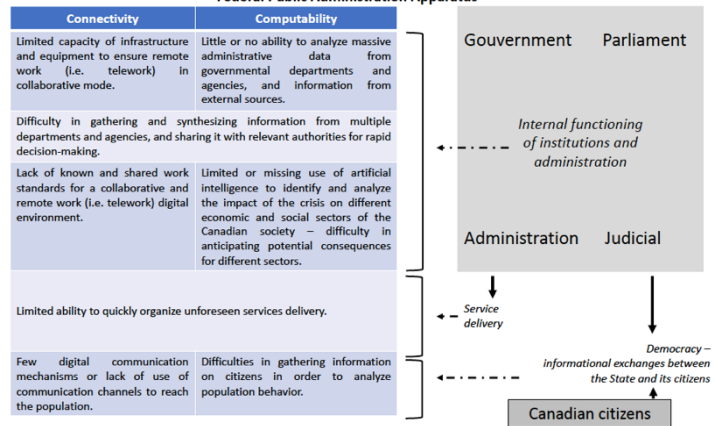
3. Observations

Several observations can be made concerning the reaction of the Canadian Federal Public Administration to deal with the crisis. From an informational and digital point of view, we will consider two elements for our analysis. The first element is connectivity. The latter refers to the ability to exchange information. Among other things, it allows the achievement of remote collaborative work. The second element is computability which is, in other words, the ability to analyze information and big data through automated procedures. Within the governmental paradigm, these elements are found on three levels. First, they influence the daily operations of institutional and organizational functioning. Second, they are determining factors impacting the ability of public organizations to deliver their services. Finally, they serve as a channel of communication between the State and its citizens. Such a channel of communication may take the downward route, i.e. the sharing of information from governments to citizens, but also the upward route, i.e. through the tracking of people according to various parameters of interest.

Very early during the COVID-19 crisis, evident hesitations and inaccuracies in the messages sent to the population testified to a difficulty in obtaining key information to support the design of such messages. As these messages were expected to be as fair and as useful as possible, the information and data to design them could only be decisive. The issue of the importance and severity of the crisis, the closing of international borders, the tracking and follow-ups of people who were returning from travels abroad, the repatriation of citizens, and finally the needs of workers and businesses affected by the crisis have shown that information may not have circulated at the frequency and in the manner desired or at the very least desirable. Furthermore, it was only after a few days that a reinforcement of messages could be perceived, among other things in the accuracy of informational contents, and such messages reinforcement probably came from the possibility of basing them on better information, persuasive data, more factual information from more consistent and reliable sources. The information seems to have been able to circulate “beyond the borders” of governmental departments or ministries and it came to feed the war room or crisis management unit. What was perceived from the outside is the likely result of a much more horizontal work where a decision-making center, beyond governmental ministries or departments and agencies, was now the focal place of convergence. The usual “informational selfishness” distinctively peculiar to traditional bureaucracies has gradually given way to a flow of information serving the issues to be resolved and the individuals who were in charge of solving those problems. If this change has taken some time to be operational, it is certainly due in part to the fact that the federal bureaucratic apparatus is huge, its synchronization is demanding and coordinating it quickly in an unusual manner represents a gigantic challenge. However, it may also be necessary to question the conventional operating standards of these institutions which were established before the technological advances of recent decades. From such a vantage point, is this not the most fundamental organizational issue to be considered when thinking about the future?

Within the COVID-19 crisis and at this level, what is interesting from the informational point of view is the lesson that we can learn from the effectiveness of a fragmented informational model specific to a multitude of entities who are “custodians” of a mission, and who are

Figure 1. Lessons to Be Learned from the COVID-19 Crisis for a Digital Transformation of the Canadian Federal Public Administration Apparatus



working in a rather autonomous manner and distributing information vertically compared to a horizontal model, and who are promoting the fluidity of exchanges and transversal sharing of information corresponding with outputs to be produced and results to be achieved whatever the particular missions. Consequently, information is primarily at the service of the State and the problems which the government has to resolve rather than forcing itself to respect flows and data feed which respond to institutional mechanisms. Accountability could be done differently and the institutional models could be reviewed and corrected according to these ways of working. The current conception of the work of institutions and their functioning has therefore possibly shown its limits and its difficulty in deriving all the advantages linked to the connectivity intrinsic to functional operations based on digital technologies.

A second aspect of connectivity that emerged from the COVID-19 crisis is the fact that the Canadian Federal Public Administration did not appear to be equipped or at least sufficiently equipped to work remotely. As reported by the media, this appeared to be altogether an issue of a technical, human and organizational nature. Quite quickly, the problem of the availability of equipment and infrastructure – e.g.: number of connections and secured connection – has hampered the redeployment of human resources for telework (i.e. working remotely) rendered indispensable. With reference to equipment and infrastructure, the techno-digital maturity of governmental departments and agencies appeared weak. It should be remembered that this issue has been the subject of many extensive works and major investments since at least the end of the 1990s, notably following the very articulated initiative of “Government On-Line 2004: Meeting

Canadians' Needs and Expectations" (Government of Canada and PWGSC, 2004). In addition, the Canadian Federal Public Administration does not yet seem to have developed the working and operating standards inherent to collaborative and remote work in digital mode (Government of Canada, 2020). These standards should be generalized throughout the public administration. In the case of the current COVID-19 crisis, federal employees have been sent to their homes, but the equipment and infrastructure were not up to the needs, and the mode of operation – administrative meetings, ad hoc committees, videoconferencing, task force gatherings, etc. – remained to be defined. Therefore, operational standards, ethical framework, equipment and workforce management for a telework organization mode appeared to be insufficient to transform the organization into a digital environment allowing optimal informational exchanges.

Thirdly, and in terms of the relationship with citizens, digital connectivity was mainly done in 1.0 mode, through the websites of the Government of Canada and its public administration. Daily press conferences with journalists are necessary and cannot be completely replaced by the use of web 2.0 and its social networks, but digital media could have been used with, for example, the activation of alert messages for lockdown (Finlay, 2020). Moreover, the use of connectivity could have been used when travellers were arriving at airports and eventually made it possible to register them for health monitoring. Such connectivity exists through cellular data and it is used for security purposes.

This lesson makes it clear that connectivity is more than just implementing or putting in place infrastructure and equipment, it has a huge impact on work organization. If the Canadian Federal Public Administration hopes to succeed with its digital transformation in the future, greater attention must be paid to the parameters essential to the support, technical framework and supervision of collaborative telework. This will also require reconsidering working methods not around institutional or organizational hierarchies, but according to informational flows.

The second element that captured our attention is computability. The failures experienced during the first days and the first weeks of the COVID-19 crisis showed that the existing data could not be quickly used to fuel reflection and deliberations fostering actions. The difficulty in foreseeing the consequences on industries and workers or on the need for lockdown related to the possible proliferation because of arrivals from outside the country took some time to materialize and have required several adjustments to programming as long as the data and analyses were progressively enhanced and refined. Nonetheless, the massive stock of data available to the Government of

Canada on all aspects of the functioning of society could have been used much more expeditiously with sophisticated analytical tools generated by digital technologies such as deep learning and artificial intelligence (Andrew-Gee and Grant, 2020). Failing to use such tools, the administration must fall back on traditional analysis made by experts, but without the support of these sophisticated working methods which shorten the time for completing various analyses, provide more detailed studies, in addition to allowing and actually freeing up time for significant deliberations required by experts and decision makers.

In terms of relations with Canadian citizens, computability would have been interesting to provide valuable analyses on the movement of people and COVID-19 proliferation or even forecasts linked to the need for healthcare equipment according to the evolving crisis and different scenarios. Nevertheless, for this to be achieved, there should have been very good information on inventory and supplies as well as excellent connectivity with hospitals and provincial health authorities. System interoperability is also part of the equation and it is generally deficient (Samson and Associates, 2015).

4. Conclusion

In conclusion, this concise analysis provides the means to demonstrate that it is not so much the degree of preparedness for the COVID-19 crisis in terms of plan or strategies that has emerged as the greatest shortcoming from an organizational perspective. Instead, it is the proficiency of the Canadian Federal Public Administration to operate in digital mode that is at the core of the issue. On the one hand, the weak technological maturity of governmental departments and agencies is an easily remediable deficiency. On the other hand, work organization and culture are not adapted to the digital realm. Here, work to be done will be more demanding.

By adequately using digital technologies and a work organization built around information flows, the Canadian Federal Public Administration could take advantage of connectivity and computability which would create anticipation capacities, foster greater policy coherence and facilitate transparency. These elements are expected from digital citizens who live their daily lives

surrounded by these technologies, use them regularly and increasingly understand their strengths and weaknesses as well as the risks of potential drift. At the same time, these same citizens are also aware that these informational uses can help to better manage society and the public policy choices society has made. While it is essential to have plans and strategies (Bronskill, 2020) that will deal with the kind of crisis we are presently facing, it is important to emphasize that, for example, if we can anticipate and allow cross-referencing, sharing and analyzing data within a national security strategy, data science does not operate in the same manner. The algorithms must be practicing and learning from one another. Algorithms must be trained. Therefore, such a choice must be a long-term choice, permanent and rooted within daily administrative practices. As a result, the required governance and management will be better prepared, adapted and more transparent. The same logic applies to the administrative planning of the more human dimension of work which will enable the development of a digital work culture.

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