



# Building fully connected, intelligent emerging markets

*Emerging markets now underpin the global economy. Home to between 80 and 85 percent of the world's population, they contribute almost three-quarters of global GDP growth. In 2017, global economic growth reached 3 percent, up from 2.6 percent in 2016. What are the right solutions for operators to maximize opportunities?*

By Dang Xin

## A macroeconomic perspective

**T**he digital economy is expanding in several ways. The global production of ICT products and services accounts for an estimated 6.5 percent of global GDP, and some 100 million people are employed in the ICT services sector alone. The

digital spillover effects are changing all parts of the economy.

Connectivity is developing fast globally. In 2017, more than 450 million people were connected to the mobile Internet and more than 30 million households were connected to home broadband. However, there are still 3 billion people in the world who still don't

have mobile Internet, 870 million of whom lack mobile phones, while 1.1 billion households are without home broadband.

However, due to inadequate infrastructure and a weak business foundation in emerging markets, the ICT sector faces challenges. Operators frequently find it difficult to acquire site infrastructure and

fiber optic resources, and spectrum resources are extremely costly. To grow, operators require more revenue streams from data, such as video, music, and gaming content, that grows their user bases.

## An emerging market ecosystem

At the Unlocking New Economic Value Summit at Mobile World Congress 2018, the Chief of Strategic Planning and Membership Dept for ITU, Doreen Bogdan-Martin, said that, “Infrastructure, investment, innovation, and inclusivity are the 4 'I's put forth by the ITU to guide our work toward the 2030 Agenda.” And Doyle Gallegos, Global Lead of Broadband Access for All Global Solutions Group, the World Bank, commented that, “To make sure the digital economy works for everyone, we must build it on four foundations: digital infrastructure, basic E-payments, digital entrepreneurship, and usage.”

A strong ecosystem ensures the rapid growth of the ICT industry. The ecosystem includes infrastructure supply, regulatory environments, industry sector participation, business operations, and system and device provisioning. A healthy ecosystem for energizing business isn't built by a single stakeholder – it needs collaboration from regulators, stakeholders, industry partners, operators, and suppliers.

Infrastructure providers from all industries need to open up and help develop supply utilities such as transportation, power grids,

and facilities. For example, Italy's utility Enel and state lender CDP established OpEn Fiber to deploy fiber optic networks throughout the country.

Regulators need to orchestrate regulations to ensure spectrum availability, service authorization, telecom taxation, and demand for digital social awareness. For example, Malaysia has initiated High Speed Broadband (HSBB), a government program to make high-speed Internet accessible and affordable to every citizen. The Indonesian government is working on the Indonesia Broadband Plan (IBP) to ensure high-speed fixed-line connectivity across the country, alongside mobile data services offered by mobile operators. In Ghana, the government worked with the Alliance for Affordable Internet (A4AI) to cut mobile phone taxes, which led to the rapid penetration of mobile broadband.

Operators need to provide affordable, valuable, and convenient digital services that offer the best user experience and improve the quality of digital life. For example, Safaricom M-Pesa has lifted 2 percent of Kenyan households out of extreme poverty. The economic impact of M-Pesa is mostly seen through its 1.8 percent contribution to GDP.

Stakeholders and partners from all industries need to develop profitable business models and encourage investment by providing demand. In Ghana, MTN has implemented rural coverage through the Ghana Infrastructure Fund for Electronic Communications (GIFEC), extending mobile

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coverage across the country.

System and device suppliers need to keep innovating and providing agile solutions and affordable devices optimized for every scenario.

The obstacles to unlocking opportunities include resource availability, operating efficiency, and lengthy ROI. It takes a combined effort to remove these stumbling blocks and build a fully connected, intelligent world together.

## Huawei's ICT vision and strategy

To enable operators and partners to seize opportunities in emerging digital economies, Huawei's strategic approach has three pillars: support national ICT policies, build a healthy ecosystem, and create end-to-end business solutions.

Zhou Jianjun, Vice President of Huawei Carrier BG, believes that, "To capitalize on the vast opportunities in emerging markets, operators need to deliver a better scenario-based service and accelerate their ROI. Huawei focuses on three core areas to help operators meet the burgeoning demands on their networks. We're engaging with industry partners to build open, cooperative, and win-win industry ecosystems for ICT infrastructure, and creating business solutions to help operators deliver services that generate new revenue streams, while simultaneously improving the quality of life in emerging markets."

Huawei works proactively with countries

to develop their national ICT plans as well as define a roadmap that's relevant to the market and to society over both the short and long term.

Another core strategy centers on building a sustainable ecosystem to facilitate the digital transformation of the telecom industry. Huawei's expertise has supported operators in leveraging market resources to benefit all stakeholders and industry partners. Huawei has achieved significant progress in site, device, and FTTx alliances, and bridged the gap between affordable devices and content providers.

Huawei aims to maximize business value for operators and unleash business potential through innovative solutions that leverage the most valuable operator assets, like spectrum, site facilities, subscribers, and services. Huawei's business methodology improves investment efficiency by facilitating spectrum utilization and agile site deployment, and brings revenue growth by maximizing user value and innovative digital services.

Huawei CloudAIR2.0, nTnR, and massive MIMO solutions enable spectrum efficiency improvements. CloudAIR uses cloud technology to centrally schedule and utilize air interface resources, including spectrum, power, and channels. Carriers can increase efficiency, flexibly deploy services, and deliver a better user experience. At MWC 2018, CloudAIR won GSMA's awards for Best Mobile Technology Breakthrough and CTO's Choice in recognition of the innovations it offers mobile broadband networks.

Huawei's agile site solutions, including PoleStar, TubeStar, RuralStar2.0, and Indoor Coverage Digitalization Solution are adapted to all deployment scenarios to optimize overall site TCO and ROI.

Huawei's TubeStar solution features E2E system-level site design. The BBU, RRU, power supply module, battery, and transmission equipment are integrated into a tube, eliminating the need for equipment rooms and cabinets. TubeStar satisfies current network requirements, while also allowing for future evolution. A single site supports five to seven bands for multiple RATs (GSM/UMTS/LTE). TubeStar won the Green Mobile award at MWC 2018 for communications infrastructure and progress at reducing emissions, boosting energy efficiency, and lowering O&M costs.

Huawei has been working to connect the unconnected and promote mobile broadband in emerging markets through healthy business models. Huawei's RuralStar won the GSMA's Best Mobile Innovation for Emerging Markets award for its role in promoting rural network construction. According to the judges, the solution ticks all the boxes for benefiting emerging markets, including low power consumption and a choice of sources, low TCO, easy installation with minimal site preparation, new

battery technology, and security features.

To lower site OPEX and prepare sites for the 5G era, Huawei provides L.I.V.E Site for site transformation, with "LIVE" being an acronym for on-Line, Intelligent, Visible, and Evolved. It automates O&M and modernizes sites to cut site OPEX and prepare for massive site construction to accommodate 5G.

By using big data to identify potential customers and high-value users, Huawei's innovative DSP and SmartCare solutions help operators attract new customers and migrate existing ones to new services. By offering an outstanding global experience, Huawei can help operators accelerate revenue growth.

The home broadband solutions WTTx and FTTx enable operators to rapidly deploy home broadband services, provide seamless connections with household Wi-Fi, and lay the foundation for services such as smart home solutions.

Huawei provides business and network consulting services to address operators' business needs, while putting processes in place to ensure well-managed product offerings. With highly efficient and innovative products and solutions, Huawei helps operators deploy and maintain affordable networks. 

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