

VITAL ECONOMIC OPERATIONS MANAGEMENT (VEOM)

PLANNING AND DEVELOPMENT DEPARTMENT, GOVERNMENT OF KHYBER PAKHTUNKHWA

VEOM Brief - 12

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TOP GLOBAL DATA-DRIVEN SOLUTIONS TO COUNTER THE IMPACT OF COVID-19

BACKGROUND

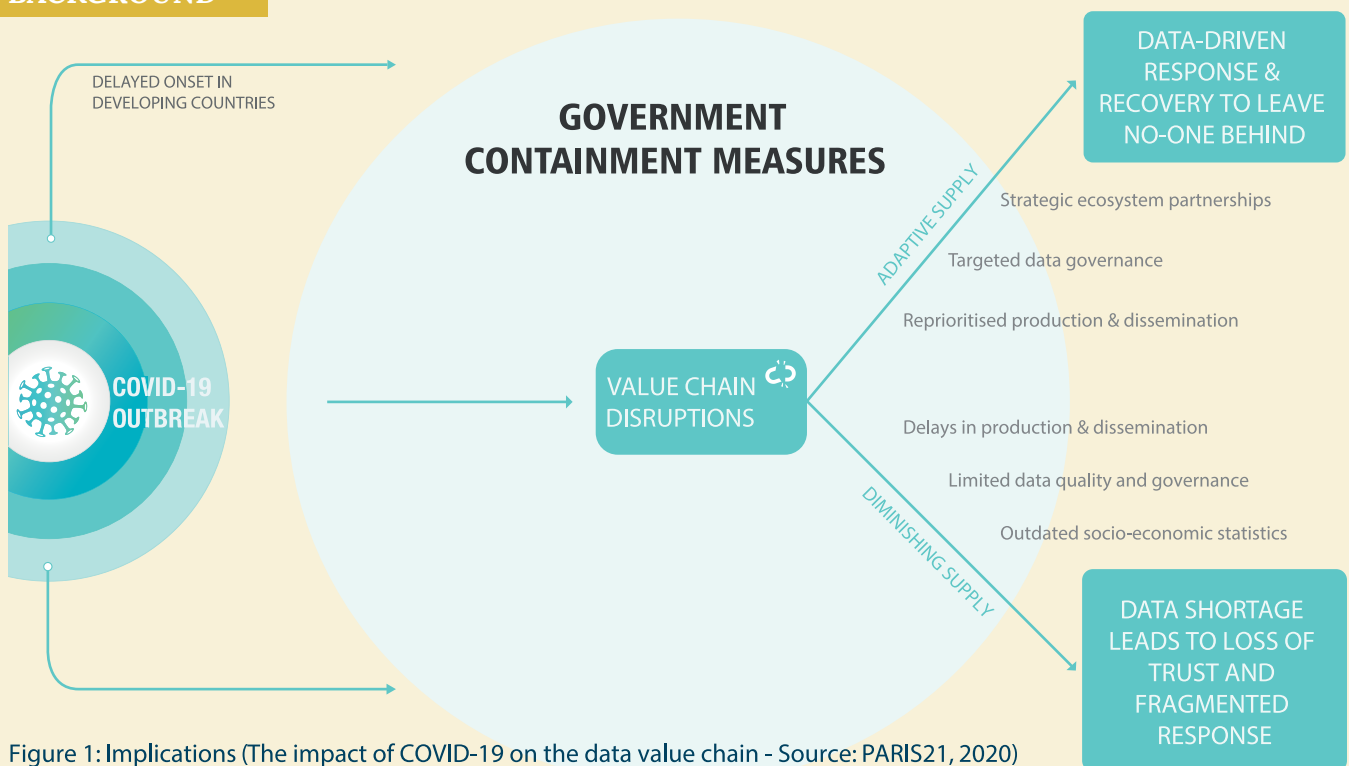


Figure 1: Implications (The impact of COVID-19 on the data value chain - Source: PARIS21, 2020)

*The above image has been slightly altered for targeted information

The COVID-19 pandemic has challenged conventional approaches to governance, forcing governments and societies all around the globe to adopt digital technologies and innovative strategies to mitigate the damages from the crisis. These unprecedented times make it incumbent upon administrations globally to adapt and draw from the experience(s) of others. The challenge is to leverage digital technology, policy reform, public-private partnerships, and e-governance systems amongst others to devise solutions to some of the most pressing problems of our times.

Pakistan needs to adopt a similar approach and continue to ramp up a Proposed Action by the Government of Khyber Pakhtunkhwa on tackling the challenges of weak healthcare and education systems.

The following **9 key data-driven innovative solutions** from across the world provide valuable lessons on how innovative thinking coupled with technology can lead to better handing of the crisis and result in improved service delivery to the population.



COUNTRY: AUSTRALIA



Intervention: Clinician training to accurately diagnose COVID-19 cases with CovED



Department: Health



Proposed action by the Government of Khyber Pakhtunkhwa: Continuous medical education via online platforms



Time to launch¹: Short



Assessment: DetectED-X - CovED is a powerful educational solution that is proposing free online training for medical staff. It aims to provide a quick (1-2 hours) training session for fast and accurate diagnosis of COVID-19 along with rapid training of additional staff to teach them lung Computed Tomography (CT) interpretation in order to increase the number of medical workers qualified to analyse lung scans. This will reduce the burden on doctors and will train support medical staff to perform CT interpretations to tackle the upward surge in the number of cases. Medical training bodies can explore the option of offline downloading of the tool to overcome traditional challenges around internet connectivity and limited digital training facilities.

COUNTRY: BELGIUM



Intervention: Brussels citizens and social economy actors produce 100,000 protection masks for non-medical workers



Department: Industries



Proposed action by the Government of Khyber Pakhtunkhwa: Encourage private sector to produce face masks and personal protection equipment



Time to launch: Short



Assessment: With a massive potential of cottage industries, the Government of Khyber Pakhtunkhwa can mobilise Civil Society Organisations (CSOs) and Small & Medium Enterprises (SMEs) to produce relevant low-cost personal protection equipment for health workers and law enforcement agencies. Such a policy will also benefit unemployed daily wage earners and low-income families. Furthermore, there is potential to engage local delivery services like Bykea, Careem, or Uber for coordinated delivery efforts through collaboration with local district administrations.

COUNTRY: BRAZIL



Intervention: Unification of patient health history record system



Department: Health



Proposed action by the Government of Khyber Pakhtunkhwa: Document digital records of patients



Time to launch: Medium



Assessment: Some aspects of digital health record keeping are already being implemented but present efforts need improved coordination. The unification of public health data is required so that the government can make decisions based on accurate and reliable information. Scaling community-based screening is critical to improve state responses to viral diseases. The use of open source mobile data platforms such as CommCare created by a US-based technology company Dimagi can be used for surveillance, case management, contact tracking and laboratory data management. Pakistan can benefit from using this data to create disease prediction models using AI and statistical models to influence long-term government strategy for future disaster planning.

¹ Time to launch: Short, less than 1 month, Medium, 1 to 6 months and Long, greater than 6 months.



COUNTRY: CHINA



Intervention: Using heat sensing technology and artificial intelligence to identify feverish people within a crowd



Department: Planning and Development



Proposed action by the Government of Khyber Pakhtunkhwa: Pilot testing of heat sensing technology at the Civil Secretariat in Peshawar



Time to launch: Medium



Assessment: Temperature checks via heat sensor thermometers are already being implemented within the private sector in some places, and the government could consider utilising this technology as one of many tools to assist in identifying potential COVID-19 cases. An assessment of costs in acquiring and maintaining equipment as well as training and employing the personnel to monitor the scanners will be needed. In this respect, the costly nature of the technology will require getting donors on board. If efficiently implemented, some symptomatic individuals maybe prevented entry in crowded spaces to mitigate risk of widespread infection.

COUNTRY: INDONESIA



Intervention: Continuing education in the time of COVID-19 through Ed-Tech



Department: Education



Proposed action by the Government of Khyber Pakhtunkhwa: Development of online content and introduction of hardware at schools to facilitate access to online teaching



Time to launch: Long



Assessment: Ed-Tech is a burgeoning domain across the developing world. In times of mass lockdowns, the need for online education has come to the fore. The Citizens Fundrun TeleSchool on Pakistan Television (PTV) is an admirable effort and can be scaled once schools reopen to introduce digital display screens in high schools especially, for science classes to increase access for students. Furthermore, students should be incentivised to complete online courses if they have the resources to do so. Universities can provide institutional access to online courses to allow students free certification upon completion.

COUNTRY: INDONESIA



Intervention: A team of citizens is using government data and GPS tracking to map the outbreak



Department: Law and Health



Proposed Action by the Government of Khyber Pakhtunkhwa: Mapping and contact tracing



Time to launch: Medium



Assessment: All hospitals currently must collect information on high-risk, suspected, and confirmed cases. This information must be anonymised and mapped according to district / area via the official COVID-19 dashboard, so citizens can easily access data on mapping of the disease. Mass tracing systems have already been employed by South Korea, India, and China whereby one can see suspected and positive COVID-19 cases near their location. Geographic Information System (GIS) experts from universities can be brought on board and provided with data from hospital registries and government resources on urban and rural maps to facilitate the creation of such a system.



COUNTRY: MEXICO



Intervention: Susana Distancia - cartoon to encourage social distancing



Department: Education



Proposed action by the Government of Khyber Pakhtunkhwa: Creative work competition



Time to launch: Short



Assessment: In an effort to increase awareness and motivation for social distancing, the government can engage local creative artists or animation agencies to create a local virus battling «national hero» to remind people to practice physical distancing to «save their country.» Such a national icon can provide strength to the national discourse against the pandemic.

COUNTRY: UNITED KINGDOM



Intervention: Developing low-cost emergency ventilators



Department: Science & Technology and Health



Proposed action by the Government of Khyber Pakhtunkhwa: Production of low-cost ventilators



Time to launch: Medium



Assessment: With chronic shortages of ventilators at Intensive Care Units (ICU) across Pakistan, consultant pulmonologists (and related medical experts) as well as engineering tech companies can be paired to produce emergency ventilators for COVID-19 patients. The ventilators can be manufactured with relative ease and assist patients in breathing as well as purifying the air in the patient's room. These ventilators do not replace the ICU ones, but their use by a COVID-19 patient greatly reduces the need for the patient to be transferred to the ICU ventilator. A similar product can be devised and produced in Pakistan through doctor-engineering collaborations with universities and engineering companies.

COUNTRY: GERMANY



Intervention: Match4Healthcare - connecting medical institutions with professionals and volunteers



Department: Information Technology and Health



Proposed Action by the Government of Khyber Pakhtunkhwa: Application design for volunteer management



Time to launch: Medium



Assessment: As an open source project, conceived and run by medical students, Match4Healthcare serves as a platform to allow medical institutions to publicise their need of expertise and volunteers to those professionals and volunteers who are willing to help out. By connecting institutions and professionals through an easy, connecting platform, resource-constrained medical facilities in Pakistan, including hospitals and isolation centers can conveniently source individuals to match their needs. The platform can be website based as well as an application that can be outsourced to university students or researchers. This intervention is low-cost, convenient, robust, and is effective in connecting manpower. Hospitals in Khyber Pakhtunkhwa and humanitarian aid delivery organisations would benefit through a direct linkage to active volunteers and donors for COVID-19 relief response.