Pandemic in the Internet Age: From second wave to new normal, recovery, adaptation and resilience"

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Overview

- COVID 1.0 - Pandemic in the Internet Age – lockdown, telecommunications and economic dislocation extracted from REG4COVID
- COVID 2.0 – Recovery Phase – Future Frameworks
- COVID 2.0 – Selected Survey Results of NRAs
- COVID 2.0 - Detailed Case Studies
- Conclusions and Way Forward

COVID 1.0 -Pandemic in the Internet Age –updated summary

COVID-19: UPDATED TELECOMMUNICATIONS SECTOR RESPONSES

NETWORK RESPONSES

EXISTING TELECOMS NETWORKS
- manage demand/allow shaping
- expand/flexible IMT spectrum available
- increase broadband speeds
- facilitate digital telco payments/ mobile money

NEW CAPACITY & NETWORKS
- increase transmission/backhaul
- optimize network capacity
- new 4G/5G Fixed Wireless Access (FWA) deployments

- big data - disease management
- support vaccine distribution
- contact tracing outbreaks
- productivity & remote education /working tools – video communication

BANDWIDTH DEMAND

Massive growth in overall demand for bandwidth

Increased demand for bandwidth for emergency and health care

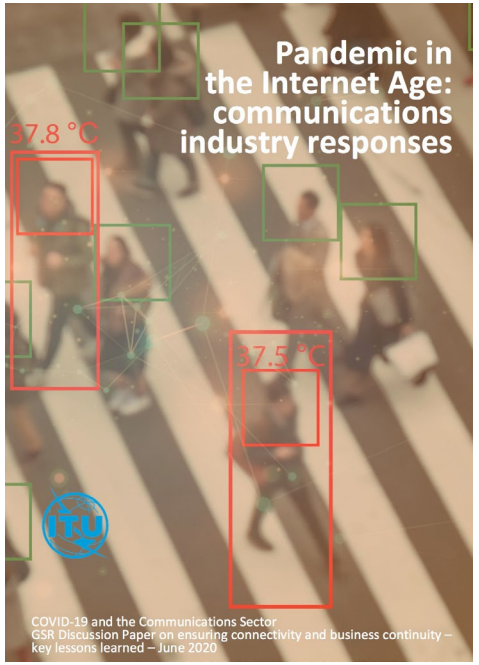
ECONOMIC IMPACTS
- lockdowns
- business failures
- unemployment
- debt
- additional operational costs

GOVERNMENT/CONSUMERS

GOVERNMENT INITIATIVES
- facilitate increased broadband speeds
- relief from licence fees/regulation
- increase transmission/backhaul
- direct subsidies 'release IMT spectrum
- address COVID-19 'fake news'

CONSUMERS
- free access/ health information
- discounts/extra GB limits
- extra time to pay
- facilitate electronic payment/ commerce

BUSINESS/WORKERS/STUDENTS
- work from home
- education from home
- better remote working tools
- Use digital ID/QR codes for check-in
- assistance from governments



Source: ITU- WPC, May 2020, updated December 2020

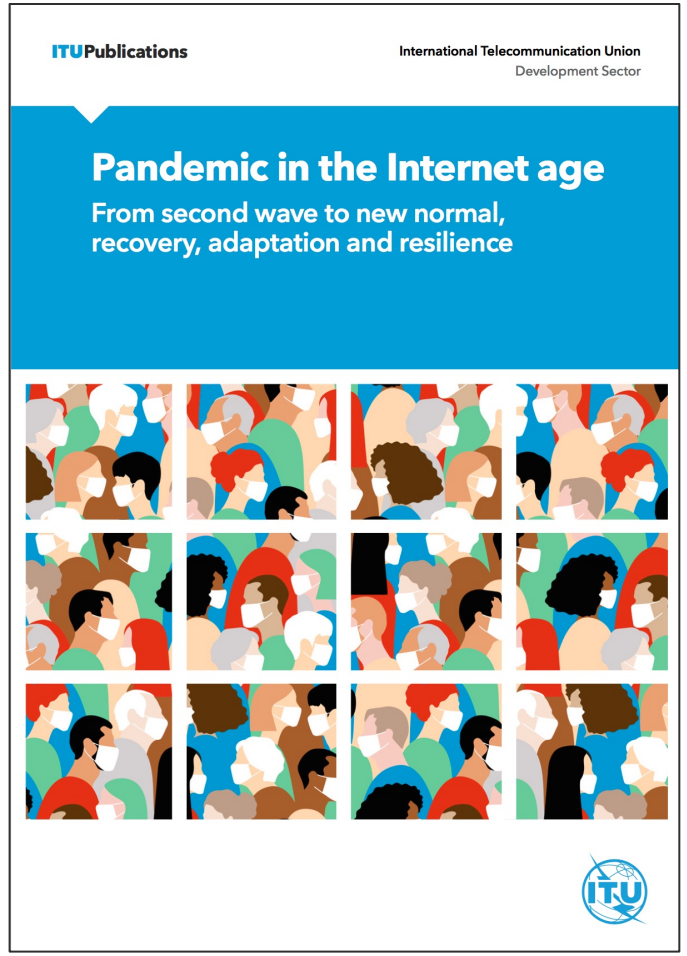
COVID 2.0 – Recovery Phase – Future Frameworks

- Unfortunately, the health and economic implications of COVID-19 are not just a short term issue. ***COVID-19 has been a uniquely powerful game-changer, with digital connectivity/addressing the digital divide now at the top of every nation's agenda***

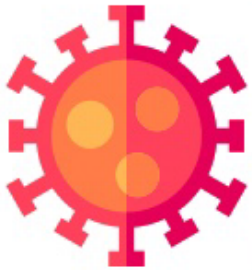
- The ITU COVID 2.0 paper entitled ***"Pandemic in the Internet Age: From second wave to new normal, recovery, adaptation and resilience"*** is focused on post June 2020 and the recovery phase includes the use of ICT in vaccine distribution & digital passports

- The paper covers the ***lessons learned for better preparedness with a Roadmap for Action***

  - Different groups of ICT stakeholders are provided with an analysis of policy and regulatory measures undertaken during the pandemic and provide concrete guidance in preparing for the post-pandemic to ensure better preparedness, and contribute to long term global connectivity



COVID 2.0 – Summary of Key Themes



OBJECTIVES	ACTIONS/POLICIES
ADDRESSING THE DIGITAL DIVIDE	• Improving coverage – lower band spectrum (eg, 700 MHz), transitioning from 2G/3G to 4G/5G sooner, rural backhaul, rural & remote broadband satellite services • Affordability –use of USFs for access and affordability efforts, municipal networks, wifi • Digital skilling – government education programs, language challenges, minorities, the aged and persons with disabilities
DRIVING DIGITAL DEEPENING	• High speed & capacity broadband, increased IMT spectrum and fiberised backhaul, fixed wireless access (FWA) (5G at mid & high band spectrum) • Urban/suburban deployments to support: WFH, home education, teleworking, video services • Online government services and communications (help desk, health information, hotlines, etc.)
EFFECTING DIGITAL TRANSFORMATION	• Legislative and regulatory change to support digital business processes and services • Reimagining legacy processes and approaches with an emphasis on the Cloud • Accelerate transition to e-money, online banking, identification and payment services • Supporting societal and cultural change to effect digital transformation
BUILDING DIGITAL RESILIENCE	• Build capacity and system 'headroom', while improving speed and capacity • Develop system redundancy and resilience including submarine cable capacity • Strengthened cybersecurity and strategic network assets • Strengthen personal data protections to encourage online participation

REVISE AND IMPLEMENT NATIONAL DIGITAL/BROADBAND PLANS TO ACCELERATE COVID RECOVERY

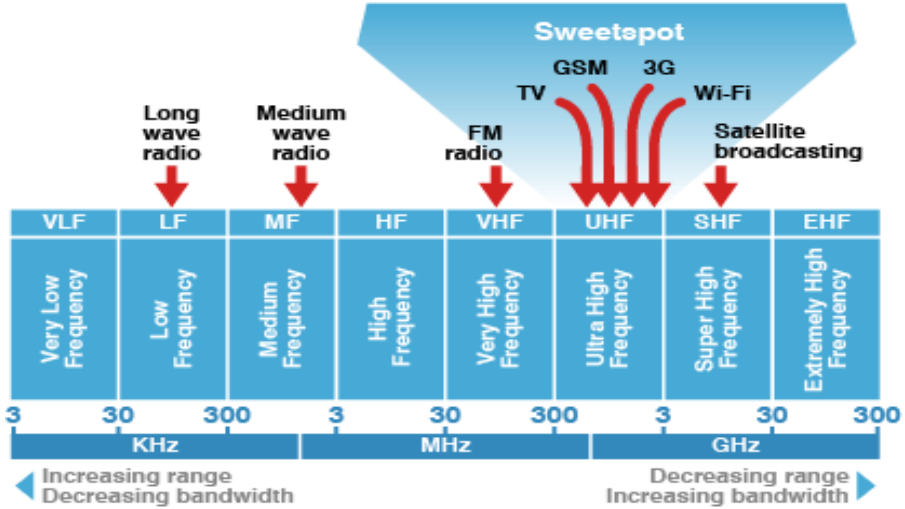
Source: ITU-WPC, December 2020

COVID 2.0 – Addressing the Digital Divide

- The huge shift to online means that ***social groups without adequate affordable connectivity are now more disadvantaged than before the COVID-19 pandemic***.
- ***The ability to socially and economically participate, access education, medical & other government services, communicate, & access e-commerce services when WHF/SFH is completely dependent on affordable connectivity.***
- Addressing the digital divide has important consequences for economic efficiency & development but at its core it should provide ***equal access to all*** for opportunities to participate in the digital economy and society.
- ***Addressing the divide necessitates (i) facilitating coverage, (ii) improving affordability and (iii) increasing digital skills***
- The challenges in emerging markets are highlighted by the Internet Society's report on the impact of COVID-19 in Afghanistan, Nepal and Sri Lanka.

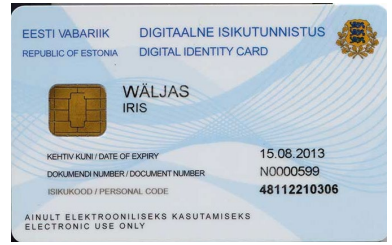
COVID 2.0 – Driving Digital Deepening

- ***As business and government organisations shift their activities online, they will require faster higher capacity data services.***
- ***Particularly in emerging economies, rapid deployment of 4G/5G coverage will be critical in urban & suburban areas in order to support pandemic-driven data demand.***
- ***Digital deepening is primarily driven by economic objectives of increased efficiency, productivity, competitiveness and growth.*** And such digital deepening it not limited to access networks but backhaul, cloud infrastructure and international submarine/satellite capacity must be properly dimensioned for the additional load and more.
- Driving digital deepening requires *inter alia:*
  a) high speed & capacity broadband/FWA , increased IMT spectrum and fiberised backhaul
  b) Urban/suburban deployments to support WFH, SFH, etc
  c) Online government services and communications



COVID 2.0 – Effecting Digital Transformation

- The ***shift to digital processes requires a digital transformation in institutions, and business and government processes*** including access to health care, financial services and government services. There is a need for legislative/regulatory change & digital IDs



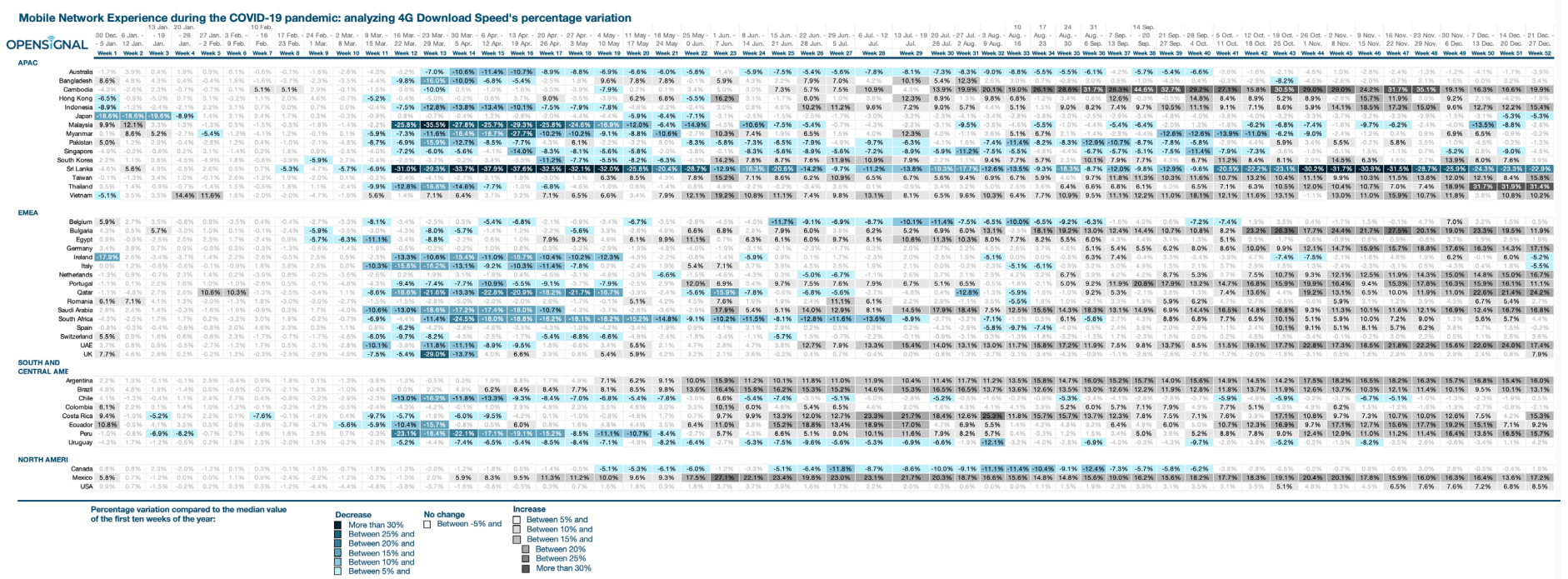
- ***More difficult but just as important is cultural change in societies, Government and companies to effect digital transformation***. Examples in include allowing e-health consultations, online board meetings from Belgium to Thailand, to challenge of eliminating the use of the hanko (判子) in Japan.

COVID 2.0 - Building Digital Resilience

The rapid increase in demand for services experienced at the onset of the pandemic indicates the need to build additional capacity & resilience into telecommunications infrastructure systems & services. In a period of uncertainty the costs of building additional redundancy are increased.

Building digital resilience it not limited to access networks but backhaul, cloud infrastructure and international submarine/satellite capacity as well as ICT systems must be properly dimensioned for the challenge of today as well as future pandemics, other pathogens, or future disasters.

Critical to enhance cybersecurity, strengthen strategic network assets & protect personal data



COVID 2.0 - Selected Survey Results of NRAs (1)

What measures do NRAs consider had most value?

Which measures have been of greatest value in responding to the crisis?	Average of importance (out of 10)
Implemented VOLUNTARY measures requiring Network Operators and service providers cooperation	7.9
Support e-learning during the education suspension/lockdown period	7.1
Allowed flexible network and traffic management	6.0
Development and use of specific health applications	5.9
Development and use of contact tracing apps	5.5
Implementing consumer protection measures (eg limited terminations for non-payment)	4.9
Allowing more flexible IMT spectrum use (eg granting temporary licenses)	4.6
Implemented MANDATORY measures requiring Network Operators co-operation	4.5
Mandated the provision of free services to customers by licensees	4.4
Mandated an increase of minimum consumer broadband capacity and speeds	4.3

COVID 2.0 - Selected Survey Results of NRAs (2)

Which plans has your country engaged in for the post-crisis situation in terms of ICT policies and regulations?

Which plans has your country engaged in for the post-crisis situation in terms of ICT policies and regulations?	Yes %
Encourage more collaboration with other sectors (formalizing MoU, collaborative regulatory approaches)	57%
Accelerate the transition from legacy 2G/3G networks to 4G/5G networks in order to provide more efficient bandwidth to consumers	53%
Revision of National Broadband/ICT Plans and broadband penetration targets and speeds	49%
Adopt a more collaborative model between all national ICT stakeholders	49%
Feedback analysis of the crisis measures implemented and outcomes	47%
Facilitating last mile connectivity initiatives	45%
Revision of universal services policies and financing to more effectively address the digital divide	39%
Institute digital training and skill enhancements for different segments of society (eg elderly, disabled, youth, etc)	37%

COVID 2.0 - Detailed Country Case Studies

South Africa: Challenge of the digital divide in the COVID-19 era focusing on education

Peru: Examines February 2021 'Todos Conectados' program to bring free internet to local and rural areas in Peru and close digital infrastructure gaps

Source: weforum.org

UAE: Approach to USF, QoS during the COVID-19 pandemic including dynamic traffic dashboards

Israel: Implementation of digital vaccination passports, known as 'green passports'.

Indonesia: COVID-19 Vaccination One Data System is a system for integrating data with a partnership between PT Bio Farma and PT Telkom, to develop new digital infrastructure

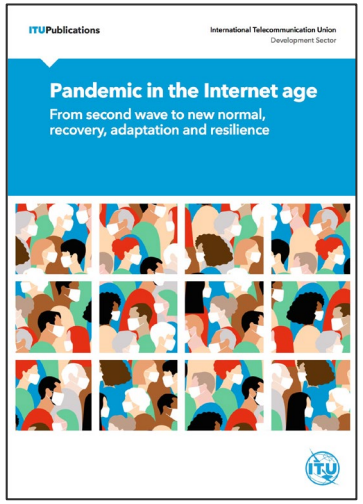
Colombia: How the Communications Regulatory Commission (CRC) has accelerated both internal and external processes to establish ourselves as an "intelligent regulator"

Conclusions and Way Forward

The COVID 2.0 paper which is free for download covers the lessons learned for better preparedness with a Roadmap for Action

- Different groups of ICT stakeholders are provided with an analysis of policy and regulatory measures undertaken during the pandemic and provide concrete guidance in preparing for the post-pandemic to ensure better preparedness, and contribute to long term global connectivity

Recommendations in relation to (non-exhaustive list):



- Support for contact tracing and vaccine distribution (short term – 6 months)
- Digital ID and digital vaccination passports
- On-line education and health (short term and long term)
- Addressing the Digital Divide, Digital Deepening, Digital transformation etc
- National broadband plan revision
- Accelerating IMT Spectrum prioritising sub-1 GHz to address the digital divide, fair and reasonable prices to ensure adequate return on capital
- Cybersecurity
- Resilient and nimble network planning

Thank you

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