

Digital Policy Hub – Working Paper

# Digitalization in Korea, Sweden and Canada: Examining Governance

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The Digital Policy Hub at CIGI is a collaborative space for emerging scholars and innovative thinkers from the social, natural and applied sciences. It provides opportunities for undergraduate and graduate students and post-doctoral and visiting fellows to share and develop research on the rapid evolution and governance of transformative technologies. The Hub is founded on transdisciplinary approaches that seek to increase understanding of the socio-economic and technological impacts of digitalization and improve the quality and relevance of related research. Core research areas include data, economy and society; artificial intelligence; outer space; digitalization, security and democracy; and the environment and natural resources.

The Digital Policy Hub working papers are the product of research related to the Hub's identified themes prepared by participants during their fellowship.

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## Key Points

- Korea and Sweden have shown significant progress in adopting digital technologies as well as in reckoning with the challenges that digitalization brings.
- A study comparing the Korean and Swedish experiences with respect to digitalization indicates that these two countries have adopted governance approaches that use a rigorous planning process, establishing clear priorities and evaluating policies on an ongoing basis.
- In the case of Canada, while progress has been made in some domains, governance of digitalization has been characterized by more jagged priority setting. Overall, there is a distinct lack of policy durability and targeted focus on digital priorities.
- As Canada confronts digital transformation, there are policy lessons it can learn from the Korean and Swedish experiences.

# Introduction

In a world characterized by the clash of digital titans (Bradford 2023), extensive commodification of data (Haggart 2018) and transformative technologies that disrupt the territoriality of nation-states, focusing on national digitalization strategies may seem a bit anachronistic. Yet, the governance of digitalization does remain important in the race for international comparative advantage, as well as in the fuel that digitalization provides for innovation and the protection that it may, or may not, bring to citizens and their privacy rights. So too is such governance critical for matters of national security. As such, using a comparative lens to examine the national digitalization strategies of two recognized innovation leaders — the Republic of Korea (hereafter Korea) and Sweden — against Canada,<sup>1</sup> a country with a much less stellar history on the innovation front, holds the promise of offering important insights.

This proposed examination rests on the factors that can either enable or imperil digitalization as it diffuses through a given society and its economy. So too does it encompass the protective envelope that governance may place around not only individual rights but also collective societal interests. Consequently, the digitalization strategies employed and the contrast between successful and more muted efforts offers important policy lessons for the future.

The purpose of this inquiry is twofold. First is the matter of policy mission and durability and the extent to which directed priority setting characterizes the governance of digitalization in Korea, Sweden and Canada over time, specifically from the year 2000 onward. The legal framework in which national agenda setting is couched as well as each nation's plans and priorities will be explored in relation to this issue. Second, the comparison of these countries will reveal the type of governance regime that prioritizes

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<sup>1</sup> See Scharf (2022).

digitalization and innovation — and whether these factors have been primarily reliant on market mechanisms or more coordinated initiatives as propelled by the nation-state.

For the purposes of this paper, the concept of digitalization refers to the economic and societal transformations that occur in the wake of the development, adoption and diffusion of digital technologies — such as massive computing power, machine-to-machine connectivity, artificial intelligence (AI) and big data, among others — and the resulting interconnection.<sup>2</sup> In this context, it is particularly important to highlight the accelerating power and revolutionary nature vested in these technologies (Samson et al. 2023).

## The Theoretical Framework

The comparative lens used for this paper will draw on two currents of literature that explore public policy choices in the context of innovation. The first is the development network state framework as associated with the work of Fred Block, Matthew R. Keller and Marian Negoita.<sup>3</sup> Critical examination of this literature<sup>4</sup> will show that government initiatives premised on targeted policy direction (Block 2008, 172-73), resourcing and priority setting are important in enabling growth and innovation. Initiatives that have policy endurance and are sustained through to implementation are also necessary components of successful strategies. While distinct from the development network state framework, the extensive contributions of Mariana Mazzucato (2018a, 4) on innovation equally highlight the need for “clear direction” and “deliberate” public policy choices in regard to innovation (Mazzucato and Semieniuk 2017, 30).<sup>5</sup>

Drawing on insights from this research, this paper examines whether government strategies, being sharply honed and sustained over time, may also positively impact digitalization. It also questions whether differences in governance — as articulated through robust legal frameworks and targeted priority setting — impact both the extent of a nation-state’s digitalization efforts and its response to the challenges that this transformation brings.

## Digitalization Indicators

Korea and Sweden have been recognized by the OECD as being above the OECD average on a range of digitalization indicators and have been the leaders in some domains such as connectivity and access (OECD 2018, 2023). Both countries’ digital transformations are viewed as key components in their successful innovation performances. Canada, however, has not enjoyed as much success in terms of digital transformation and resulting gains in innovation. A review of a few salient digital indicators from the OECD toolkit<sup>6</sup> shows that Canada is lagging

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2 This definition draws from three concepts used in OECD’s (2019, 18) definition: digital technologies, data and interconnection.

3 See Block (2008); Block and Keller (2011); Keller, Block and Negoita (2022); Block, Keller and Negoita (2024).

4 For an extensive discussion of the Development Network State framework and the work of Mazzucato, see Scharf (2022).

5 See also Mazzucato (2015, 2018a, 2018b, 2021); Dosi et al. (2023).

6 See <https://goingdigital.oecd.org/>.

well behind Korea and Sweden on economic measures as well as machine-to-machine connectivity and fixed broadband connections with fibre, although Canada has done exceedingly well on fixed broadband more generally.

Yet, despite certain discrete areas in which Canada has excelled, such as in population coverage for 4G technology, both Korea and Sweden have surpassed Canada in adapting to the digital age and incorporating digital technologies and data into their societies and economies. Thus, these digital indicators provide a very interesting case by which to examine the strength of government policies and the policy lessons they reveal.

## Korea: Creating Comparative Advantage

### Legal Framework

In the case of Korea, the legal framework and essential building blocks for digitalization were established early, with legislation designed in 1996 to specifically “promote” an “informatization” society and economy (Lee 2021). By 2009, and as amended in the years following, the Framework Act on National Informatization had more concretely established the mission to be achieved and the planning mechanisms that would accompany it. Bold in intent, the act aimed to “build a free and open knowledge and information based society,” ensuring both “human dignity” and “sustainable development.”<sup>7</sup> To be realized through a rigorous five-year planning process, the act included the machinery for implementation, dispute resolution, performance criteria and annual reporting.<sup>8</sup> By 2021, new legislation had been enacted, focused on creating a seamlessly connected economy and society. Revolving not just around broadband and traditional networks, the legislation now spoke to the transformative power of digital technologies for the nation, including AI, cloud computing, data, machine-to-machine connections and the machine-person interface.<sup>9</sup>

Certainly, the act remained committed to the security and privacy of Korean citizens, as well as to closing the digital divide and inequities that can characterize digital access. However, what is apparent in the 2021 act is a much stronger emphasis on the required market mechanisms and the role of the private sector in realizing digitalization goals. The legislation is explicit about the “new value” that can be transported across all dimensions of the polity, including the economy and civil society. It also lays out the need to support the commercialization of these technologies through intellectual property and access to capital. The legislation is predicated on positioning for the future, bringing Korea to the fore in terms of comparative economic advantage.

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7 *Framework Act on National Informatization Act No. 14572 (2017)*, art 2, online at: <[https://elaw.klri.re.kr/eng\\_service/lawView.do?hseq=42620&lang=ENG](https://elaw.klri.re.kr/eng_service/lawView.do?hseq=42620&lang=ENG)>. It should be noted that the act provided on the official Korean website indicates the legislation was “wholly amended” by presidential decree in 2009.

8 *Ibid*, c II.

9 *Enforcement Decree of Framework Act on Intelligence Informatization, as amended by Presidential Decree No. 31763 (2021)*, art 4, online at: <[https://elaw.klri.re.kr/eng\\_mobile/viewer.do?hseq=57430&type=sogan&key=54](https://elaw.klri.re.kr/eng_mobile/viewer.do?hseq=57430&type=sogan&key=54)>.

## Plans and Priorities

### Early Years

While the Framework acts of 2009 and 2021 formed the legal foundations for digitalization in Korea, the Basic and Master Plans have aligned with these acts over the years by establishing the strategies and machinery for implementing priorities. Five-year plans propelling industrialization and development in Korea have been in place since 1962, but starting in 2003, there has been an ongoing cycle of five-year Basic Plans on science and technology (S&T) that have articulated the goals and vision for the nation's future. In the 1990s, there were efforts aimed to catapult Korea into G7 ranks (Oh, Lim and Kim 2016; OECD and the Permanent Delegation of the Republic of Korea to the OECD 2021; Yoon 2014). But the Basic Plans on S&T specifically addressed widescale technological transformation, with an increasing focus on digitalization and informatization.<sup>10</sup> First focused on critical investments in the information and communication technology (ICT) industry, particularly semiconductors, the early plans (from 2003 to 2017) broadened to include 5G technologies and robotics. However, by the Fourth S&T Plan (2018–2022), there is a clear broader objective of striving for an “intelligent information society” (Government of the Republic of Korea 2018, Task 11-2),<sup>11</sup> integrally connected through communications and replete with real-time networks and technologies.

### The Current Agenda

Recognizing the new wave of digital transformation and innovation that the country is facing, the Fifth S&T Plan (2023–2027) (Government of the Republic of Korea 2022) has cemented the intelligent information society further. Laying out a concrete national strategy, the Fifth Plan focuses on establishing the information infrastructure and digital replication needed for existing physical assets. It indicates the support to be provided to industries across all sectors to incorporate leading-edge technologies into their operations, such as AI, 5G, cloud computing and blockchain. Critically, and akin to the leaps that Korea took in its early nationhood, in a world of national competition for “technological hegemony,”<sup>12</sup> the Fifth Plan presents 12 strategic areas in which the country should seek to lead development, such as quantum, AI, next-generation communications (including the commercialization of 6G) and semiconductors, among others.

*The Mid-to Long-Term Master Plan in Preparation for the Intelligent Information Society* (Government of the Republic of Korea 2017) has fleshed these goals out even further. Notably, the plan provides a critical assessment of the breadth of industrial and societal transformation in the wake of digitalization. Strengths and weaknesses characterizing the “current status” (ibid., 21) of the nation are laid out. Plan objectives are then calibrated in that context, revolving around the “world-class infrastructure” needed to realize the country's vision of an intelligent information society, including the application of intelligent information to “all industries”

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<sup>10</sup> On early plans, see Yim and Lee (2015) and OECD (2014). The Fourth and Fifth Plans were provided to the author by Korean officials.

<sup>11</sup> Translations of Korean and Swedish text generated by DeepL.

<sup>12</sup> Government of Korea (2022), S.III, 1-1-2 and S.IV, 3.4.

and the requisite changes to “social security” (ibid., 28). In sum, the Master Plan encompasses the national strategies, policy goals, tasks and metrics needed not only for infrastructure and industrial needs, but also to enable citizens to have technical skills, access to networks and personal protection within the digital economy.

## The Vision

If policy durability and clear priority setting are the conditions required for effective governance of digitalization, this brief history of the Korean model provides clear evidence of this. From a “leap forward” position of placing critical information technologies among the strategic industries needed for industrial advancement, the plans grow to include Korea’s adoption of the technologies of the future and the resulting digital sovereignty that the country may carve out within that.

The later planning reflects a heightened dependence on the private sector and a “market-leading approach” (Government of the Republic of Korea 2017, 26–27) for propelling these changes. Be it the focus on futuristic technologies with massive innovation potential or the manner in which this digitalization will leverage comparative advantage, the policy vision here very much rests on a strong market orientation. Planning documents specifically reference the role of government as that of enabling market conditions and providing “support” (ibid., 27). Nonetheless, the state’s governance role remains crucial, fixed as it is on enabling the ecosystems and fostering the transmission infrastructure that can catalyze change. The resulting vision that is articulated is both holistic and enduring.

# Sweden: A Collective Pursuit

## Legal Framework

Unlike Korea, Sweden does not embed its planning and priority setting in dedicated legislation. However, since the 1980s, the Swedish government has regularly brought forward bills for legislative approval that lay out the country’s research agenda. Moreover, since the 2000s, these bills have been tightly interwoven with innovation priorities. The bills themselves are introduced through four-year planning cycles and are extensive in nature.<sup>13</sup> The priorities of the nation are articulated within the context of global and national developments and funding allotments for initiatives are proposed. Contained in the bills is an extensive analysis essentially of the state of the nation, both economic and social, including the results of consultations on issues that have been undertaken. Further, each cycle reviews the achievements to date and outlines where strengthened approaches are needed. Thus, while it is couched in a different context, Sweden’s priority setting operates in a manner akin to that of Korea, with a regular and rigorous planning cycle.

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<sup>13</sup> See *Regeringens proposition 2008/09:50, Ett lyft för forskning och innovation*, 20 October 2008, online: <[www.regeringen.se/contentassets/05cb6c62a34e4b37a114611a3ebcbd5b/ett-lyft-for-forskning-och-innovation-prop.-20080950](http://www.regeringen.se/contentassets/05cb6c62a34e4b37a114611a3ebcbd5b/ett-lyft-for-forskning-och-innovation-prop.-20080950)>; *Regeringens proposition 2012/13:30. Forskning och innovation*, 11 October 2012, online: <[www.regeringen.se/contentassets/4ef9d72bd1b84b3fad482671b5509fa7/forskning-och-innovation-prop.-20121330](http://www.regeringen.se/contentassets/4ef9d72bd1b84b3fad482671b5509fa7/forskning-och-innovation-prop.-20121330)>; *Regeringens proposition 2016/17:50. Kunskap i samverkan — för samhällets utmaningar och stärkt konkurrenskraft* [*Regeringens proposition 2016/17:50*], 24 November 2016, online: <<https://data.riksdagen.se/fil/276B2209-A8A3-411E-AF7F-1706658FB9EB>>; *Regeringens proposition 2020/21:60. Forskning, frihet, framtid — kunskap och innovation för Sverige* [*Regeringens proposition 2020/21:60*], 17 December 2020, online: <[www.regeringen.se/contentassets/da8732af87a14b689658dadcfb2d3777/forskning-frihet-framtid--kunskap-och-innovation-for-sverige.pdf](http://www.regeringen.se/contentassets/da8732af87a14b689658dadcfb2d3777/forskning-frihet-framtid--kunskap-och-innovation-for-sverige.pdf)>.

As for the legislation relating to digitalization, Sweden, as a member of the European Union, is subject to the General Data Protection Regulation (GDPR),<sup>14</sup> which took effect in 2018. The regulation addresses the personal protection of individuals in an era of data usage and economic activity and lays out the security procedures that must be put in place by providers, as well as the redress for individuals when security is breached. Sweden has also passed accompanying laws that are aligned with the regulation.<sup>15</sup> Further, there has been an historical emphasis in the country on digital services in the context of public administration, as well as broadband expansion (Myndigheten för tillväxtpolitiska utvärderingar och analyser 2014, s.4.2).

## Plans and Priorities

### Early Years

Like Korea, Sweden's engagement on digitalization started early, back in 2000. Certainly, there was the backdrop of the European Union's 1999 agenda to bring nations into the digital age and secure the perceived economic benefits that would result. Sweden, however, advanced quickly on the digital agenda, focusing efforts and funding around broadband coverage for its citizens (OECD 2018), as well as on government services. By 2010, amid government concerns over the country losing its competitive edge in research and innovation, a strengthened set of digital priorities was being established. Releasing *Digital Agenda for Sweden* in 2011, the intention of the government was clear (Myndigheten för tillväxtpolitiska utvärderingar och analyser 2014; Digitaliseringskommissionen 2012): Sweden was to "be the best in the world at using the opportunities of digitalization" (ibid., 4). An ambitious target of 90 percent of households and businesses were to have internet connectivity by 2020 (Regeringskansliet 2012, 67). The workforce and a new generation were to be equipped and educated with the ICT skills for the future. Moreover, connectivity and "inclusion" were to suture digital divides (ibid.). Similarly, the agenda prioritizes a broadening of citizen influence and voice through greater democratic opportunities.

While the agenda included the need for businesses to seize ICT opportunities to strengthen their "competitiveness" (Statens Offentliga Utredningar 2014, 72), the government also commissioned a more in-depth inquiry into how digital technologies might be impacting the Swedish economy. Undertaken by the Swedish Agency for Growth Policy (Myndigheten för tillväxtpolitiska utvärderingar och analyser 2014), the inquiry probed deeply into the relationship between digitalization and productivity. The conclusions were impressive. The agency found that the ICT sector and accompanying investments had contributed extensively, adding 42 percent to total productivity growth in Sweden over the 2006–2013 period. But that productivity was confined "almost exclusively" to the ICT sector (ibid., 9).

The implications of this analysis were clear. Digitalization was a catalyst for growth and policy makers needed to take a "broader perspective" (ibid., 10), ensuring that the

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14 EC, *Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)*, OJ, L 119/1, online at: <<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R0679>>.

15 See [www.staff.lu.se/support-and-tools/legal-records-management-and-data-protection/personal-data-and-data-protection-gdpr/general-information-and-support/laws-and-regulations](http://www.staff.lu.se/support-and-tools/legal-records-management-and-data-protection/personal-data-and-data-protection-gdpr/general-information-and-support/laws-and-regulations) and [www.riksdagen.se/sv/sok/?avd=dokument&sok=Dataskydd&doktyp=sfs](http://www.riksdagen.se/sv/sok/?avd=dokument&sok=Dataskydd&doktyp=sfs).



transformation wrought by digitalization extended into the whole economy. Benefits needed to have a wider regional dispersion, beyond concentration in the Stockholm area. Growth did not pivot just on hard infrastructure (broadband) or technology but had consequences for a wide range of related policies — research, innovation, industry and trade.

The government was not long in translating these results into concrete policy initiatives. Major infusions of funding were directed into digitalization in the budget of 2015 (Myndigheten för tillväxtpolitiska utvärderingar och analyser 2014) and again in the Research Bill of 2016.<sup>16</sup> A focus on broadband and hard infrastructure was retained, but now with a new goal of achieving 98 percent connectivity for Sweden by 2025 (OECD 2018, 36–37). And digitalization in 2016 became one of the six key priorities that the government laid out in its four-year planning cycle.<sup>17</sup> This position was retained and strengthened as the government launched its Research and Innovation Bill for 2020,<sup>18</sup> intended to guide the nation forward until 2024.

### The Current Agenda

In 2017, the government presented a digitalization strategy (Regeringskansliet 2017), signalling the pillars on which policy would rest, and the implementation that would be taken. Akin to the Korean planning initiatives, *For a Sustainable Digitalized Sweden — A Digitalization Strategy*, evokes a vibrant vision for the future, balancing challenges with opportunities and setting Sweden out as an international leader. Indeed, the strategy is both ambitious and unequivocal: “The overall goal is for Sweden to be the best in the world at using the possibilities of digitalization” (ibid., 6).

But what is striking about the strategy is not just the international leadership it seeks, nor the economic dimensions to which it points, but the societal range it covers and its collectivist nature. The strategy itself is premised on five goals and certainly digital innovation is a critical objective among these. The digital innovation pillar in the strategy includes creating the enabling conditions and “climate” for reaping the benefits of a digital economy by “supporting entrepreneurship that contributes to competitiveness and trade, and incubating start-ups” (ibid., 28).

At the same time, there is a clear commitment to digital “competence” (ibid., 14) for all citizens. Based on the skills and education enabling full participation in digital society and readiness for its structural transformation, digital literacy is not just premised on access. It also includes the critical skills for citizens to “evaluate” information and its “credibility” (ibid., 15). As for the third pillar around digital security, while this turns on the protection of personal privacy, it too is vested with an emphasis on security for workers as they transition within a digitally driven labour market. The fourth pillar, digital management, revolves around streamlining government operations for both access and efficiency. The digital infrastructure that girds and enables this transformation is named as the fifth pillar. In sum, citizenship, “social cohesion” (ibid., 9) and participation in a democratic undertaking stand alongside innovation and competitiveness. The strategy itself was

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<sup>16</sup> *Regeringens proposition 2016/17:50*, supra note 10, 95–96.

<sup>17</sup> *Ibid.*, 1.

<sup>18</sup> *Regeringens proposition 2020/21:60*, supra note 10, 1.

bolstered with funding,<sup>19</sup> with a monitoring role given to a new third-party agency. And while it has not been updated since 2017, the strategy continues to guide policy efforts; the commitment to digitalization priorities and objectives remains.

### The Vision

With respect to the Swedish governance of digitalization, then, two issues of import can be discerned. First, the continuity and rigour with which Sweden has pursued policy goals around digitalization are evident from 2000 onward. Priorities have certainly broadened and evolved beyond broadband and access but the focus on a digitalized economy and society has remained. Second, there is a deeply collectivist nature to this project; it is not solely driven by innovation, competitiveness and trade. Rather, the emphasis on social cohesion and collaboration among the key actors of business, academia and government are very much in keeping with Swedish corporatist traditions and the social-democratic foundations on which the country has been based (Esping-Anderson 1990).

## Canada: Governance and Challenges

### Legal Framework

Unlike Korea, Canada does not have an established and rigorous legislative framework for priority setting, and unlike both Korea and Sweden, it does not have an accepted tradition of mid-term planning. At the federal level, budgets are generally introduced on an annual basis and throne speeches are used to launch the agendas of new administrations. Moreover, there is no legal or customary obligation for these initiatives to take account of previous efforts or how or why these efforts may have differed. While budgets do at times exhibit continuity under the auspices of the same administration, this is by no means a requirement. As such, the priority-setting framework in Canada could certainly benefit from a lesson in the legislative practices of Korea and Sweden.

With respect to more comprehensive legislation that covers the digital front, currently, the Digital Charter Implementation Act is before the House of Commons for consideration.<sup>20</sup> This would amend previous initiatives that were focused on personal protection in the digital age. However, unlike the GDPR adopted by Sweden or the various Korean acts, there is no comprehensive body of legislation grappling with the impacts of and risks posed by the digital economy on wider Canadian society.

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<sup>19</sup> *Regeringens proposition 2020/21:60*, *supra* note 10, s.4.10, table 4; s10.1, 10.1.5.

<sup>20</sup> Bill C-27, *An Act to enact the Consumer Privacy Protection Act, the Personal Information and Data Protection Tribunal Act and the Artificial Intelligence and Data Act and to make consequential and related amendments to other Acts*, 1st Sess, 44th Parl, 2022 (second reading 24 April 2023), online: <[www.parl.ca/legisinfo/en/bill/44-1/c-27](http://www.parl.ca/legisinfo/en/bill/44-1/c-27)>.

## Plans and Priorities

### Early Years

What has particularly characterized the Canadian experience is the lack of a comprehensive digital strategy, be it with respect to the valuation of data and privacy alongside human rights (Haggart 2018; Scassa 2018, 2019) or its economic implications (Wolfe 2019) or the broad architecture that needs to be addressed within the context of digital transformation (Centre for International Governance Innovation 2018). Nonetheless, what is particularly interesting about the Canadian case are the various and intermittent endeavours that have been undertaken in this field. In contrast with Korea and Sweden, which have adopted clear and focused strategies, Canada might be best characterized as having not just *a* strategy but rather a few strategies existing simultaneously.

The first forays into a digital economy strategy initially appeared in 2010 with the announcement in the March 2010 Speech from the Throne. The strategy itself was a rather ambitious initiative based on five key pillars (Industry Canada 2010a, 2010b). It called for “world-class infrastructure” centred on providing broadband to rural and remote areas of the country. It openly embraced the digital economy and the measures necessary for business to “adopt” ICT into their operations. It focused on enhancing digital skills (albeit only with respect to primary education and research grants for universities). And it provided for some investments in ICT firms that would be capable of exporting globally. Finally, it articulated a commitment to enhancing digitized Canadian content in recognition of the country’s heritage. This strategy was the subject of widespread national consultations at the time (Industry Canada 2010a), which solidified its key pillars and allocated significant funding to its initiatives (Department of Finance Canada 2011, 150–51, 166).

Despite this rather auspicious start, policy efforts since have been more mixed. There have been four key inflection points: the aforementioned 2010 initiative and a renewed version in 2014, the 2017 focus on the digital economy within the context of the Innovation and Skills Plan and the more recent 2022 pivot to the government’s “digital ambition.”<sup>21</sup> These efforts have been interspersed with more specific initiatives in 2015, 2021 and 2023 (Department of Finance Canada 2015, 14–16, 71, 95–99, 158–59, 172; Department of Finance Canada 2021, 131–35, 153–58; Department of Finance Canada 2023, 100, 175–76, 189; Innovation, Science and Economic Development Canada 2023, 1, 4–5).

That noted, three features about this policy history stand out. First, the “pillars” or components of the strategies do not remain consistent. For example, skills first appears in 2010 but disappears from view in the 2014 Digital Canada 150 venture, only to reappear in 2017 and this time much more strongly — with a focus both on adult digital learning and early education and STEM skills (Department of Finance Canada 2017, 71–74). The skills pillar then resurfaces again in terms of both literacy and business needs in the 2021 policy (Department of Finance Canada 2021, 113–15, 131–33). Similarly, the emphasis on Canadian content disappears after 2014, only to reappear in the 2022 context of tax reform in the face of social media platforms using Canadian content and data (Department of Finance Canada 2022, 187).

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21 See Industry Canada (2014); Department of Finance Canada (2017) 44, 71–74, 102–104, 109, 111); on the 2022 pivot, see [www.canada.ca/en/government/system/digital-government/government-canada-digital-operations-strategic-plans/canada-digital-ambition.html](http://www.canada.ca/en/government/system/digital-government/government-canada-digital-operations-strategic-plans/canada-digital-ambition.html).

Second, even when the emphasis is on enabling the private sector, there is a tension that emerges. Objectives tend to manoeuvre between large firms that can compete globally, anchoring vibrant Canadian digital ecosystems, and the effort to enable small and medium-sized enterprises (SMEs) in their adoption of digitalization. Thus there is an evident focus on the National Research Council supporting SMEs in their adoption of digital technologies in both the early years (Department of Finance Canada 2011, 2014) and the “Digital Adoption” program for SMEs in 2021 (Department of Finance Canada 2021). So too within this rubric are the ancillary efforts by the Business Development Bank of Canada to assist these firms with loans and extended credit.

Yet, equally evident in budget 2017 and again in budget 2021, there is also a focus on establishing digital anchor firms as a priority. Housed within the 2017 Digital Supercluster, dense activities of research and commercialization would take root and catapult Canadian firms poised for growth into the ranks of the globally competitive. This aim was reiterated in the Digital Economic Strategy Table (Canada’s Economic Strategy Tables 2018), which was established by the government at the time. In the quest to “own the podium” (ibid., 5) the priority was to double the number of such firms in Canada: no small endeavour, especially given the starting point. Yet, policy initiatives are quite agnostic on the question of what the criteria driving SMEs to global contention are and how these may be attained. Unlike Korea, dedicated attention to firms with the “potential for significant ripple effects” and the adequate capacity for scaling and propelling growth (Government of the Republic of Korea 2017, 28) are distinctly lacking.

Third, what is resonant and consistent throughout this history is the focus on connectivity and infrastructure for both private citizens and businesses. It does take different forms and evolves, first setting a goal of 98 percent of Canadians with connectivity (Industry Canada 2014). It also includes, in the effort to stimulate commercialization, emphasis on modernized digital research infrastructure and networks (Department of Finance Canada 2015, 97–99), as well as facilitating internet access to those in difficult economic or social circumstances (Department of Finance Canada 2014, 77). Uniquely, early years also saw a focus on opening up more spectrum to incentivize providers to build out networks, especially for the last mile to remote communities. Nonetheless, the goal of building out the infrastructure does continue (Department of Finance Canada 2014, 179–80; Department of Finance Canada 2021, 153; Industry Canada 2022, 2), although continuity has tended to be the outlier in these strategies.

## The Current Agenda

In more recent days, policy efforts have tended to pivot on two fronts. There has been the launch of the Digital Charter<sup>22</sup> and the tabling of the proposed legislation in Parliament as of June 2022. Despite its caveats, the bill has been focused on the protection of individuals’ personal data and privacy and the mitigation of associated harms. The charter (although not directly articulated in the legislation) has also been replete with 10 “principles,” key among them the concept of “universal

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<sup>22</sup> Bill C-27, *supra* note 13.

access” for Canadians to “participate” in the new digital era.<sup>23</sup> Progress has been slow, however, and the bill has yet to have made its way into legislation.

The government has also launched Canada’s Digital Ambition 2022.<sup>24</sup> Aiming to modernize the federal government’s operations by providing seamless and enhanced services to businesses and citizens alike, the agenda is focused on an overhaul of government operations. Arguably, however, the lens has been narrowed from earlier efforts. True, it seeks to transcend the currently rather troubled landscape of existing information technologies within the public service. But this does not represent the pursuit of digital transformation and readiness within the economy and society more broadly. The role of government, and the structural transformations of digitalization, are being viewed through a fairly narrow prism.

## The Vision

In sum, the Canadian digitalization experience contrasts quite sharply with that of Korea and Sweden. Canada has not yet fully reckoned with the forces of the digital revolution — technological, global and socio-economic — as Korea and Sweden have clearly done in their policy making. Nor, in large part, has Canada undertaken a deep assessment of the country’s strengths and weaknesses as it faces down the digital challenges of the twenty-first century. The vision imparted in these policy efforts is not grounded in a sustained national undertaking, whether it be that of a collectivist nature or a technological powerhouse on the global front.

Certainly, the Canadian case is a hybrid model, both focusing on societal challenges around digitalization as well as market needs. But the vision itself is porous at the edges and the defining characteristics of the Canadian governance regime are difficult to distill. If anything, this governance has a decidedly ad hoc character (and notably not propelled by political partisanship). There is a commitment to wrestling with the challenges of personal protection in the age of social media, as well as the biases and unpredictability embedded in AI. But the history of Canadian priority setting suggests that government policy is much less equipped to handle the forces of digitalization going forward.

## Conclusion

With respect to the questions raised at the outset of this inquiry, two important conclusions emerge from this historical review. First, the success that Korea and Sweden have experienced in terms of digitalization is predicated on rigorous and ongoing planning cycles, replete with clear priorities, performance metrics and evaluation. While the two countries present different approaches, one with a deeply embedded legislative framework and the other with a tradition of planning, both cases are characterized by continuity and policy durability. By contrast, Canada, despite making significant advances in some areas such as connectivity, has presented a much more episodic and jagged approach to priority setting, with the absence of the ongoing metrics, review and critique that can inform future directions and course corrections.

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<sup>23</sup> See <https://ised-isde.canada.ca/site/innovation-better-canada/en/canadas-digital-charter-trust-digital-world>.

<sup>24</sup> See [www.canada.ca/en/government/system/digital-government/government-canada-digital-operations-strategic-plans/canadadigital-ambition.html](http://www.canada.ca/en/government/system/digital-government/government-canada-digital-operations-strategic-plans/canadadigital-ambition.html).

Second, as for the respective governance regimes of these three countries, there are certainly no pure forms here, with Korea, Sweden and Canada all demonstrating a hybrid nature. In the case of Korea, there has been a stronger focus on markets and the pursuit of technological advances in relation to sovereignty, while Sweden has tended toward a more collectivist vision and governance regime. In Canada, governance has demonstrated a more ad hoc nature, although clearly a market impetus can be strongly detected as well (notwithstanding the tensions between SMEs and anchor firms).

Given the importance of digitalization for innovation and the manifest societal implications of the new digital era, Canada and its federal policy would be well-served by observing the policy lessons inherent in the Korean and Swedish experiences: namely, the priority setting and planning, rigorous performance tracking and foresight initiatives that have deeply informed digitalization in these two countries. As the global environment presents even more economic and political challenges, carving a national path forward for an increasingly digitalized future becomes ever more critical.

## Recommendations

- **Establish a five-year planning and priority-setting cycle for digitalization issues at the federal level in Canada.** Key dimensions could include access to digital participation; economic progress (with respect to technologies, productivity, employment and exports); digital literacy; social security and trust in the digital economy. At the forefront of each planning cycle, the government should engage in consultations with major stakeholders and citizens, releasing a white paper and then using that to further craft and solidify goals.
- **Establish a clear and viable set of metrics, including quantifiable measures, for tracking progress on these priorities.** Priorities should also be clearly linked to realistic and achievable timelines.
- **Establish a 10-year vision exercise at the federal level in Canada,** with a focus on technology transformation, economic priorities in a changing global world order and social needs.

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