



Caribbean Telecommunications Union

ICT Week 2021

Digital Economy, ICT to boost Recovery

Cesar Humberto Funes Garay

Public Relations, Vice-president

Huawei Latin-American & Caribbean

Agenda

- ICT to Improve Economic Recovery
- Digital Economy Definition (by BCG)
- Opportunities



Trend: Digital Technology is Leading the Fourth Industrial Revolution

First Industrial Revolution



Steam engine

Second Industrial Revolution



Electricity

Third Industrial Revolution



IT

Fourth Industrial Revolution



Digital technology

Global macro trends



Sustainable development



New growth of the digital economy



Smart city development



Industry digitalization

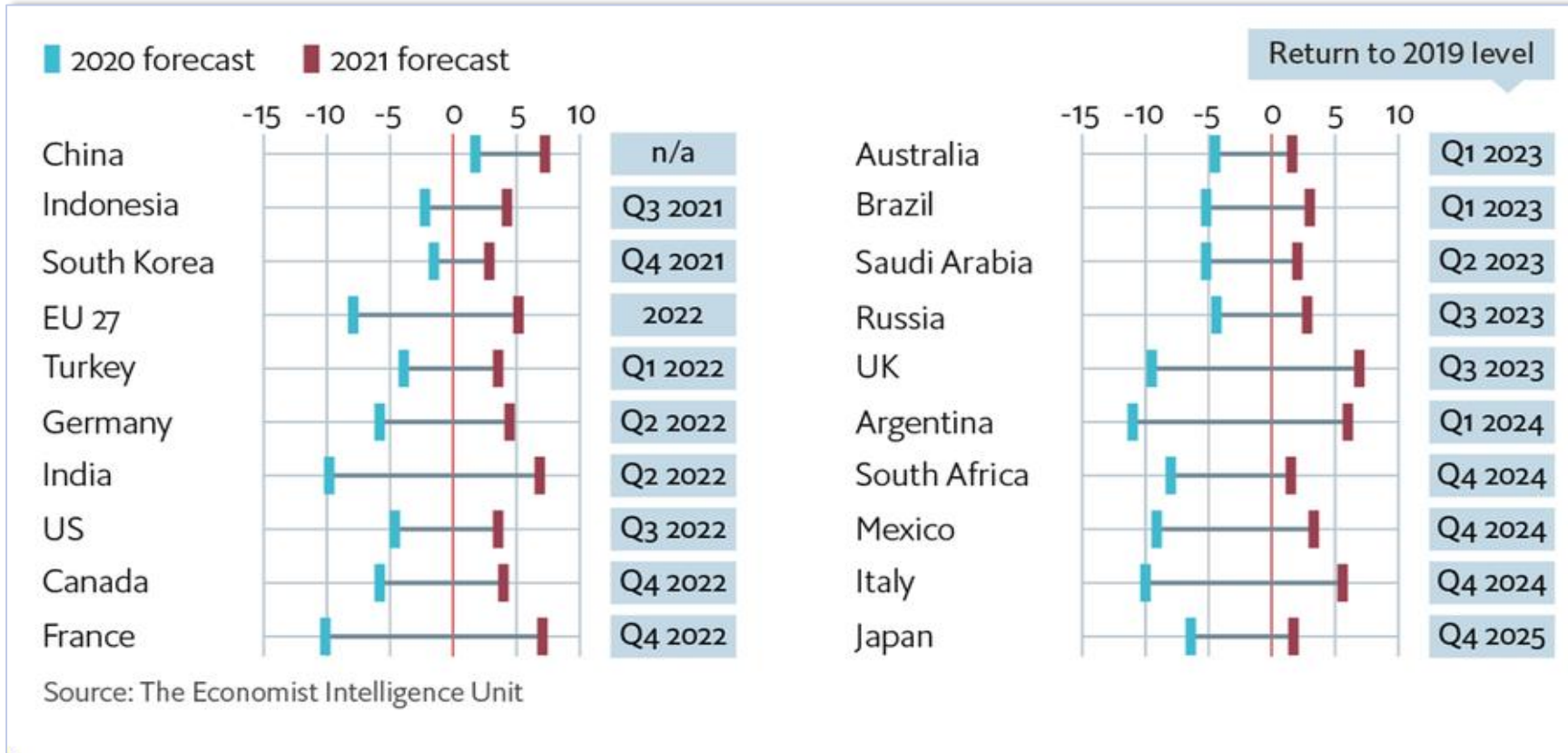


Consumer experience upgrade



Scenario-specific upgrade

Pandemic Impact



“A Proactive Government and An Effective Market is Needed - the Roadmap for the Development of the Digital Economy“

BCG

Forecast real GDP growth in 2020, % change on a year earlier

World organizations encourage strengthening digital infrastructure & accelerating digital transformation



World Economic Forum (WEF)

Together with the World Bank, ITU and GSMA, **developed a Call for Action** to keep networks available and ensure access for the most vulnerable populations.

Launched **Accelerating Digital Transformation project** to accelerate enterprise resilience and digital transformation capabilities.



World Bank

" We need to ensure that digital solutions are not only part and parcel of our immediate response to weather the shock; but also, **a key foundation for fast-tracking economic recovery** in the aftermath of the pandemic."

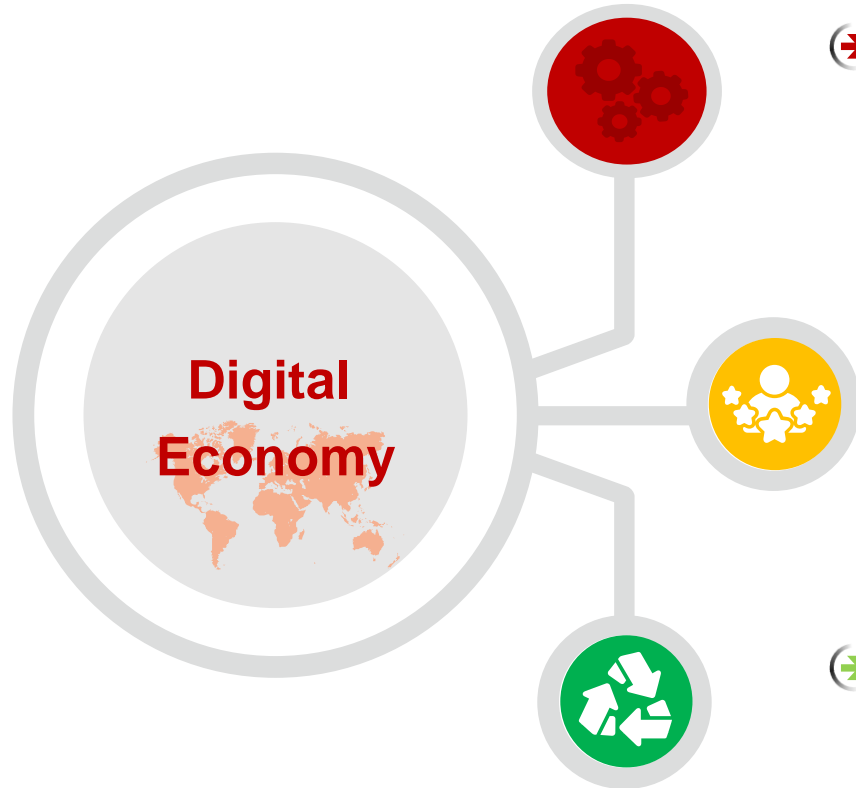
- Makhtar Diop, World Bank Vice President for infrastructure



IMF

The IMF's May 2020 Fiscal Monitor report asserts that **high-quality efficient public investment (especially into digital infrastructure) can lift GDP growth, inflation, and interest rates.** If investment is inefficient, the macro impact will be only modest, but public debt will surge.

Create New Value of Digital Economy: Growth, Inclusion and Green



Economic growth: Driving economic growth

> The digital economy will be the main driver of future economic growth as it is growing faster than GDP in all countries, both rich and poor.



Social inclusion: Improving social well-being

> Digitalization helps improve social well-being, reduce income and gender divides, and create diverse jobs.



Green environment: Promoting environmental protection and emissions reduction

> Digital applications using AI, IoT, big data, etc. can effectively improve energy conservation and protect the environment, helping achieve carbon neutrality sooner.

Digital Economy has become the Main Driver of National Economic Growth

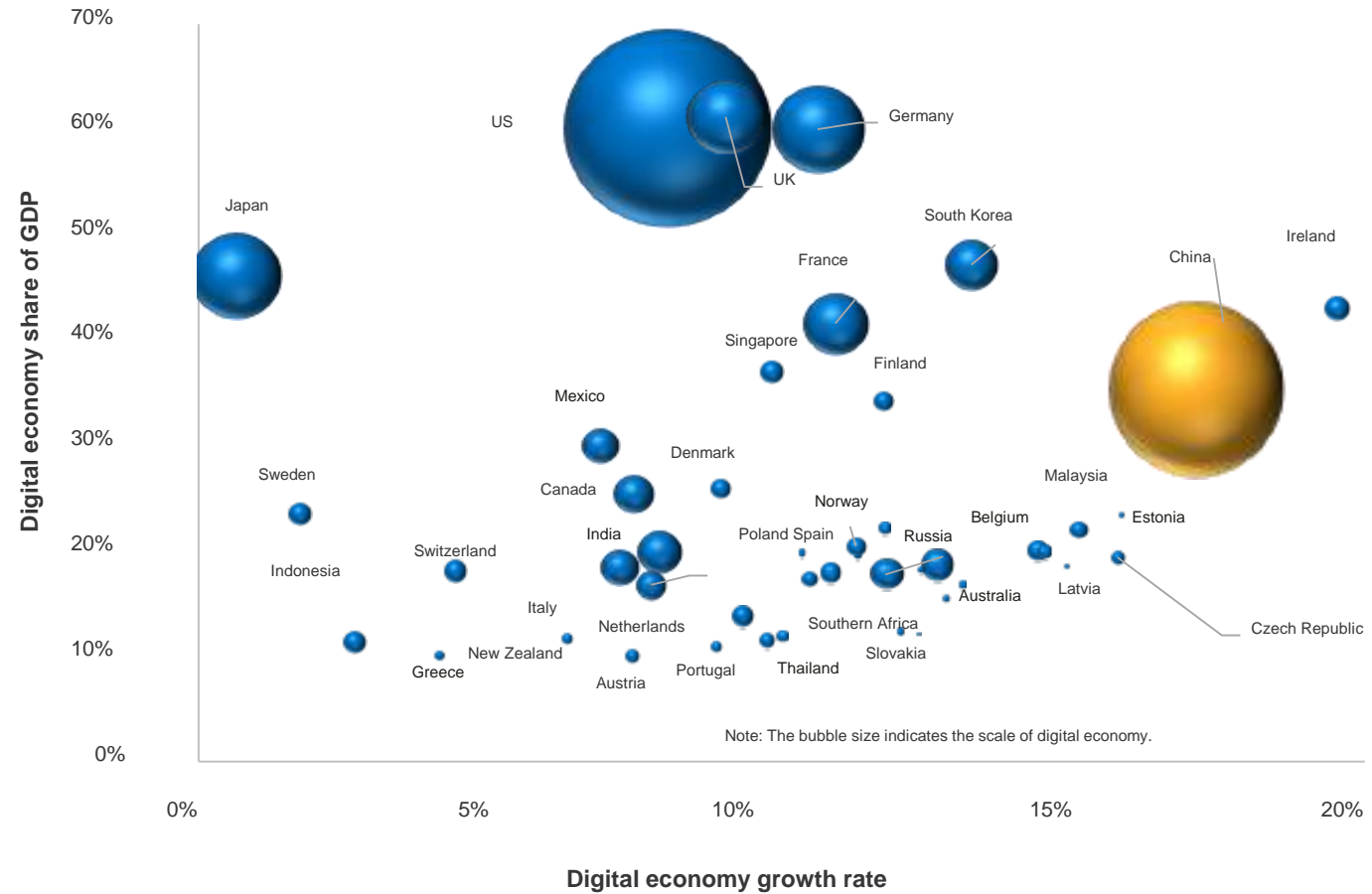


Economic growth

New strengths of digital economy

Trend | Element | Case Study

Digital economy's growth rate and share of GDP by country



Source: CAICT, Roland Berger

ITU's Connecting Humanity Initiative, Building a Fully Connected World

ITU's Connect 2030

Achieve universal, affordable broadband connectivity

US\$428 billion of investment is needed

Connect the
unconnected

Universal
connectivity

Bridge the
digital divide

Promote
sustainability
in rural areas



Smart Villages

whole-of-government approach using shared "ICT building blocks" to deliver



telemedicine



e-agriculture



e-learning



and more...

Characteristics:

- Involvement of multiple international organizations and industry stakeholders
- Cross-department coordination and resource integration
- Infrastructure + Digital skills + Information services
- **Diverse sources of funding** (government budget, the USF and international financial institutions, e.g., the World Bank and Asian Development Bank)

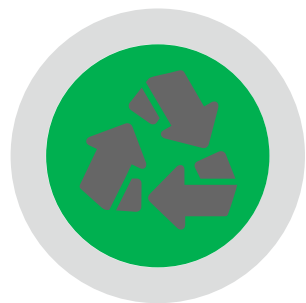
Pilot countries:

- Nigeria
- Indonesia
- Pacific island countries: Palau, Fiji, Papua New Guinea, etc.
- Sudan
- ...



Social inclusion

Climate Change Impacts the Environment, Society and Economy



Green environment

- **Economic impact:** 700 million to 1.2 billion people will live in places with extreme conditions. The global economy will suffer from a **US\$4–6 trillion** loss, equivalent to **2–3.5%** of 2050 GDP.
- **Impact on food:** The likelihood of decreasing production of wheat, corns, soybeans and rice will increase from 6% to **18%**.
- **Natural impact:** Compared with 1925, 25% of all land has changed ecologically (e.g., from rainforests to savannas) and this number will increase to **45%** by 2050.

If we do nothing, the global mean temperature will rise by 2.3°C, and even 5°C in some locations by 2050.

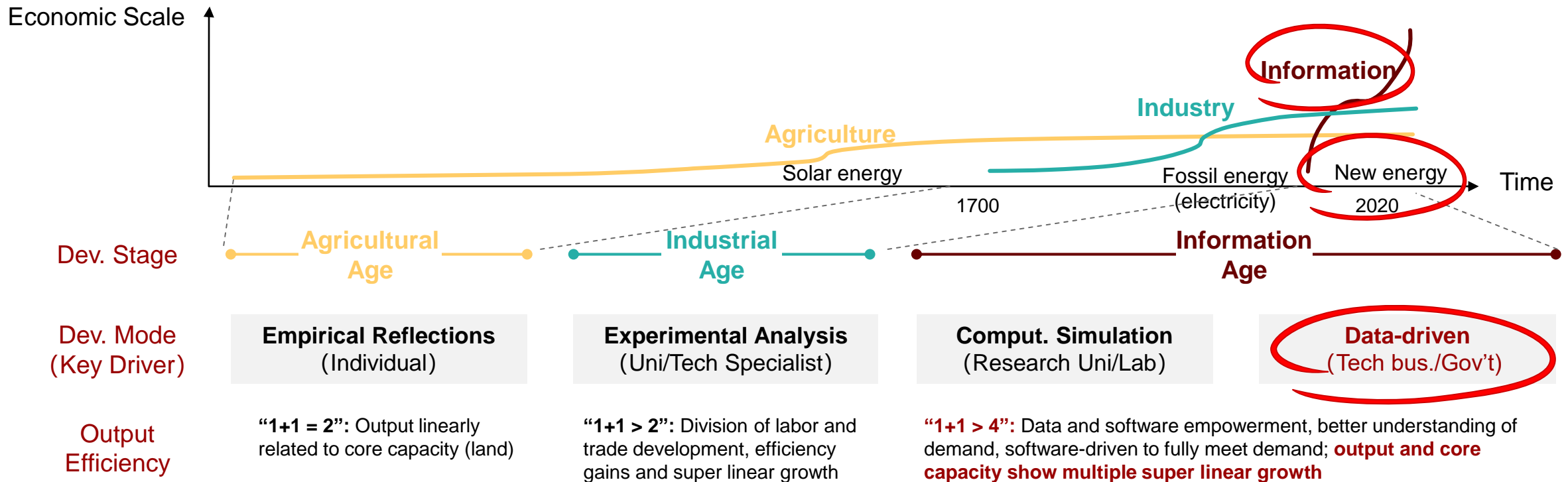
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As the world enters the era of great changes in new energy and digital revolution, it presents the multi-superlinear development of "1+1 >4", which is imperative to promote the digital economy, and the government plays an even more important role.

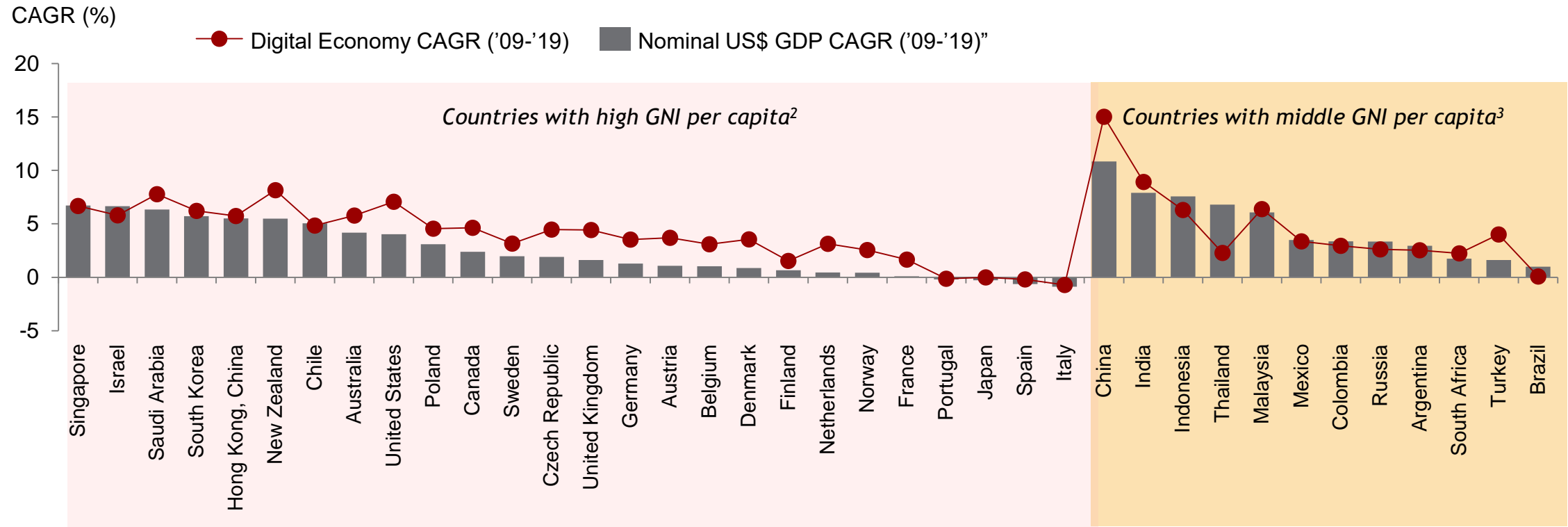
Stages and modes of economic development in different ages



To promote economic growth and meet national needs, countries around the world are all trying to make the digital economy a "key engine" for their economic development

In the past decade, most countries witnessed a faster growth of its digital economy than its overall economy based on our model

2009 – 2019 Digital Economy¹ growth rate

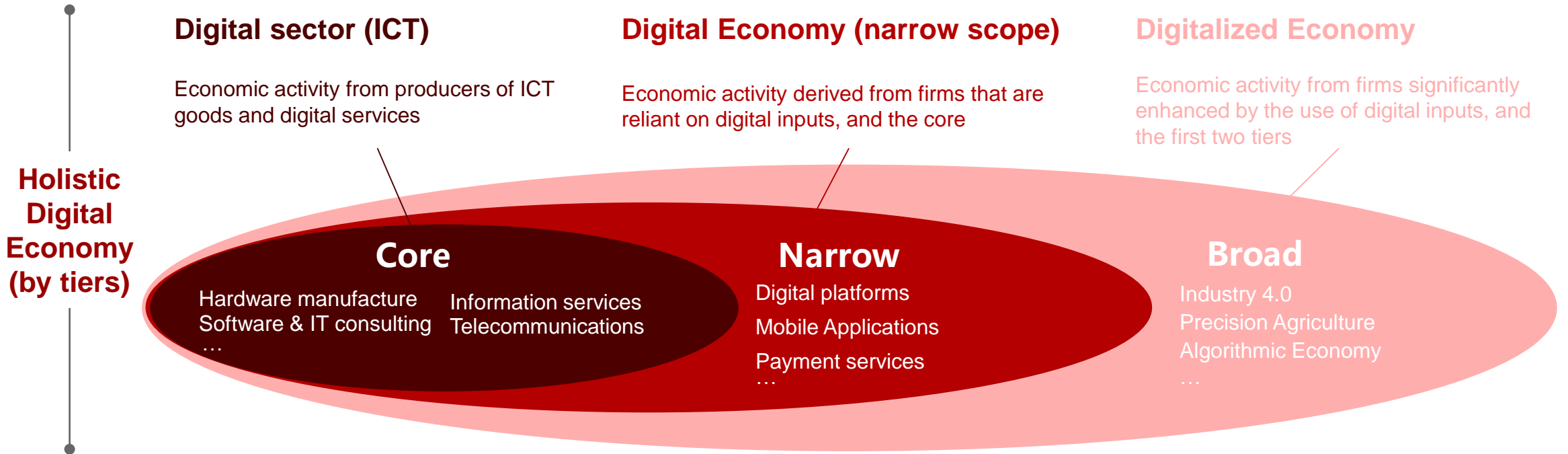


Source: Oxford Economics, Euromonitor, Garner, World Bank, BCG analysis

Definition of Digital Economy includes three tiers of activities



The **Digital Economy** incorporates all economic activity reliant on, or significantly enhanced by the use of digital inputs, including digital technologies, digital infrastructure, digital services and data. It refers to all producers and consumers, including government, that are utilizing these digital inputs in their economic activities.



Source: UNCTAD (2019), Digital Report 2019, OECD (2020), A Roadmap toward a Common Framework for Measuring the Digital Economy, BCG analysis

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Governments that have prioritized digital transformation in the public sector have reaped clear, tangible benefits

Improved efficiency



With 99% of public services online, Estonia estimates that **reduced bureaucracy saved 1407 years** of working time

Going paperless



Multi-channel Digital Tax Platform in the UK provide paperless options which **reduced paper returns by 21%**

GDP growth



Estonian officials estimate that e-Government efficiencies **could potentially lift annual GDP by 2%**

Cost savings



E-government transformation in Singapore generates approximately **~\$14.5 million in savings** for the government

Modernization



Through modernization in the USCIS, **100% of new N-400 applications are processed digitally** today

Additional revenues



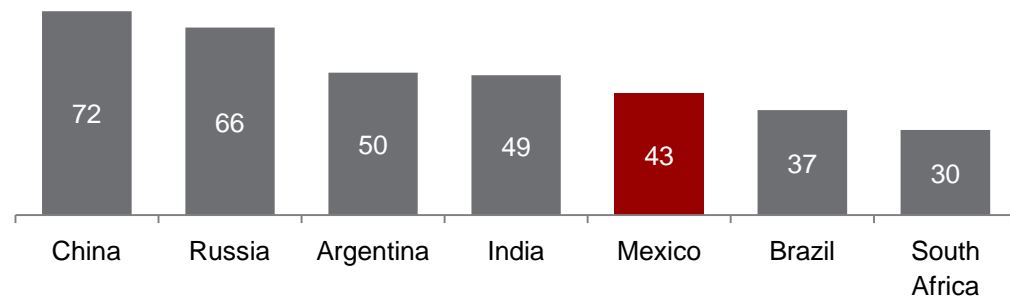
Through a digital tool, the UK tax authority claimed an **additional £3 billion in tax revenues** from 2008 to 2014

Source: Publicly available information through official government websites; BCG analysis

Talent: Low average digital skills and an increasing shortage of digital talents call for action to initiate more upskilling and reskilling programs

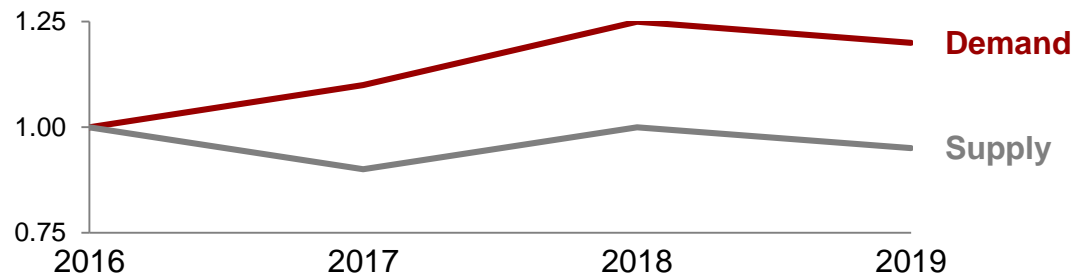
Lower percentage of population has basic digital skills

Digital skills¹ among active population, % (weighted avg. 2019-2020)



Demand for digital talents grow much faster than supply

Digital supply and demand in Mexico (indexed, 2016 = 1.00)



1. Scored at Level 5 or higher
Source: OECD; LinkedIn; BCG analysis

Though the public and private sectors have launched a few national training programs, a holistic strategy is needed to orchestrate all efforts and parties involved



Ministry of Public Education

- An **online learning platform** with over 230 courses including digital skill training courses for both students and teachers
- **Shortcomings:** The program has yet to develop indicators of success to understand its impact



HUAWEI

Partnered with Ministry of Public Education and TecNM

- ICT courses, workshops and a training and certification program provided to students and teachers



Some countries have similar initiatives in place

Know-how

Government works with industry leaders to develop industry, and growth stage-specific digital plans, and provide SMEs with step-by-step guide (Singapore)

Solutions

SMEs can apply for government grants to install pre-certified digital solutions that are developed specifically for SMEs (Singapore, Japan)

Talent

Government sponsored IT advisory services dedicated to help SMEs with more advanced digital needs (Singapore, Japan)

E-commerce

Enable SMEs to sell overseas by connecting them with B2B and B2C e-commerce platforms that have regional or global reach (Singapore, Japan, Malaysia)

Funding

Subsidies for technology adoption across sectors (Japan), or targeting sectors that were heavily affected by covid (i.e. Food services and Retail) (Singapore)

R&D

Connect SMEs to research institutions to conduct joint and commissioned research on topics companies cannot do alone (Japan)

Gov't need to consider a integrated program to help SMEs overcome hurdles

Some gov'ts adopt holistic SME digital transformation program help to boost SMEs' productivity and top-line

Huawei support: Green & Inclusive



Green
environment

- Macro insights into **environmental protection**
- Actions speak louder than words: **Huawei protects the environment with technological innovations in ICT**
- Use digital technology to build a **low-carbon society** and achieve **harmony** between humanity and nature



Social inclusion

- Many countries around the world are looking to improve **social well-being** through digitalization
- **ITU's** Connecting Humanity initiative
- The digital industry will create more jobs and benefit **SMEs** and individuals
- Huawei's **TECH4ALL** digital inclusion initiative

Thank you.

把数字世界带入每个人、每个家庭、
每个组织，构建万物互联的智能世界。

Bring digital to every person, home, and
organization for a fully connected,
intelligent world.

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