

“Políticas y Regulaciones Innovadoras para Futuras Tecnologías Emergentes”



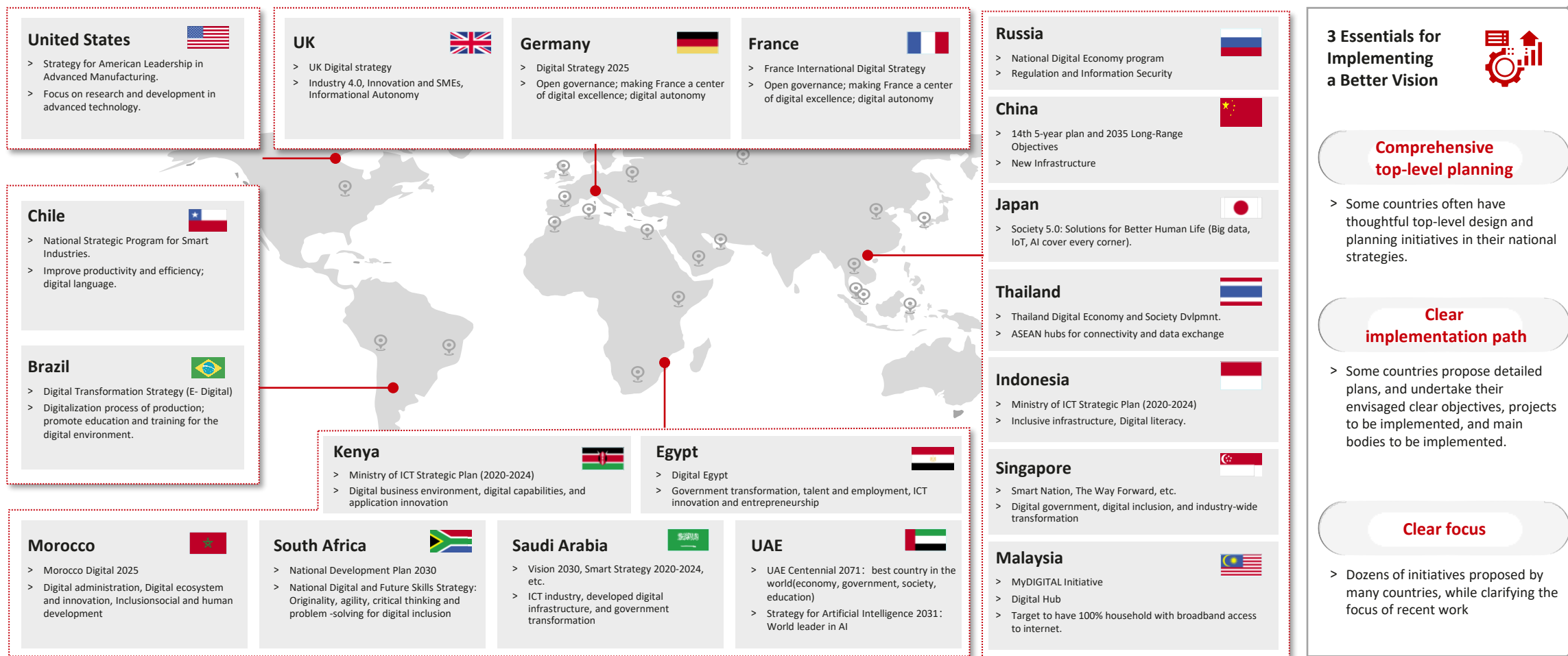
Sustainability Development Goals (SDG)



Source: Desktop Research; Roland Berger



170+ Countries Release Digital Strategies, 3 Essentials for a Better Implementation



Some Countries Propose to become Digital Hub / Centre in their Strategies

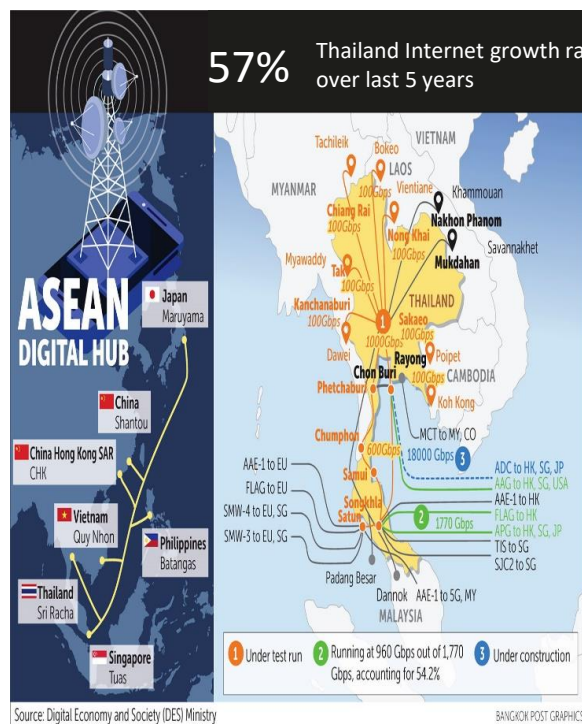
Saudi Arabia

To establish **A Digital Hub for the MENA region** and create an ecosystem of advanced technology services that will establish Saudi Arabia as a leading business hub in the region.



Thailand

To become **ASEAN's Digital Hub** and build a country-wide, high-capacity digital infrastructure to provide accessible and affordable internet, digital transformation on SMEs, Agriculture, and other industries.



Malaysia

The 12th Malaysia Plan aims to position Malaysia as the **ASEAN digital center**, given the country's strong capability in cyber security solutions and digital content production.



With excellent ICT infrastructure, some countries **propose to become regional digital centers**, pool talent and innovation capabilities, accelerate the development of local ecosystems, guide the upgrading of industries such as finance, logistics, and manufacturing, and improve national competitiveness.

Governments Take Various Measures to Support the Development of SMEs and Start-ups



China

Digital Technologies Support

- The Ministry of Industry and Information Technology promotes access to digital products such as video conferencing, cloud services and training programs for SMEs
- Some local gov'ts offer free cloud computing products to encourage businesses to resume operations through telecommuting



Italy

Digital Solidarity Initiative

- Advocates the establishment of online service centers, such as the establishment of free online newspapers and e-learning platforms
- Companies can contribute and share free digital services through online service platforms



Japan

SME Digitalization

- Provides a subsidy of JPY 300K to 4.5 million for introducing IT to a single SME to promote the digital development of SMEs
- Initiates the "Champion City for Digitalization" project to introduce digital technologies to SMEs in champion cities to increase business sales revenue



Denmark

Digital SME

- A total of Dkr 55 Mn allocated for 2018-2021
- Consulting and coaching on digital opportunities, business case preparation and implementation of digital solutions for companies
- Provides specific recommendations and guidance for e-commerce and electronic export applications



Germany

Mittelstand-Digital

- Annual budget of ~€36 Mn
- Support for SMEs' digitalization through building IT competence centers by universities, research institutes and external partners (e.g., chambers of commerce)
- Since 2015, 26 competence centers have been established to empower SMEs through examples, information events and exchange of experiences



Australia

Small Business Digital Champion

- \$18,500 funding for a single enterprise and guidance on products and services
- Provides digital transformation support to 100 Australian small businesses
- 15 of these 100 companies were selected as digital champions, with additional support from a high profile digital mentor

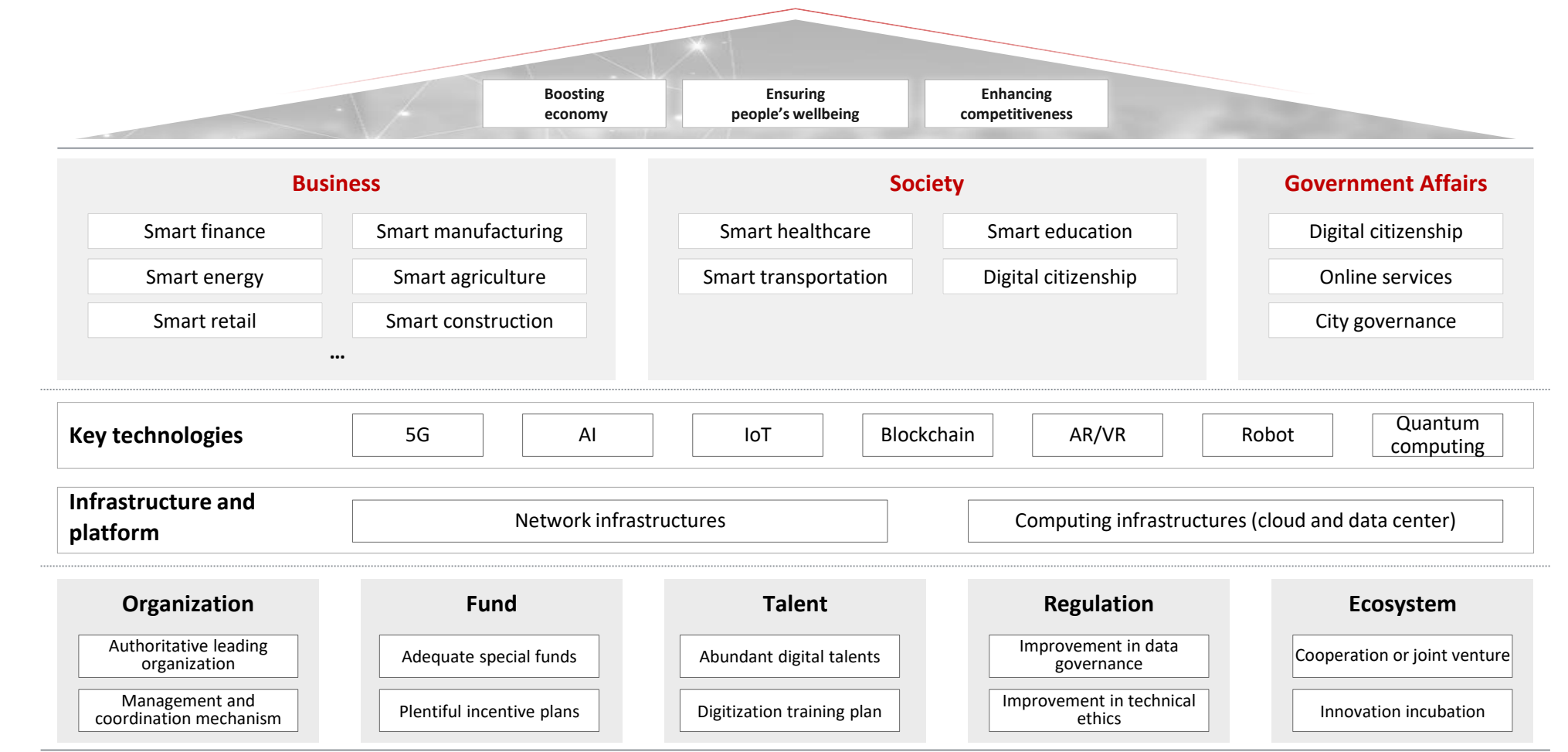
Framework: Top-level design based on strategy, application, technology and enablers

Strategy

Application

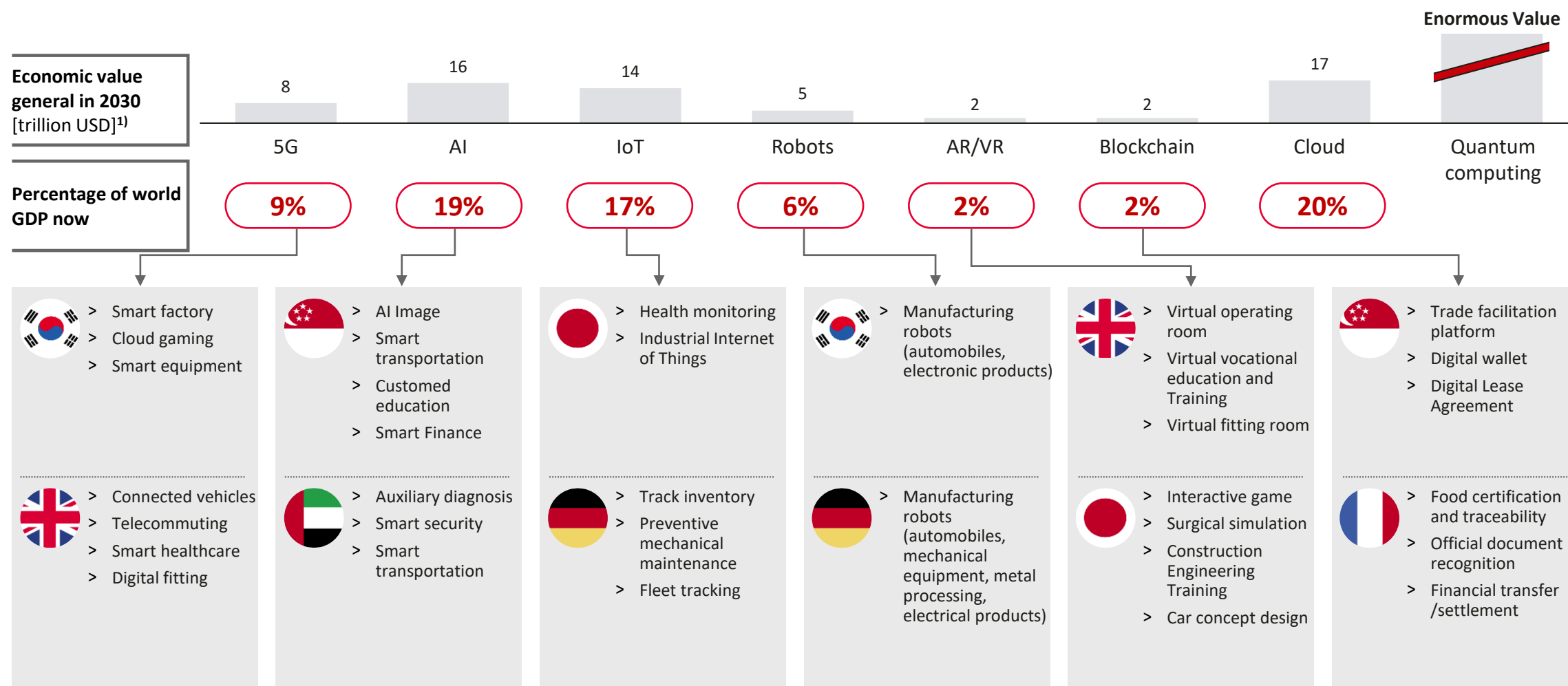
Technology

Enablers



Source: Roland Berger

Emerging technologies would generate more than US\$10T of value.



1) Including different technology act together, economic value could be overlapped

Supportive Spectrum Policy for Sustainable Development



5G Spectrum Allocation Principle

- ① At least **80-100 MHz/MNO contiguous block** per network in 5G first phase (C-band /2.3GHz..)
- ② **Affordable** 5G spectrum **price**, with a rational market-based valuation award process
- ③ Reasonable obligations, Technology-neutral, Focused on **Global Scalability** and Ecosystem Development
- ④ More Mid-band (6GHz...) is needed to **fulfill** next 5/10 years' **traffic growth**.

Governments Accelerate the Development of ICT Infrastructure

China: New Infrastructure

- CNY17 trillion (US\$2.6 trillion) over five years for new infrastructure.
- **Seven industrial infrastructures:** 5G, AI, big data centers, industrial Internet, intercity high speed rail, charging stations, and UHV transmission.

EU: NextGenerationEU

- EU: EUR750 billion to make Europe **greener, more digital**, more resilient, and healthier.
- Germany: EUR5 billion to establish state-owned company MIG to provide 5G networks in "white spots".
- UK: GBP5 billion, together with private-sector funding of GBP30 billion, to accelerate the deployment of fiber networks.

South Korea: Digital New Deal

- KRW114 trillion (US\$103 billion) for the **Digital New Deal and Green New Deal**.
- Ten domains: 5G, AI talent cultivation, data dam, AI-based government, smart healthcare, green buildings, electric vehicles, smart cities, sustainable energy, and low-carbon industrial campuses.

US: American Rescue Plan

- On Feb 5, 2021, the Senate passed a US\$1.9 trillion plan: US\$1 trillion for families, US\$415 billion for a vaccination program, and US\$440 for supporting SMEs.
- President Biden proposed another bill to fund programs for climate change and infrastructure.

...

South Africa: Temporary spectrum

- 466 Ghz **temporary spectrum**.
- Shortened time for license approval: 30 days -> 4 days.
- Reduced costs for emergency site coverage.
- US\$20 billion infrastructure plan: Rail, ports, energy, broadband, water, hygiene, and social care.

Brazil: Fine-for-investment swap

- Brazilian telecom regulator Anatel agreed to swap TIM's fines of US\$121 million for 4G investments in 350 remote areas.
- Telecommunications is one of the four pillars of the "great reset" and regulation will be relaxed. Brazil will receive SoftBank's Latin American Fund (US\$5 billion) to accelerate the development of telecommunications.

Thailand: Incentives for 5G development

- Low auction prices for 5G spectrum with a 10-year payment term, and payment from the 2nd to 4th Y may be exempted if construction meets requirements.
- NBTC approved a fund of US\$43 million for ICT equipment in hospitals, subsidized US\$100 M for 10GB wireless users for three months, and provided US\$5 M to support free-of-charge evolution from FBB to 100 Mbit/s networks.

Pakistan: Tax reduction

- Reduced federal excise duty on telecommunication services (17%-16%).
- **Withdrawing sales tax on SIM** card purchase (US\$1.55/card).
- Reduced import duty on raw materials and machines (20%->5%) and equipment parts (7%->3%).
- **67% reduction in import taxes** (US\$25->US\$8) on budget mobile phones (price: US\$30-100)

...

Digital Infrastructure is the foundation of Digital Economy.

Dimension	Key Policies	 Innovation Hub	 Efficient Prosumer	 Service Powerhouse	 Global Factory	 Business Hub	 ICT Patron	 ICT Novice
Technology	National AI Policy							
	Emerging Tech Dev. Policy							
	Broadband Policy							
	LT Spectrum Strategy							
	National Cloud Strategy							
	5G Strategy							
	IP Rights							
	Science & Technology Policy							
	Cybersecurity Strategy							
	Data Protection and Privacy							
	Data Sovereignty							
Ecosystem	Telecom Regulation							
	Digital Service Taxation							
	Emerging Tech Regulation							
	Digital Business Support							
	EoDB Reforms							
Capabilities	Digital Inclusion and Awareness							
	Digital Foundation Education							
	ICT Higher Education							
	ICT Workforce Development							
	Specialized Skills Development							
Industry	eGov Strategy							
	Industry 4.0/Focus Sector							
	Other Sector Digitalization							

- New reality (new competitors) require a new Policy Strategy (focused on the end-user)

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.

**Copyright©2021 Huawei Technologies Co., Ltd.
All Rights Reserved.**

The information in this document may contain predictive statements including, without limitation, statements regarding the future financial and operating results, future product portfolio, new technology, etc. There are a number of factors that could cause actual results and developments to differ materially from those expressed or implied in the predictive statements. Therefore, such information is provided for reference purpose only and constitutes neither an offer nor an acceptance. Huawei may change the information at any time without notice.

