

Connecting the Unconnected in a Digital Converged World

# Evolution of ICTs: Economic, Policy and Regulatory issues

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# Context

- The Telecom / ICT sector has been transitioning and evolving rapidly over the past 2 decades
- It has been a significant driver of economic growth, impacting all countries including those of Latin America and the Caribbean
- Greater access needs to be promoted through lowering of cost and increased information literacy
- Policy and regulatory frameworks need to be responsive to the evolution and changing character of the sector

# Transitions



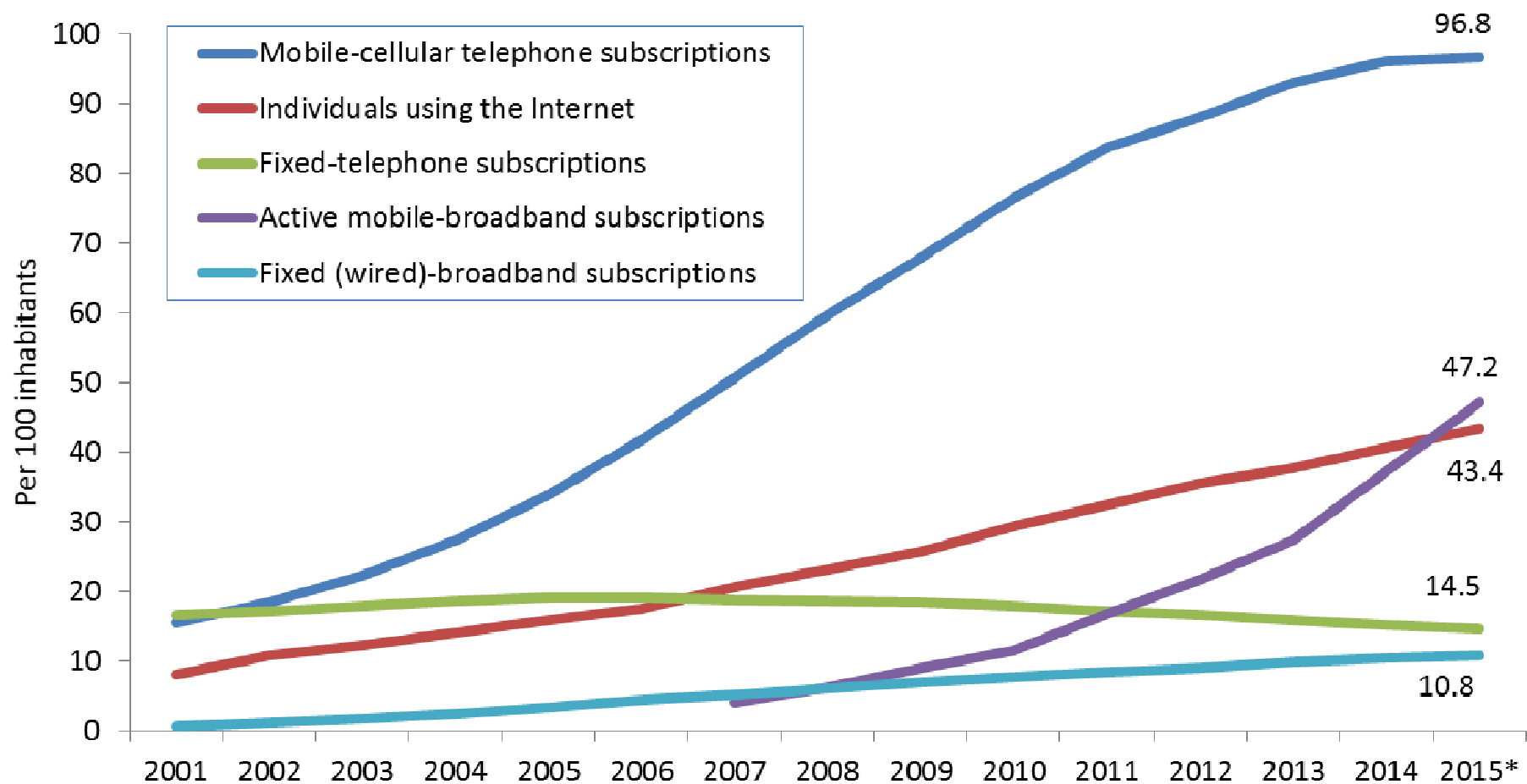
Source: MICT, CARIMAC, UWI

# Emerging IP Networks

- IP-based telecommunication systems allow for the transport of integrated services combining voice, video, image and text across a single network.
- Unimpeded access for users to services and networks across competing service providers
- Interoperability and convergence of communication services
- Broadband connectivity for high-speed transfer of content
- Smart technology artificial intelligence and robotics
- Pervasive content and social media available through diverse platforms including mobile devices



# Global ICT Trends, 2001-2015



Note: \* Estimate

Source: ITU World Telecommunication /ICT Indicators database

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# Evolution and Access

# From Ubiquitous Voice to Growth of Content

- Voice telephony has become ubiquitous via the mobile phone
- Landlines have declined leading to some margin reduction for telecom providers
- Providers are looking for new avenues for investment and income generation.
- This has led to mergers and acquisitions as content resumes its primacy
- A key enabler is widespread access to broadband



# Benchmarks to Improved Access

- **Availability:** the service is available to inhabited parts of the country through public, community, shared or personal devices;
- **Accessibility:** all citizens can use the service, regardless of location, gender, disabilities and other personal characteristics; and
- **Affordability:** the service is affordable to all citizens.

Source: ICT Regulation Toolkit



# Forms of Digital Exclusion

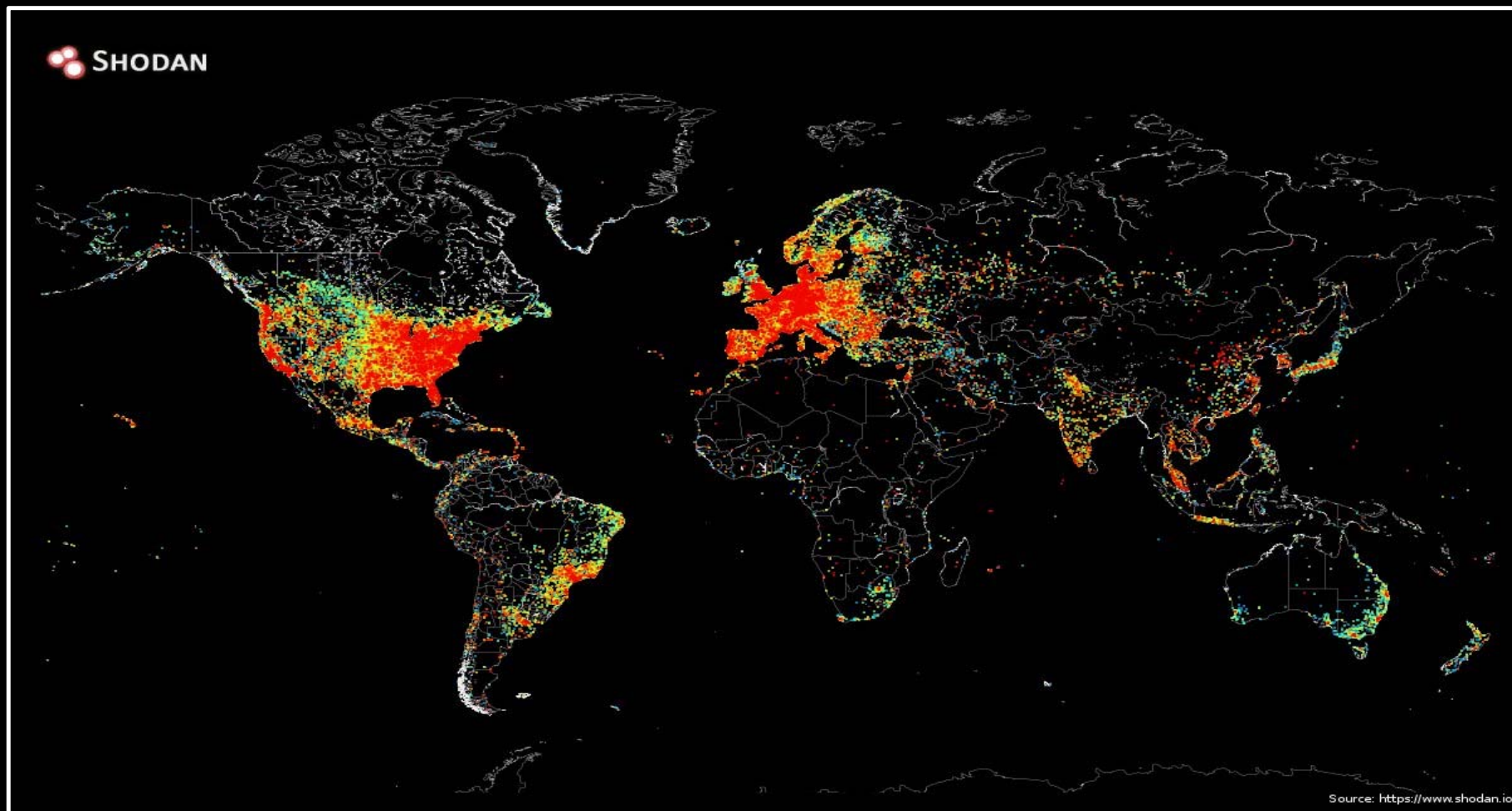
- Living in areas without access to the Internet
- Unable to afford internet-ready equipment or internet service
- Absence of relevant knowledge or training
- Physical or intellectual disability
- Absence of internet content in suitable language (linguistically excluded)
- Poverty and illiteracy

# Re-engaging the Digitally Excluded

- The digitally excluded are understood to be persons excluded from digital networks and the new economy by having no access or limited interaction with the internet.
- According to the Riga Declaration these are: older people, people with disabilities, women, lower education groups and the unemployed as well as those living in areas without Internet service.
- Digital literacy is a tool for re-engagement of the digitally excluded

# Map indicating all devices connected to the internet

Source – John Matherly 2014 (shodan.io)



# A Map of Internet User Penetration - Caribbean

(Source – ISOC, 2014)



The background features a dark blue field with a complex pattern of curved, overlapping lines that create a sense of depth and movement. A horizontal band of a lighter, medium blue color runs across the center, serving as a backdrop for the title text.

# **Economic Issues and Value Creation**

# Characteristics of the Global ICT Economy

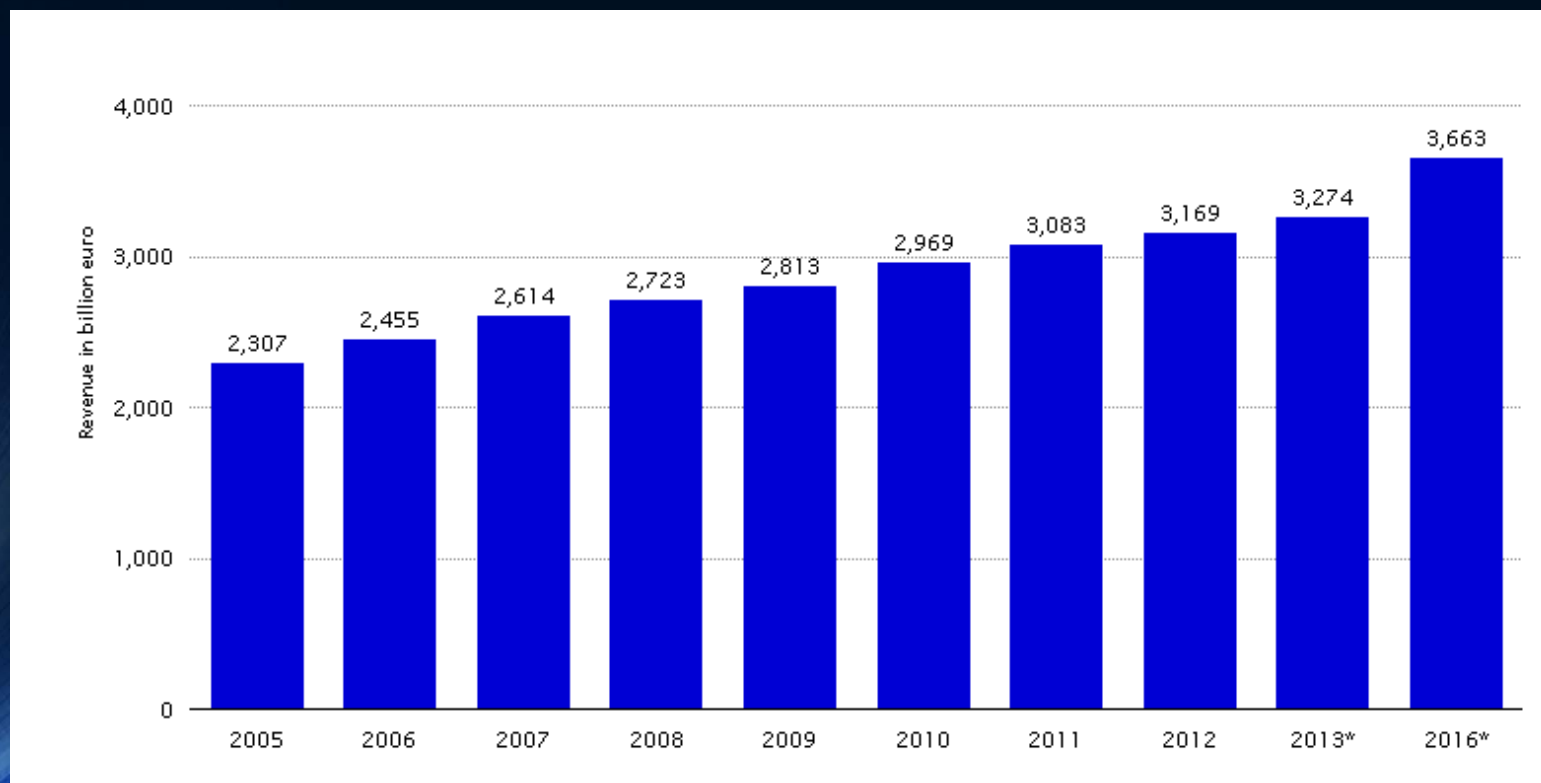
- Real time global transactions take place at anytime and from anywhere
- Global information networks allow for innumerable transactions per second
- Financial markets are more integrated
- Crowd-sourcing allows businesses to use expertise from anywhere

# Hyperconnectivity: Dominant Features

- Broadband expansion
- Proliferation of mobile devices
- Wireless Access
- Social media pervasive in daily life
- The use of cloud for data and applications access
- Challenges with cyber security

# Global ICT Revenues– 2005-2016

This year ICT markets are estimated by Statista to be worth more than 3,663 billion euro from a low of 2,307 billion euro a decade ago.



Source:  
statista.com



# ICTs – Economic Implications

- Emergence of a versatile economic space offering opportunities with global access
- Increasing use of robotics and artificial intelligence giving rise to concerns regarding human labour
- Continuation of geographic, demographic and generational economic divide
- Wrestling with cyber threats

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# **Policy and Regulatory Issues**

# Telecom and ICT Regulation

- Telecoms providers moving into content delivery
- More widespread converged regulatory structures needed for broadcasting, cable television and telecommunications services
- Conventional regulations challenged by OTT net-based content delivery services (eg Netflix, Hulu)

# Issues in Telecoms and ICT Reform

- Provisions for a level playing field among internet users should be preserved in line with principles of Net Neutrality.
- Need for Digital Switchover to be fast-tracked and more uniformly adopted in line with ITU guidelines.
- New strategies to be adopted relating to roaming. With application of new signal distribution technology, are roaming costs still justified?
- Inter-regulators fora and increased collaboration needed to coordinate oversight of increasingly global ICT conglomerates.

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# Contemplating the Way Forward

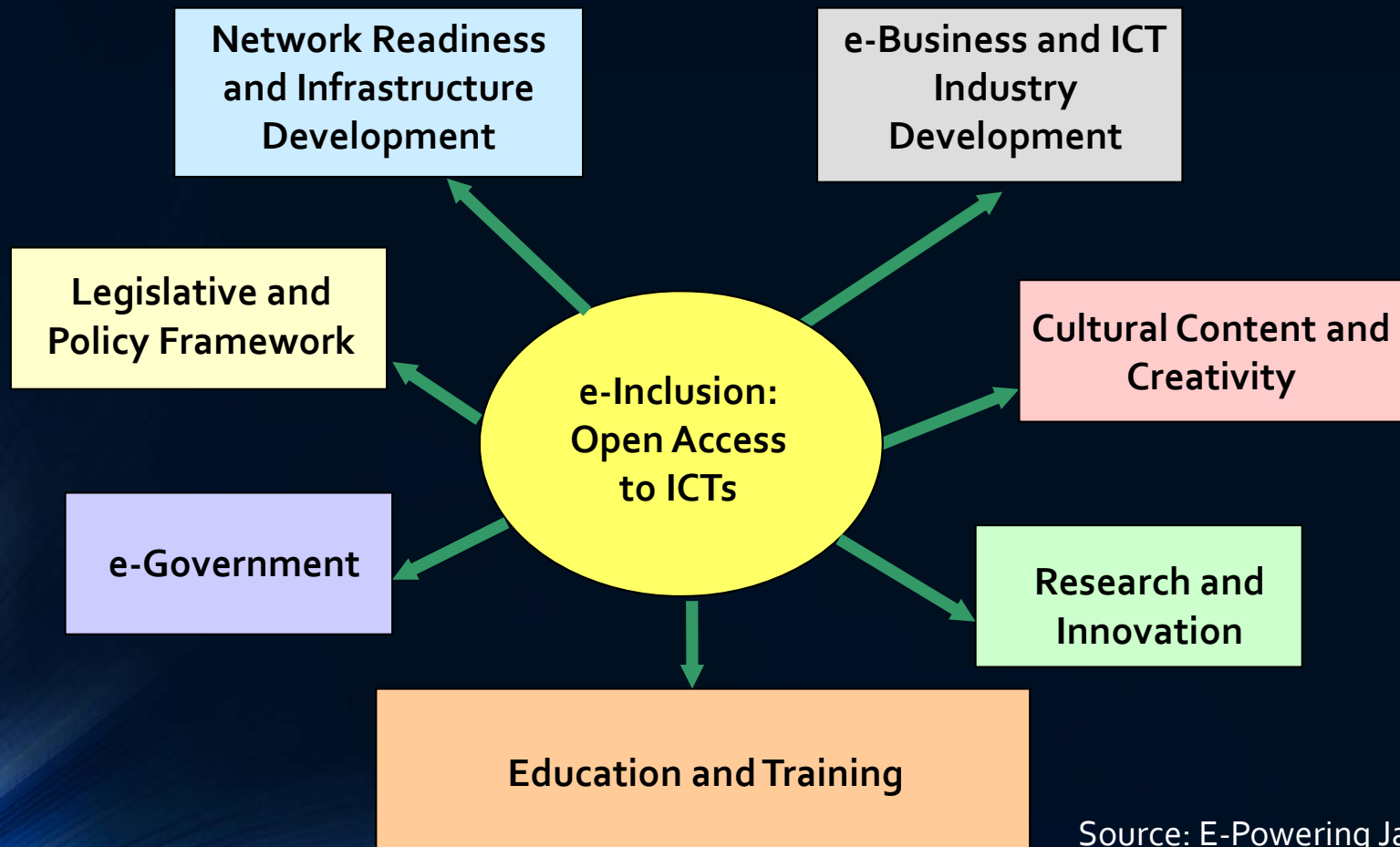
# The Centre-Periphery Model



- Asymmetric distribution of ICTs, geopolitical power, and economic wealth
- ICTs are the global conduits facilitating flow of the main global commodity – information

Dunn 2005

# Achieving Inclusivity



Source: E-Powering Jamaica

# Conclusions

- Reduce costs for broadband access through innovative payment methods and reduction of taxes
- Re-purposing of Universal Access Funds
- Fostering diversity and competition
- More training and information literacy
- Better research and mapping of ICT issues



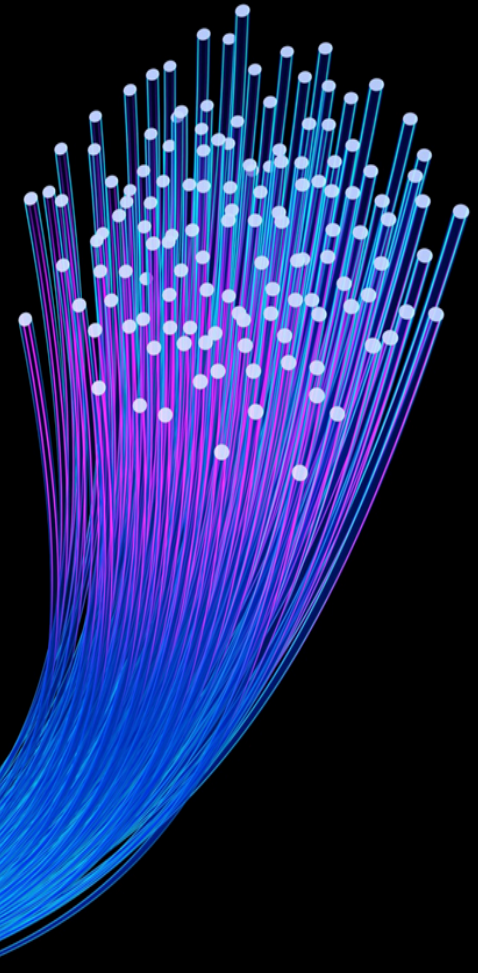
# Demands of the Digital Domain

Innovate, not just imitate

Upload, not just download

Adapt not just adopt the emerging technologies

Foster popular access through lower costs and wider public education



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# Thank You!

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