The Impact of Covid-19 on Public Sector Performance: The Case of the National School of Government

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Abstract

The National School of Government (NSG) is a government training academy that offers training interventions directly or through partnerships with local and international higher education institutions. The NSG's programmes are aligned with public sector policy frameworks and national priorities and respond to the learning needs of public servants and public sector institutions. Historically, most of these programmes have been offered through face-to-face training in a classroom situation, with a limited number delivered online. This standard delivery approach was drastically tested in 2020, with the outbreak of the COVID-19 pandemic. Cabinet declared a National State of Disaster in March 2020, forcing the country into lockdown to prevent the spread of the virus, which suspended face-to-face classes. Given that the NSG is only partially funded by government, it relies heavily on fees charged to students and/or their departments for its financial survival. This financial crisis worsened when its limited budget allocation was severely cut at least twice in one financial year by National Treasury. Unfortunately, none of the relief funds made available to support businesses that lost revenue due to COVID-19 were extended to the NSG. In this article, we evaluate the impact of COVID-19 on the performance of the NSG and discuss how the institution had to reposition itself and innovate to remain a going concern and a premier government training academy. The new strategic direction involves embracing the Fourth Industrial Revolution (4IR) and online e-learning, which in turn means organisational redesign and staff reorientation and training. This innovation also includes redesigning courses and other bespoke programmes for online delivery, both directly and in partnership with other local and international institutions, all of which requires superb communication and the support of government.

Keywords: COVID-19, public sector innovation, digital transformation, e-Learning.

Introduction

Slavoj Zizek writes in *Pandemic* (2020) that historically, public functions have been

disrupted by wars and pandemics, compelling governments to make shifts to sustain public services, revive economies and provide social relief to citizens. The disruption caused by the coronavirus (COVID-19) pandemic has been a "huge test of governments' capacity to lead societies through crisis" (Mazzucato & Kattel, 2020:2) and their vulnerabilities in managing socio-economic issues. The pace and spread of the virus across the globe have certainly caught many governments on the back foot and unable to address the crisis. At the initial outbreak of COVID-19, Morens, Daszak and Daszak Taubenberger (2020:1294) warned that if public health control measures are not able to address the outbreak, "we face a daunting challenge equal to or perhaps greater than that posed by the influenza pandemic of a century ago".

The South African government was faced with this crisis at the outbreak of the COVID-19 pandemic. It announced a nation-wide lockdown using the provisions of the Disaster Management Act, 2002 (Act No. 57 of 2002) to prevent the spread of the virus (The Presidency, 2020), which has now entered its third wave of infections. The lockdown had a serious impact on the economy as many companies were closed and people were unable to work. Ngcaweni (2020a:618) points out that COVID-19 has devastated the economy as businesses have shut down and over a million jobs have been lost. The economy will take decades to recover, especially as the pandemic has hit after years of negative growth trends and rising unemployment. COVID-19 has pushed governments around the world to identify and implement different ways of coping with the disease and new ways to deliver services. One of the key levers has been the use of technology to deliver services as per their mandates, especially as the lockdown has continued far longer than most people anticipated.

Economic repercussions were not the only effects felt by society and individuals. A study surveyed the consequences of home confinement due to the pandemic and found significant negative effects on mental health and wellbeing, suggesting 'several psychological perturbations and mood disturbances such as stress, depression, irritability, insomnia, fear, confusion, anger, frustration, boredom and stigma during quarantine periods' (Ammar *et al.*, 2020:8). The study also found that emotional wellbeing was affected by risk factors such as 'disruptions to normal lifestyles', including less freedom, financial losses and an unhealthy diet (Ammar *et al.*, 2020:9). Thus, it can be argued that public sector employees would not have been excluded from these negative psychological effects on their wellbeing, which is also a contributing factor in poor public sector performance. The NSG was not spared from these effects and had to come up with new ways of delivering on its mandate. This required a recalibration of the approach to training delivery and a refocus on how this would be done. The NSG's existence is dependent on revenue generation to remain financially viable. The organisation could have chosen to be overwhelmed by the reality of the lockdown, taken a minimalist approach to service delivery and possibly sought a bailout from the National Treasury. Instead, it chose to respond positively and deliver on its mandate.

In his State of the Nation Address (South Africa, 2021), President Ramaphosa outlined the government's priorities in response to the negative effects of the pandemic on the

economy: to deal with the COVID-19 disease; accelerate economic recovery; implement economic reforms to create sustainable jobs and drive inclusive growth; fight corruption and strengthen the state. This was achieved by repositioning the NSG through digital transformation, partnerships, organisational redesign, effective communication and stakeholder engagement. McKinsey (2020a:2) has emphasised that during this period it is very important for organisations to adapt fast to the new normal by rewiring their ways of working, reimagining their organisational structures and readapting talent. This article discusses the impact of COVID-19 on the performance of the public sector, specifically the NSG, and looks at possible solutions in a changing environment that demands innovation. A literature review of annual reports, strategic reports, policy documents, journal articles and directives was undertaken to imbed the study in the current imperatives, which include the priorities of the public sector, the COVID-19 pandemic, the Fourth Industrial Revolution (4IR) and the NSG's performance.

Overview of the National School of Government

The NSG was established as a government training institution, with a mandate derived from the Public Service Act, 1994 (as amended), which states that the institution shall provide training or cause training to be provided; conduct examinations or tests or cause examinations or tests to be conducted as the Head of the institution may decide or as may be prescribed as a qualification for the appointment or transfer of persons in or to the public service. The mandate also provides for the institution to issue diplomas or certificates or cause diplomas or certificates to be issued to persons who have passed such examinations (NSG, 2018:7). This mandate is further supported by the Public Administration Management Act (PAMA) (Act 11 of 2014), which provides, *inter alia*, that the NSG must promote the progressive realisation of the values and principles governing public administration (section 195 of the Constitution of the Republic of South Africa, 1996) through education and training, and enhancing the quality, extent and impact of the development of human resource capacity in institutions.

In terms of its business model and delivery approach, the NSG offers training interventions based on its own curriculum that is aligned to public sector policy frameworks and priorities, which respond to the needs of public servants and public sector institutions. The NSG delivers these programmes and courses using a combination of contracted independent individuals, NSG employees and other public servants as facilitators, and partnerships with higher education institutions. The majority of the NSG courses and programmes are offered using face-to-face or contact training, with a smaller number being offered on an e-Learning platform. However, this delivery approach was drastically tested in 2020 with the global outbreak of the COVID-19 pandemic, and Cabinet's decision to declare a National State of Disaster. The writing was on the wall in March 2020 when the NSG started to receive cancellations of bookings for training and requests for contact training began to drop. The immediate response of the NSG was to reassess the current business models including delivery approaches and devise a response plan.

The Impact of Covid-19 on The Work of Government

The South African government is committed to the delivery of services in an efficient and effective manner. This is informed by the imperatives set out in section 195(1) of the Constitution of the Republic of South Africa, 1996, which requires public administration to, *inter alia*, promote the efficient, economic and effective use of resources; be accountable; foster transparency by providing the public with timely, accessible and accurate information; and promote and maintain a high standard of professional ethics. The rendering of a wide range of services requires the coordination of a variety of functional areas that are necessary to deliver these services. Malatjie (2018:2) asserts that governments are able to deliver services only through efficient and effective public service delivery systems, which should be driven by core public service values. Fakir (2007) points out that the public service is responsible not only for the delivery of services, but it is also crucial for economic and social development through the provision of essential services and the basic infrastructure necessary to spur economic development and improve the lives of poor communities.

Public sector performance is also informed by the 2009 policy document entitled 'Improving Government Performance: Our Approach', which set out a performance system, including an outcomes-based approach to planning and performance management (South Africa, 2009). Key principles in this policy document include the measurement of politically designated outcomes for accountability; giving priority to a few sectors identified within the Medium-Term Strategic Framework; a focus on the sector rather than the department and the intergovernmental implications; emphasising accountability throughout the service delivery chain; changing behaviour, values and attitudes; and an improved data architecture with credible, validated and timely information on outcomes (South Africa, 2009:12).

This policy document also provides for the signing of performance agreements (by the President or the Premier) with Ministers/Members of Executive Councils (MECs), and sector delivery agreements supported by sector delivery forums. The success of this policy document includes having very effective intergovernmental mechanisms, commitment to the performance of an overall sector (e.g. education), as well as political and administrative accountability in government performance. The performance management system (i.e. planning, budgeting, reporting, monitoring, evaluating and auditing) is highly regulated – for example, draft organisational performance plans are developed in line with a Revised Framework for Strategic Plans and Annual Performance Plans, assessed by the Department of Planning, Monitoring and Evaluation (DPME) and National Treasury in accordance with strict submission timelines; approved performance plans are tabled in Parliament with strict tabling timelines; organisational financial and non-financial performance is monitored and reported on a quarterly basis (to the departments' executive authority, the DPME, National Treasury, the departments' Audit Committee and the relevant committee in the Parliament or provincial legislature). The annual performance information is audited by the Office of the Auditor-General South Africa (AGSA), in line with its constitutional and legislative

mandate. Despite frameworks and policies in place, there are still gaps in the planning and performance system, including the need to strengthen integrated planning processes across all spheres of government, gaps in the implementation of national priorities by the other spheres of government, and inadequate collaboration among departments and spheres of government (DPME, 2021).

Public sector performance was put to the test with the onslaught of the COVID-19 pandemic in the 2020/21 financial year (i.e. 1 April 2020 to 31 March 2021). Following the tabling of performance plans in March 2020, departments were given the opportunity to review their planned performance and revise their performance plans accordingly for the 2020/21 financial year. In addition, the Minister for Public Service and Administration issued a directive outlining, *inter alia*, arrangements for employees to work remotely, while ensuring business and service continuity to support the delivery of public services (DPSA, 2020). According to this directive, administrative heads of department had to re-determine the working arrangements of employees, approve remote working for eligible employees, and provide requisite and additional resources to facilitate remote working.

The public sector, including the NSG, had to adapt quickly to the new ways of working during the COVID-19 pandemic. This included working remotely to ensure that service delivery continued uninterrupted during lockdown. As McKinsey (2020a:30) aptly puts it, this arrangement had its drawbacks: for example, many processes were originally designed for face-to-face working and had to be revised; managers who had been successful team leaders were suddenly faced with virtual teams; and there was no longer interaction (synergy) between teams. Policies had to be recrafted to fit into the new normal; important processes, such as supply chain management, had to be changed; and legislation pertaining to procurement had to be redrafted. As Ngcaweni (2020a:616) argues, the outbreak of COVID-19 also necessitated emergency procurement processes as part of the rapid response, especially for the provision of essential items like personal protective equipment (PPE). The emergency procurement was a shift from the usual supply chain processes bound by legislation and specific regulations.

In the context of performance, this has placed the heads of department in precarious positions. They have to plan for performance marked by unknown risks and uncertainties, impacted by government budget reductions to fund COVID-19 relief. Government services have not been fully digitalised, and the majority of public services are still based on face-to-face contact with citizens. Equally, business processes and systems are often still done manually and, therefore, it is difficult to render these services digitally or remotely. Then there are the additional costs related to the procurement of mobile devices for employees working remotely (such as laptops) and extra data cost claims from employees, which were not budgeted for. The staff rotation approach may also be a hindering factor to performance – for instance, if manual processes are still prevalent in government, this could necessitate physical signatures on documents.

It is speculated that by the end of the final audit of the 2020/21 financial year, there

may be a significant rise in government non-compliance with regard to payments to service providers within 30 days. According to the Finance Minister, Tito Mboweni (2021), eight national government departments had not paid invoices older than 30 days (as at 31 December 2020) to the value of R416.6 million and departments in all nine provincial governments have unpaid invoices older than 30 days to the value of R3.2 billion. This is a direct indication of service delivery that was impacted by the COVID-19 lockdown. The impact of the pandemic on public sector performance can be viewed from various impact perspectives and a few of these will be discussed.

The first impact on public sector performance relates to crime. The lockdown regulations implemented in many countries have resulted in some positive consequences, for example, there has been a sizeable reduction in crime since the COVID-19 outbreak. According to the Institute for Security Studies (ISS), in "Latin America for example, lockdowns saw murder fall by 56 percent in Colombia and by 43 percent in two of Mexico's states" (ISS, 2020). In South Africa, the national lockdown included the restricted movement of people, the closure of clubs, bars and restaurants, a ban on alcohol sales and the deployment of the South African Defence Force to support policing. The consequences of the policing lockdown resulted in "the most substantial crime decreases in the past 26 years" (ISS, 2020). The Chris Hani Baragwanath Hospital in Johannesburg, the third largest in the world, reported that "it is the first time in its history that the trauma rescue area had no patient on the 1st of the new year (Legodi, 2021). The lockdown, in this instance, had a positive effect on public sector performance, in that resources that were normally allocated to trauma cases (e.g. motor vehicle accidents, drunk driving incidents and alcohol-related violence) could be reprioritised for COVID-19 patients. The ripple effect of this was fewer cases for the police to investigate and place before the courts – thus easing the burden on both the police and the judiciary.

The second perspective relates to public service delivery. The pandemic has spurred some service delivery in areas that had been neglected for many years. One example is the provision of water to the people of Hammanskraal, a community located in the Tshwane Metropolitan Municipality in Pretoria. Hawker (2020) contends that the pandemic "'has both magnified the urgent water crisis and precipitated an unprecedented marshalling of resources" through government intervention to mobilise water tankers for the provision of clean water. The Hammanskraal community had been lobbying for the basic human right of access to water for years. The pandemic brought relief to Hammanskraal, with the deployment of water tankers and a budget for the rehabilitation and upgrade of the water treatment plant. In another slightly astonishing event, in what is possibly a first, government hospitals were receiving and treating patients admitted from overburdened private hospitals. According to the South African Minister of Health, the transfer of patients from private to public hospitals had not occurred before, but this has pointed to a need for collaboration between the public and private hospital systems (Seleka, 2021) in order to leverage resources, create more capacity and drive efficiencies.

The third aspect relates to the acceleration of digitalisation and digital transformation of the public sector. A report from Deloitte Centre for Government Insights finds that the pandemic has accelerated digital government, wherein it is "no longer a 'nice to have' for government, but an imperative" (Deloitte, 2021:8). Governments are now placing digital strategies at the centre of policy issues, for failing to establish a dependency on digital technologies for services and interactions could hinder "efforts to emerge stronger from the pandemic" (OECD, 2020:1). COVID-19 also became a catalyst for the Fourth Industrial Revolution (4IR) as organisations had to adapt quickly to the use of new technology to fast track the delivery of efficient and effective services. Shava and Hofisi (2016:208) point out that rapid changes challenge legislators to adapt quickly and be innovative enough to embrace new technologies, thus accelerating the 4IR. Empirical research indicates that there are performance improvements in the public sectors of countries that adopted the new technologies ushered in by the 4IR (White *et al.*, 2015; Kemp, 2016).

Digital Transformation in the Era of Covid-19

The 4IR is defined as a revolution that is driven by artificial intelligence (AI) and cyber-physical systems that are characterised by the integration of vertical and horizontal value chains, the digitalisation of product and service offerings, and digital business models and customer access (Davis, 2016; Swab, 2016; Xing, Marwala & Marwala, 2018). The World Economic Forum (WEF, 2017) reported that the 4IR is challenging traditional management and governance norms in both the public and private sectors. In other words, the innovations and technological advancements of the 4IR are uprooting and changing how societies do business and go about their daily duties. Martin (2019) argues that while the 4IR presents opportunities for timely and less costly delivery of services, it also presents challenges to regulatory frameworks. It exposes organisations, countries and individuals to potential cybersecurity breaches with consumers being mostly vulnerable especially in countries with inadequate data protection laws and technological capability.

While digital transformation, influenced by the 4IR, was being embraced to a greater or lesser extent by governments all over the world, it cannot be disputed that the onslaught of the COVID-19 pandemic has fast-tracked plans for digitalisation. According to a global survey of company executives, the "share of digital or digitally enabled products in their portfolios has accelerated by a shocking seven years" (McKinsey, 2020b:2). Furthermore, a report by the Deloitte Centre for Government Insights (Deloitte, 2021:10) on government trends indicates the following COVID-19-led digital investments made by some countries:

- The government of Ontario, Canada, is channelling CAD500 million over a four-year period into modernisation projects in government. These include making government services digitally accessible.

- The United Kingdom's Spending Review 2020 has set aside GBP600 million to upgrade the government's information technology to improve security and efficiency.

- France has earmarked USD8.4 billion for investments in digital transformation and infrastructure.

- The Malaysian federal budget has allocated USD242.5 million for investments in cybersecurity, a digital workforce and digital transformation.

- The Australian government investment of approximately AUD800 million will support whole-of-government capabilities such as digital identity.

At the same time, digitalisation has to be approached with some level of caution. According to the OECD (2020), digital access does require consistent high-quality connectivity. It also has the potential to widen the digital divide, and there are security risks associated with malicious activities related to online engagements. This is particularly interesting, because South Africa finds itself affected by all of these issues and this has certainly been the case with the NSG.

Innovation as a Signifier of Resiliance at the NSG

As stated earlier, with the suspension of revenue generating face-to-face classes, the institution entered unchartered waters. Leadership was forced to explore various models that could help the institution to stay in business. Both the Finance and Strategy offices made appraised capabilities available to assess the national situation and explore the extent to which departments would be willing to accept new delivery modalities, such as virtual online learning. Curriculum and e-Learning Chief Directorates had to work on adapting the curriculum for online (synchronous and asynchronous) as well as virtual learning. This was a highly risky exercise as the majority of public servants occupy lower ranks within the system and therefore do not qualify for data and devices.

To make products attractive, the institution aggressively promoted some free online courses, such as Ethics in the Public Service on social media, media statements and countless interviews, which coincided with the national outcry about COVID-19-related corruption. Media interest in this course generated significant attention (e.g. the course grew from an enrolment of 2 458 in the 2019/20 financial year to 19 074 in 2020/21) and provided traction for other online courses. The introduction of *Nyukela*, the compulsory pre-entry Senior Management Service course, also generated significant national interest and tested the market's appetite for the NSG's online courses. The aggressive social media marketing and mass media's coverage of this new course also generated significant interest and enrolments – the course recording over 10 000 students in its first year of offering.

The following vision of what digital transformation meant for the institution was communicated to NSG staff by the head of department:

- Moving to a fully automated office ecosystem with basics such as bookings, routing of submissions, leave and performance management processed electronically.

- Automating the knowledge management system, introducing business analytics in research, monitoring and evaluation functions.

- Procuring Microsoft (MS) 365 to give full MS Teams functionality, in addition to securing Zoom, which gives the organisation more virtual training options. This enabled the introduction of virtual courses using these platforms – with Zoom dominating as it can be accessed by students without a licence, since many departments have not yet migrated to MS 365. These innovations were in addition to the existing training management platforms such as Moodle, which are used for the old limited e-Learning courses. These new technologies and ways of working required the fast-tracking of internal training so that employees could function effectively. The leadership of the school was very sensitive to the possibility of leaving employees out of the new normal, which would have caused anxiety and undermined buy-in.

- There was full recognition that digital transformation 'needed hardware, software and what can be referred to as *brainware'* (employees who can fully use available technologies) that improve business processes, and drive efficiency and impact. It means building algorithms driven by machine learning so that, from wherever we are, we can press a button and access dashboards of what training is underway, where, who is in attendance, and who is facilitating such training (Ngcaweni, 2020b:3).

- Finally, digital transformation involves plans to build bots on platforms like WhatsApp Business so that public servants can engage easily with the NSG on their devices, wherever they are, at their own convenience.

Once again, we emphasise that the NSG's COVID-19 response plan recognised the radical change from the old business model (which offered training mainly through face-to-face delivery) to an open distance e-learning approach; that is, shifting from the physical classroom to a technology-based learning model. This response plan identified the need to invest in a strengthened ICT environment to enable distance learning, while redefining the business processes and the way in which the NSG will function in the future. This would include fully digitising the institution and reskilling employees so that they are able to function adequately in the new normal. Once fully implemented, the new normal will see employees using new technologies such as scanners that use QR codes (digital scanners) instead of manually capturing data. These changes, the leadership argued, should open career advancement opportunities, especially for administrators. Instead of mailing bulk study material to students and trainers, the new digital learning platforms will be used to upload material per class and make it available on demand, while keeping digital records of who is logging in, and accessing or printing the School's intellectual property. In essence, the pandemic has induced an emergency leap into a digital future, demanding the department to fully exploit the 4IR dividend, or become irrelevant.

Building awareness and advocacy across the public sector was also necessary in order to prevent leaving behind and losing the majority of the NSG's clients, who happen to be junior and middle-tier public servants who do not necessarily have access to computers and data for e-learning. A study by Xing,

Marwala and Marwala (2018:174) found that when new technologies are introduced there is always a need for staff to facilitate the implementation process and to perform maintenance duties. This was, indeed, the experience in the NSG, as outlined above. When more training courses were added on an online platform for learners working from home, the back office required more people to deal with the high volume of queries and to assist learners to log on to the system and access the training courses.

Implementing digital innovations is always a risky business, and the NSG experienced some of the following challenges:

- The remote working and online innovations require steady and high-quality data connectivity, which is not easy to secure outside of the State Information Technology Agency (SITA). Data lines in government do have many restrictions – and a bigger data line means increased costs

- The marketing of the NSG online courses during the level 5 national lockdown, through media statements issued by the Minister of Public Service and Administration, resulted in a large number of enquiries via the NSG website, which caused the website to crash. Clearly, the website was not geared or prepared for these high volumes.

- Virtual meetings became the new normal, but employees were ill-prepared – from either a system or a capability perspective – for this new way of working. Initially, virtual meetings were a case of trial and error.

- Perhaps the greatest challenge experienced by the NSG was the cybercrime attack, which occurred on 31 July 2020 and compromised the entire local area network (LAN), thus affecting all operations. The sudden thrust of working remotely and using digital platforms has provided opportunities for cyber criminals to extort ransom from vulnerable organisations – both public and private. Although the recovery and rebuilding of the NSG production environment was disrupted, other measures have ensured that it was not a complete loss. These included effective disaster recovery and back-up plans, using cloud-based solutions and outsourced service providers for key operations.

The executive of the NSG, in chartering the unfamiliar waters of the lockdown and the challenges associated with embracing 4IR and a fully digitised organisation, took on an 'if we fail, we will learn' approach. This strategic approach paid off and in the 2020/21 financial year, the NSG recorded, in what can be viewed as unprecedented, online learning enrolments in excess of 54 000 learners. In addition, more than 17 000 learners enrolled for an orientation to getting 'Started with e-Learning' (NSG, 2021). If these training figures are anything to go by, it confirms that there is an appetite among learners (mainly public servants) to study at their own pace and in their own time, and that the NSG's decision to move in the direction of increased digital and online learning was the correct one. However, this also means that government has to invest significantly in the digital ecosystem to enable more e-learning. Nevertheless, there is an economic spin-off for government: e-learning eliminates the

need for payment of accommodation, travelling and other subsistence costs related to training.

The NSG also ventured into two other new areas during the pandemic. The first was the hosting of webinars led by seasoned presenters, including the late Professor Stan Sangweni. These are game changers that are attracting significant numbers and are lifting the profile of the NSG. As Ngcaweni (2020b) aptly puts it, this "is a clear sign that public servants, like pilots, are ready to turn to the simulator to deepen their knowledge and sharpen their skills".

The second is international partnerships, which materialised through 'virtual exchanges'. For example, two successful partnerships, one with the *École nationale d'administration* of France and the other with the China National Academy of Governance, have resulted in a number of public servants and public representatives participating in these learning programmes (NSG, 2021). The success of these ventures points the NSG in the direction of increased international partnerships, and several other ventures are underway, including a virtual master's programme with Arizona State University, and an Executive Leadership Programme in partnership with the University College of London's Institute for Innovation and Public Purpose.

Over the past year the NSG has geared itself up for this new era by implementing relevant digital solutions and tools for the delivery of distance learning. At the same time, its employees are being capacitated through regular training on how to manage virtual classes and webinars. In some ways, it can be argued that the pandemic has been a blessing in disguise because it has propelled the NSG's training programmes to another level – thereby fulfilling the need of learners to study in their own time, and at their own pace, in their own homes.

Conclusion

The case study of the NSG, it is apparent that government needs to strengthen its role and capacity to maintain the pace of digital change. There has to be an integration of the activities of key institutions such as the Department of Public Service and Administration, the Department of Communication and Digital Technologies, and the State Information Technology Agency, to name a few. Current literature (Clarke, 2019; OECD, 2020; Mazzucato, Qobo & Kattel, 2021) emphasises the need for a whole-of-government approach to driving digital strategies. At the same time, the digitalisation and automation of public services is now a necessity. Perhaps the snaking lines outside service delivery points could become a thing of the past. Second, government must play a central role in developing capacity and capabilities for the digital future. In this regard, the National Digital and Future Skills Strategy, issued by the Minister for Communication and Digital Technologies, is a key strategy document aimed at substantially increasing the digital skills of South Africans and addressing the digital divide (South Africa, 2020:22). This statement is supported by Marivate, Aghoghovwia, Ismail, Mahomed-Asmail and Steenhuisen (2021) who assert that "we need to move from 4IR as a buzzword to the reality with mid to long term strategies for which the country can aim. This requires a common understanding of the concepts and bringing different sectors

of society into this understanding". Lastly, from the experience of the NSG cybercrime attack, it is evident that there is a need to strengthen capacity in this area, and a cybersecurity course is in the offering with the University of Johannesburg. Agencies such as the State Security Agency (SSA) and the Cybersecurity Hub have critical roles to play in protecting state information and data.

This article aimed to offer a case study of how a government department responded to the crisis that was brought about by the COVID-19 pandemic through shifting its operations from face-to-face into online and virtual offerings. This case has shown that the department continued to deliver an effective and efficient service through the use of technology and other modalities of delivery compliant with various COVID-19 risk-adjusted lockdowns. While the cyber-attack was devastating, the department successfully reconstructed performance and financial information and was able to submit information without risking missing the regulated dates for submitting annual financial statements to National Treasury and AGSA. Without belabouring the point, all this pointed towards the need to increase investment and the pace of adaptation as well as skills development to adequately attend to challenges such as ransomware. It is important to note that as much as the 4IR has enabled service delivery during critical and tough times, there are still serious drawbacks that need to be solved. A critical aspect is the need to secure the environment in which the public sector operates, but this will necessitate substantially more investment in resources and infrastructure. This is supported by Magyar (2016), who underscores that the advancement of the latest technologies may pose a serious threat to the privacy and security of individuals, corporations and governments, because of cybercrimes such as hacking, which are now a major threat across the world.

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