Case study: Leveraging the 4\textsuperscript{th} Industrial Revolution to Prepare and Respond to the COVID-19 Pandemic – Namibia’s Experience

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Presentation Outline

• Background

• COVID-19 in Namibia

• 4IR and COVID-19 response

• Lessons Learned

• Challenges and Gaps

• Conclusion & Recommendations

Namibia’s quest for 4IR
## Background

### Country Profile
- Population: 2.55 million population
- Surface Area: 825,418 km²
- Youthful population; About 40% of the population is under 15 years of age
- Population density: 3 people per sq. Km
- Rural population remain underserved

### Legal Framework
- International Health Regulations, 2005
- Public Health Environment Act 2015
- Electronic Transaction Act, 2019
- eHealth Strategy – 2021
- IT Policy for the Public Service

### ICT Environment/Mobile Infrastructure
- Relatively stable telecommunication backbone with fibre, mobile towers, fixed broadband, grid online West Africa Cable system (WACs) and Equiano landing cables
- 97% Broadband Coverage
- 51% internet penetration of the total population
- Stable and uninterrupted electricity supply
COVID-19 in Namibia – Update, 15 November 2022

Coronavirus Cases: 169,975

- 4,080, Deaths
- 165,819 (97.6%) Recoveries
- 574,115 (32.3%) received at least 1st dose
- 497,164 (28%) fully vaccinated
COVID-19 National Preparedness & Response

Thematic Pillars

Pillar 1: Country-level Coordination, Planning and Monitoring;

Pillar 2: Risk Communication and Community Engagement;

Pillar 3: Surveillance, Rapid Response Teams, and Case Investigation;

Pillar 4: Ports of Entry;

Pillar 5: National Laboratories;

Pillar 6: Infection Prevention and Control;

Pillar 7: Case Management;

Pillar 8: Operational Support and Logistics, and Psychosocial Support;

Pillar 9: Psychosocial Support;

Pillar 10: Continuation of Essential (Health) Services;

Pillar 11: Infrastructure Management and Development;

Pillar 12: Research and Innovation, and

Pillar 13: Vaccination.

Namibia's quest for 4IR
Pillar 3: Surveillance, Rapid Response Teams, and Case Investigation

Use of technological innovations that support surveillance, testing, and contact tracing activities

Digital COVID-19 dashboards were developed in collaboration with local institutions of higher learning such as NUST

Digital technologies were used to understand COVID-19 Epidemiology by triangulating cases from data systems such as DHIS 2, Go.Data and GIS
Pillar 5: National Laboratories;

- The MoHSS collaborated with local mobile telephone service providers to facilitate the notification of COVID-19 test results to concerned individuals through the short message service (SMSes).

- Digital COVID-19 dashboards were updated routinely with information on laboratory testing; shared with stakeholders.

- The use of genome sequencing capacity to study and identify emerging variants of SARS-COV2.

- Partnership with private laboratories created an opportunity to increase testing coverage, using the latest Gene Xpert Polymerase-chain reaction (PCR) technology, which shortened turnaround times.
Lessons Learnt

• Redefined value of Whole-of-Government Approach and Multi-Sectoral Coordination

• The country’s youthful population: our greatest resource to drive technological innovations and entrepreneurship for the 4th Industrial Revolution

• Access to digital technologies enabled seamless communication between national and sub-national levels

• Social media platforms remain essential in debunking myths and stigma associated with COVID-19 infection and vaccination
Challenges & Gaps

• Fragmented ICT systems and platforms hampered the response efforts of the pandemic

• Lack of national standards and framework for data exchange

• Data management largely paper-based

• Inadequate education and training in manufacturing and 4IR technology skills

• Low R&D capacity and investment
Recommendations

- Create a Resurgence Plan to provide guidance, facilitate coordination, and mobilization of resources

- Strengthen cross-border surveillance by leveraging technologies that promote self-screening of travelers using automated voice or motion-triggered tools

- Establish cross-border digital communication hubs, that enables real-time information exchange on a traveler’s vaccination status and alike

- Strengthen collaboration with Academia and Research Institutions to provide continuous research on digital interventions
Recommendations

- Develop 4IR Human Capacity through education reform

- Develop a National Consolidated 4IR Strategy to address the strategic priorities and provide policy guidance across different sectors

- Establish a cross-sectoral National 4IR Commission to eliminate fragmentation and duplication of institutional mandates, functions, activities and resource allocation

- Develop strategies to address existing digital divide & health inequities
Conclusions

• Leveraging digital technologies to respond to the pandemic was literally out of necessity to survive as opposed to a desire to explore untapped technological innovation.

• The pandemic revealed opportunities to harness converging technologies to create an inclusive, human-centered future.

• The country’s youthful population serves as the greatest resource to accelerate 4IR adoption and capacity development.
Thank you!