ITUNews
MAGAZINE

Accelerating ICT growth *together*

Key insights from:

ITU TELECOM WORLD '16

Bangkok, Thailand

06/201

Collaborating in the digital economy

Houlin Zhao, ITU Secretary-General

> **Stakeholders at Telecom World 2016 seized the opportunity to exchange best practices and network face-to-face.**

As 2017 opens a new year of rapid convergence between the industries that power today's digital economy, it will be more important than ever to carry forward the spirit of collaboration that the ITU is known for fostering. It will no longer be good enough to talk about collaboration. We must act on it if we are to meet new demands for the key digital products and services upon which we all increasingly rely.

That's why it is worth reviewing the important discussions that took place at the recent ITU Telecom World 2016, which brought some 8800 participants together in Bangkok, Thailand, from 14–17 November. More than 330 public and private-sector leaders from 90 countries discussed detailed examples of collaborative solutions on forging paths to 5G, how disparate industries can work together, and why tech startups are important for growth. Their passion for digital inclusion, their commitment to a wide range of measures to build the digital economy and their focus on using information and communication technologies (ICTs) to improve lives was very impressive.

In addition, some 250 exhibitors from 37 countries exhibited innovative solutions, technologies, and projects with partnership and investment potential. More than 100 of the exhibitors were from tech small and medium-sized enterprises (SMEs), reflecting our increasing focus on promoting their importance to ICT growth. The wide variety of stakeholders seized the opportunity to exchange best practices and network face-to-face.

I would like to express my deep gratitude to the Royal Thai Government for its excellent support in hosting this highly successful event. My hope is that this special edition of ITU News Magazine will help you not just to understand the highlights of the event – but also to internalize the key insights from the discussions so that we can accelerate the new forms of collaboration we know will be key to future success.

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Thailand welcomes world ICT leaders

See more photos on

ITU Telecom World 2016 in numbers

173 expert speakers from **56** countries

8800+ participants

8 Agreements/ contracts signed between governments, regulatory bodies and private entities

250 exhibitors, including **107** SMEs, from **37** countries

337 public and private sector leaders from **90** countries

187 accredited media from **12** countries

ITU TELECOM WORLD '16
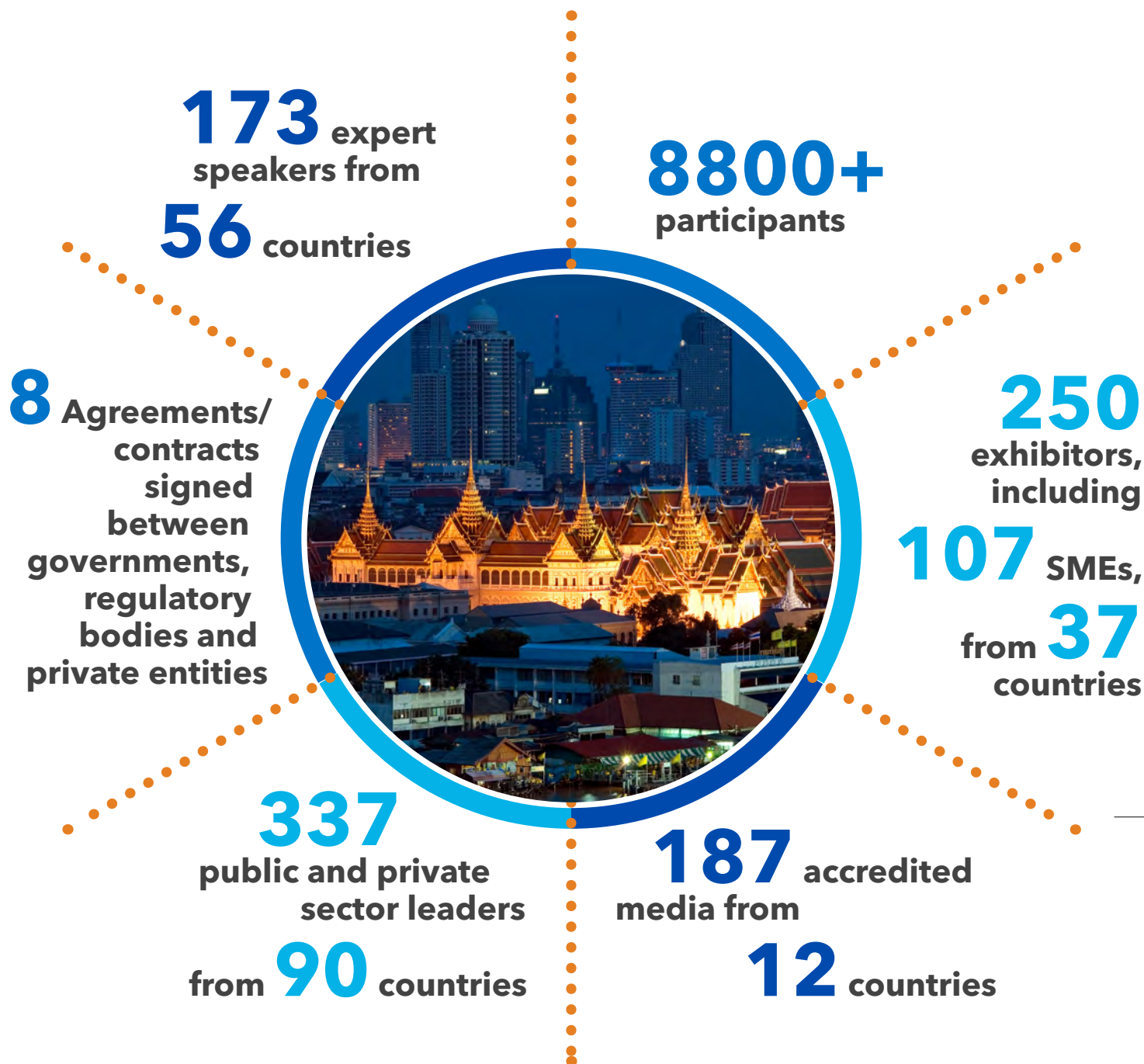
Key event highlights and co-hosted events

ITU Telecom World 2016 brought an action-packed programme of showcasing, debate, networking and awards to the IMPACT Convention and Exhibition Center in Bangkok, Thailand, from 14 to 17 November.

The event, which was formally opened in the presence of **H.R.H Princess Maha Chakri Sirindhorn**, and **General Chan-o-cha Prayut**, Prime Minister of Thailand, welcomed over 8800 participants from around the world.

Among the high-level guests in attendance were: H.R.H. Tapouto'a Ulukalala, the Crown Prince of Tonga; Xavier Bettel, Prime Minister of Luxembourg; Charlot Salwai Tabimasmas, Prime Minister of Vanuatu; Debretsion Gebremichael, Deputy Prime Minister of Ethiopia; and Mukhisa Kituyi, Secretary-General of United Nations Conference on Trade and Development (UNCTAD).

Some 250 exhibitors, including 107 exhibiting tech small- and medium- sized enterprises (SMEs) and 60 partners and sponsors took part in the event. Over 330 leaders from 90 countries joined the debates, including top-level representatives from Hungary and the Republic of Korea – past and future ITU Telecom World host countries.

"From its high-level Forum debates to the activities on the show floor, ITU Telecom World has successfully moved towards becoming the truly inclusive international platform connecting tech SMEs with global governments and industry leaders," said ITU Secretary-General Houlin Zhao at the closing of the event. "The dialogues, showcases, networking and other activities I have joined this week have given all our community and stakeholders – be they senior government officials, international organizations, leading corporate players or SMEs – the chance to examine issues vital to accelerating [information and communication technology] ICT innovation, and explore the many ways in which ICTs can help meet the United Nations' Sustainable Development Goals."

Showcasing Thailand's digital economy

"Thailand is pleased to be the host of the very successful ITU Telecom World 2016," said **Air Chief Marshal Prajin Juntong**, Deputy Prime Minister and Acting Minister of Digital Economy and Society. "I have received positive feedback from Thai participants that the event has been extremely useful in showcasing Thailand's thriving digital economy and society and, importantly, demonstrating innovations and entrepreneurship which are key drivers for national development today. The event and speakers have provided many lessons and case studies on how the government's forward-looking and inclusive digital economy policies are being turned into action by the private sector including SMEs and start-ups."

The Exhibition show floor featured the types of technology driving our digital economy, from 5G and cloud computing to smart devices, smart city solutions and national broadband plans, as well as investment and partnership opportunities from around the world.

Reflecting the significance of ICT across key verticals like financial services and automotive, ITU welcomed companies such as MasterCard, Honda and Toyota, joining debates in sessions such as the **Connected Car** and **Cashless Future**.

Leadership Summit and Forum debates

More than 170 speakers from 56 countries took part in plenaries, panel debates, workshops, high-level roundtables and networking sessions in the Forum and at the **Leadership Summit**.

Speakers spanned heads of State and governments from across the globe, leaders from the ICT industry and key verticals, SMEs, entrepreneurs and innovators to international organizations and academia. They provided truly global perspectives and viewpoints from developed and developing countries alike.

Discussions launched with the Leadership Summit, on 14 November, which brought **highly influential participants** together to share views and explore why working together is so important for growing the digital economy. Forum sessions delved into an exciting set of topics such as artificial intelligence (AI), how ICTs can meet the sustainable development goals (SDGs), the connected car, digital financial inclusion and fiscal incentives and taxation in the industry.

Other debate highlights included the **B2G** and **B2B** dialogues, which brought together tech-SMEs and large companies for an open exchange; the **Ministerial Roundtable** on the crucial role of governments in advancing the digital economy; the **Economic and Industry Expert Roundtable**, bringing together global ICT consulting firms, R&D entities, regional and international organizations; and the **Asia Pacific Exchange on Broadband Regulation and Policy** (co-hosted with Huawei).

The event showcased sponsored sessions on topics spanning 5G, reaching the next billion, digital financial services, towards a digital Nigeria and enabling third network services for the digital economy.

Key players included Huawei, KT, Japan's Ministry of Internal Affairs and Communications (MIAC), GTI, China Mobile and Telecommunication Development Industry Alliance (TDIA), Intel, MasterCard, GSMA/GSA, Nigeria and MEF.

Panel lunches hosted by the Smart Africa Alliance and International Conference of the Round Table on Archives (CITRA) helped

facilitate networking and discussion, along with high-profile networking occasions, such as the Leaders Lunch, sponsored by Huawei, Korea night sponsored by ITU Telecom World 2017 host, Republic of Korea's Ministry of Science, ICT and Future Planning. Networking breaks sponsored by Rohde & Schwarz and Utilities Regulation and Competition Authority (URCA) of the Bahamas helped ensure conversation continued between Forum sessions.

ITU Telecom World Awards

The Event Closing and ITU Telecom World Awards Ceremony brought ITU Telecom World 2016 to a close on the final day of the event and also saw the much-awaited announcement of the winners of the ITU Telecom World Awards. During the week of the event, finalists pitched their ideas and innovations to judges and a global audience. In keeping with ITU Telecom World's focus on SMEs and their role within the broader ICT ecosystem, the Awards recognized

excellence and innovation in ICT solutions with social impact from SMEs and corporations alike. The winning entries included:
- Global SME Award: **BRCK**, Kenya
- Host Country SME Award: **ServisHero**, Thailand
- Thematic Award (eGovernment): Nile Center for Technology Research (**NCTR**)
- Thematic Award (eHealth): **Neofect**, Republic of Korea

Winners of the ITU Telecom World 2016 Awards

- Thematic Award (eEducation): **Academic Bridge**, Rwanda

- Thematic Award (Disaster Prevention/ Recovery Communications): **MasterCard**, United States.

ITU co-hosted events

ITU Telecom World 2016 also welcomed perspectives from across ITU and its membership and partners, who used the international platform to hold a series of important co-hosted events.

A series of closed meetings took place a day before the official opening. These were the advisory board meetings of the **Smart Sustainable Development Model Initiative** (SSDM) and **m-Powering Development Initiative**, and the **7th Private Sector Chief Regulatory Officers (CRO) meeting**. The **8th Chief Technology Officers (CTO) Meeting** was also held on the eve of the event, bringing together high-level executives from companies such as Cisco Systems, Ericsson, Fujitsu, Huawei, Nokia, NEC, ZTE, KT, NTT, DoCoMo and Japan's National Institute of Information and Communications Technology (NICT).

In addition, there were a series of in-depth events for academia and about digital gender equality issues (see sidebars).

Academia side events

For the first time, the ITU Telecom World event engaged with academia in the global debate. Activities included the **ITU Secretary General Academia Consultation**, 2nd Brainstorming Meeting of Impact Study on ICT4SDGs, **ITU Kaleidoscope Academic Conference 2016**, **World Standards Cooperation Academic Roundtable**, organized in cooperation with International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC). ◼

Digital gender equality side events

A strong digital gender equality agenda featured events such as **EQUALS**: the Inaugural Meeting of the Global Partnership for Gender Equality in the Digital Age as well as the Mentorship Sessions: **Promoting Women's Digital Entrepreneurship**, which brought together women business owners and entrepreneurs from across Thailand to benefit from training sessions to use online platforms to help grow their businesses online.

Learn more

Another co-hosted event was the Gender Equality and Mainstreaming in Technology (GEM-TECH) Awards, given for outstanding efforts in using the power of ICTs to empower women and girls. "We believe that ensuring women's full equality is the best way to build a peaceful and just society," said a visibly moved Ileana La Rosa, founder and CEO of **Aliadas en Cadena**, the winner of the **GEM-TECH Award** for the Application of Technology for Women's Empowerment and Digital Inclusion. "Aliadas en Cadena has proven that ICTs make a real difference in women's lives." ◼

> **" Gender equality isn't just the right thing to do … it's the right thing economically. "**
>
> Unoma Okorafor,
> GEM-TECH Award recipient

There were some important side-events working on technical standards, which included the 4th APT and ITU Conformance and Interoperability (C&I) event — IPTV Testing, the **Third ITU Test Event** on Compatibility of Mobile Phones and Vehicle Hands-Free Terminals, and showcasing of the implementation of recommendation ITU–T X.1255, promoting interoperability of heterogeneous systems via digital labelling.

Event baton passes to Republic of Korea

For 2017, ITU Telecom World will head to Busan, Republic of Korea, focusing on the creative digital economy and fostering SME growth. Telecom World 2017 will take place from 25–28 September. ITU warmly invites Member States, regulators, and heads of international organizations, global media, digital experts and visionaries, leading ICT corporations and cutting-edge tech-SMEs from the region and across the globe to save the date and prepare to join us at the event.

Video insights

Several ICT thought leaders from the private and public sectors shared insights on the sidelines of ITU Telecom World 2016. Below is a small sample:

❝ *The [United Nations' Sustainable Development Goals] are aspirational, but they do give us a guide on what we as companies can do with our resources.* **❞**

Click to see video

Astrid S. Tuminez
Microsoft's Regional Director of Corporate, External & Legal Affairs for South East Asia

❝ *As we go into digitalization and the Internet of Things, we need to have a change of thinking.* **❞**

Click to see video

Marc Vancoppenolle
Global Head of Nokia Government Relations

❝ *Telecom World 2016 is a great opportunity to meet with government officials in developing countries who would be enthused by our effort to bridge the digital divide.* **❞**

Click to see video

Suneet Singh Tuli
CEO of Datawind

❝ *We've brought our own young entrepreneurs from Rwanda … and there's a recognition that these are the companies that are going to create the jobs and the solutions and the innovations of the future.* **❞**

Click to see video

Jean Philbert Nsengimana
Minister of Youth and ICT (MYICT), Rwanda

Click to see video

View the **ITU Telecom World 2016 Highlights Video** to get a flavour of the exhibition hall and the dynamic nature of the event held in Bangkok, Thailand.

Forging paths to 5G

Perhaps nowhere was the ITU Telecom World motto of "Better, Sooner" more on display than in the discussions surrounding 5G.

The enormous potential of the next generation of mobile networks and wireless systems to provide better, faster connectivity emerged a central theme of discussion throughout the event. Whether on the exhibition floor, in networking breaks, or in the multiple forum and plenary sessions devoted to 5G, participants agreed that 5G systems will be critical to powering the data-intensive digital economy of the next several years.

Rather than re-hyping the transformative potential of 5G, however, the stakeholders gathered at ITU Telecom World delved straight into the complex issues surrounding how to build smart, harmonized 5G systems. And as they did, there was the tangible realization that the backbone of the 21st century economy is being built now – and that the "information superhighways" of this global economy require unprecedented levels of international coordination. There was the realization that the previous generations of technology such as 2G, 3G, and 4G/LTE have provided key lessons – and that 5G offers a great opportunity to channel resources for maximum benefit.

Breathless tales of what technology might be able to do in the future were set aside. The 5G discussions in Bangkok were detailed. They were actionable. And they reflected a business-like approach to collaboration in these critical early phases of 5G.

> **"** *The situation is more complicated compared to 4G. We need more debates on standardization and regulation. We need common goals and global standards.* **"**
>
> Dr Yuefeng Zhou, Chief Marketing Officer, Wireless Network Product Line, Huawei Technologies Co., Ltd., China

"We need collaboration between all industries, particularly in this early stage of 5G development," said **Dr Yuefeng Zhou**, Chief Marketing Officer, Wireless Network Product Line, Huawei Technologies Co., Ltd., China. "The situation is more complicated compared to 4G. We need more debates on standardization and regulation. We need common goals and global standards."

New approaches to meet new user demands

Several panelists discussing 5G mentioned how the rapidly rising user demand for data is forcing new approaches for operators, vendors and regulators — as well as a range of other players across a widening information and communication technology (ICT) ecosystem.

"Data demand is increasing much faster than we expected," said **Håkon Bruaset Kjøl**, Senior Vice President and Head of Corporate Affairs for Telenor ASA, Norway, adding that services need to be faster, have less latency, and provide better coverage outside the cities for a seamless user experience across the portfolio.

"We need to invest USD 4 trillion to cater for this data demand … not just in infrastructure, but radio frequency spectrum," said Mr Kjøl, adding that many operators will have to run 2G, 3G and 4G networks in parallel — even as they invest in 5G. "You need a basket of spectrum to deliver all those services. Spectrum is getting more expensive, so we need cooperation between the private and public sector."

But how should public and private sectors work together on spectrum access and allocation?

Several panels discussed — and sometimes debated — what success should look like.

"We are getting better at adapting the rules to the changing environment," said **Philipp Metzger**, Director of the Swiss regulator OFCOM. "When it comes to spectrum allocation, there will always be a limited amount and excessive demand. From a European perspective, there are new ways of lowering the burden. Our experience with 4G was very good with an auction system."

There was also discussion of how and whether to work with licensed and unlicensed spectrum.

"If we could work together with unlicensed and licensed spectrum that would benefit customers and that is what we should do. We need convergence between licensed and unlicensed bands for 5G," said Zhou of Huawei.

But this has to be handled with care, agreed many panelists and participants.

> ❝ *Spectrum is getting more expensive, so we need cooperation between the private and public sector.* ❞

Håkon Bruaset Kjøl,
Senior Vice President and
Head of Corporate Affairs
for Telenor ASA, Norway

Investment predictability

Mr Kjøl of Telenor mentioned the need for predictability for spectrum license holders and warned that letting in unlicensed spectrum users in "last minute" can open license holders up to investment unpredictability.

He also said: "Lots of countries lack spectrum release plans. These need to be released as quickly as possible. It allows us to plan."

Kjøl also stated the need to consider longer-term licenses due to the investment time horizon.

"We shouldn't micromanage licenses, because it would not be conducive to a good level of service," said Metzger of Switzerland's OFCOM.

Forward thinking for spectrum

"We need new regulation to allow 5G," said **Quan Yu**, Chief Strategy Officer, Wireless Product Line, Huawei Technologies Co., Ltd. during a panel discussion entitled *Forward Thinking for Spectrum – Getting Ready for 5G*.

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Mr Yu was one of several panelists who presented in detail the spectrum requirements and plans they envision in the next few years. He said that 5G spectrum requirements will include spectrum in low, medium, and high-frequency bands. The high-frequency bands will be needed to handle the extremely high bandwidth required for peak data rates, while the lower frequency bands (below 1 GHz) will be important to provide wider and deeper coverage to serve a growing number of Internet of Things (IoT) connections in a cost-effective manner, he said.

Several fellow panelists concurred with that overall assessment, even if there were multiple viewpoints on how exactly it should be done from a regulatory perspective.

"Qualcomm is very involved in spectrum policy at the regional level. Our view is that a range of spectrum is going to be needed to support 5G in low, mid, and high bands," said **Julie Garcia Welch**, Senior Director and Head of Government Affairs for the Asia-Pacific region for the chipmaker Qualcomm, Inc. "In addition to the tech breakthroughs, we're looking for regulatory innovation to unlock the spectrum."

Ms Welch said that there need to be new techniques to use unlicensed spectrum, as well as licensed shared access, which she said is an innovative way to use spectrum that isn't being used in certain geographic areas and periods of time.

During the panel discussion, it was mentioned that spectrum harmonization remains important for 5G development because it helps provide economies of scale for cost-effective solutions, reduces efforts in cross-border collaboration and reduces equipment design complexity.

Similar points regarding the importance of collaboration were made across various forum sessions, particularly as the ICT ecosystem becomes broader every year as more and more industry sectors such as finance, automobile, and health become reliant on ICT services.

> *In addition to the tech breakthroughs, we're looking for regulatory innovation to unlock the spectrum.*

Julie Garcia Welch, Senior Director and Head of Government Affairs for the Asia-Pacific region, Qualcomm, Inc.

A broader ecosystem must work together

"5G is not just a telco ecosystem, it's an overall ecosystem," said Metzger. "There's more of a need for open-source solutions so these things can work together."

Several participants agreed that the costs of not working together often get passed down to the consumer in the end, which limits progress on the global connectivity goals that the private and public sector share.

"If you don't harmonize you're going to fragment spectrum and raise the cost for everyone," said **Dr Shiv Bakhshi**, Vice President, Industry Relations at Ericsson.

Yet harmonizing is difficult as countries and companies race to keep up with user demand for data-ravenous tools and services.

"I look at it like an arms race. There's a race going on right now and it's an escalating race," said **Robert Middlehurst**, Vice President of International Regulatory Affairs for Emirates Telecommunication Corporation (Etisalat).

"As we all run forward in this arms race, we have a situation a bit like VHS and Betamax. If we run with multiple standards, the costs of provision is going to be that much higher. The consumer loses first, then the operator. … So we need to get the standards sorted out quite quickly."

Despite the complexities involved in coming together to make 5G a reality, there was recognition that the hard work involved on the backend is really all about providing the best possible experience for users.

> **❝ 5G is necessary for the new demands on data. It's not a frivolous thing. ❞**
>
> Dr Dongmyun Lee

KT's CTO on why 5G will be key to growth

The business benefits of providing ultra-fast Internet that 5G systems will help enable are clear — especially in developed markets. Perhaps nowhere is that more true than in the Republic of Korea, which **ranked No. 1** in ITU's ICT development Index for the second consecutive year.

While the telecom market globally is growing at a compound annual growth rate of 3–4 per cent each year, the market is shrinking by 2–4 per cent annually in developed markets, said **Dr Dongmyun Lee**, Chief Technology Officer of KT Corporation during his keynote address on how 5G can drive growth in the "gigabit era."

If we run with multiple standards, the costs of provision is going to be that much higher. The consumer loses first, then the operator.

Robert Middlehurst,
Vice President of International
Regulatory Affairs for
Emirates Telecommunication
Corporation (Etisalat)

"[5G] is not about the networks and core technologies, but about the applications that meet users' needs all over the world," said **Michele Franci**, Chief Technology Officer, Inmarsat SA, United Kingdom. "The development we've seen on [software defined networking] is a very strong enabler for what we're trying to achieve. That, for me, is the most significant technological development that is allowing 5G to become a reality."

Providing gigabit speeds has allowed KT to attract far more customers and has led to a 24% increase in average revenue per user (ARPU) since the company launched its gigabit-speed service two years ago, according to Dr Lee.

"5G is necessary for the new demands on data. It's not a frivolous thing," said Lee, who pointed out that KT has been aggressive in providing smart energy, safety, health, car, and next-generation media services to power a new "Giga IoT" era that will see these services converging in a "connected cloud" in which users will be connected to the data.

"The way forward is very clear: We must build the infrastructure. But the infrastructure alone will not solve the problem," said Lee. "We must be able to use the data accumulating in the cloud structure. We really need to collaborate together to build the architectural frameworks for the whole end-to-end service."

By the time the Republic of Korea hosts the Winter Olympic Games in 2018, KT plans to show off 5G capabilities, following test phases this year. It expects commercial deployment of 5G by 2019.

"We expect that when 5G comes, all mobile customers in the Republic of Korea will be able to enjoy gigabit speed wireless," said Lee. ∎

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> **" 5G, with all its promises, is going to be magic… What you saw here is the painstaking work needed to make the complex world so simple that it looks like magic. "**
>
> Dr Shiv Bakhshi,
> Vice President, Industry
> Relations at Ericsson

Several other recent developments, from IoT-driven health solutions to connected cars improving road safety, were shared as examples of applications that improve lives; applications that will require 5G solutions.

"5G, with all its promises, is going to be magic," said Ericsson's Bakhshi. "What you saw here is the painstaking work needed to make the complex world so simple that it looks like magic."

Indeed, many sessions ended with participants reiterating the future benefits of today's hard work – and expressing the strong hope that the harmonization required to make 5G a reality would impel unprecedented cooperation.

"One of the dreams we have is that 5G [can be] a unifier," said **François Rancy**, Director of ITU's Radiocommunication Bureau, reiterating the importance of solutions that are technology neutral. "Cooperation and collaboration is important for 5G."
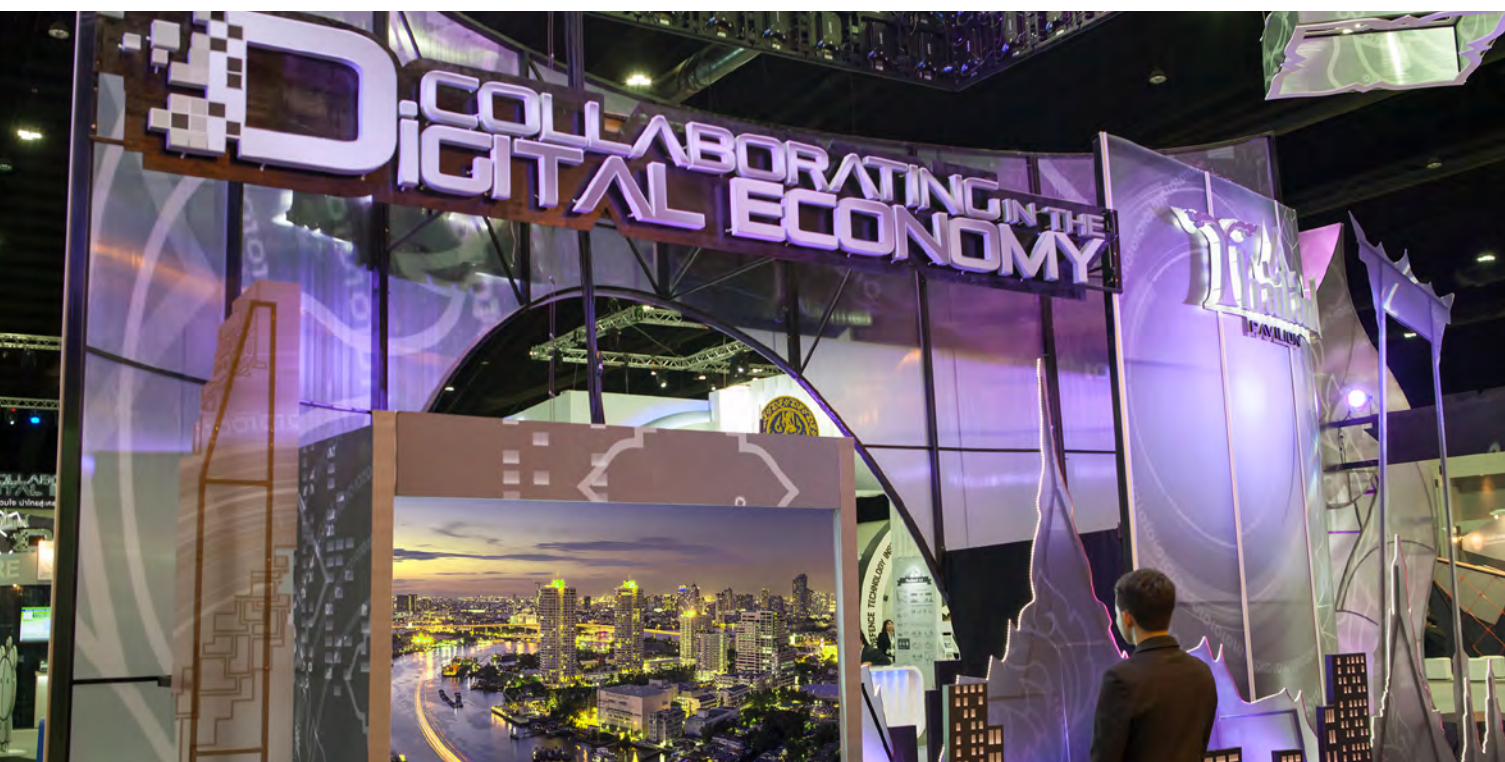
How to collaborate in today's digital economy

Rapid technological developments are enlarging the information and communication technology (ICT) ecosystem. New over-the-top (OTT) players and small and medium-sized enterprises (SMEs) are becoming key stakeholders alongside established ICT companies and governments driving policy and regulation.

At the same time, rapidly changing user demands are upending established business models and creating entire new markets. This has brought a range of disparate industries, including financial services, health care and automobile into the new ICT ecosystem.

ITU Telecom World 2016 reflected this changing mix of stakeholders and, as in previous years, attracted strong private-sector participation to complement ITU's unique ability to bring together public-sector ICT leaders. Together they discussed and debated a range of pressing questions, such as:

- What are the business models, the policies, regulatory approaches and partnerships we need to move forward?
- What can we learn from differing international perspectives cutting across both emerging and developed markets?
- How can we adopt or adapt best practices to our own local realities?

While sharing case studies and best practices, participants agreed that these times call for new partnerships, new approaches and new ways of thinking — and that today's challenges can only be met by working together. But they did more than just talk about the need for collaboration. They spoke in detail about how it can and should be accomplished.

Can industry players align?

One major theme that emerged from throughout the different discussions was: how the new, broader set of private-sector stakeholders can work together to meet the complex challenges to increase the connectivity that powers all of their respective business models?

"True connectivity comes from being able to break the silos," says **Suphachai Chearavanont**, President of the Telecommunications Association of Thailand, adding that Thailand is boosting efforts to break down the silos between the private sector and the government — as well as the silos between various industries increasingly dependent on ICTs. "If we are not connected between the layers, even among the private sector itself … then we are very vertically oriented. We are only looking at: 'How can we compete?'"

Mr Chearavanont sees progress on that front in Thailand, noting the increased collaborative spirit among industry verticals that realize the need to work together in order for all to thrive. "The private sector actually started to have this awareness of: 'How can we share the goals?' From the private sector side, we see the benefits of collaborating," he said.

" *True connectivity comes from being able to break the silos.* **"**

Suphachai Chearavanont,
President of the
Telecommunications
Association of Thailand

"What's happening in Thailand, I can call it a digital revolution," said **Lars-Åke Norling**, CEO of the Telenor-owned Thai mobile provider Total Access Communication PLC (DTAC) during the Industry Leaders Roundtable on the power of collaboration to create value, accelerate growth and open new markets. He pointed to average Internet usage rates of five hours per day with 3-5% projected growth driven mainly by video streaming. "To maintain this growth, it's fundamental to maintain good networks," he said.

Funke Opeke, CEO of MainOne Cable in Nigeria made similar points, saying that such collaboration on network infrastructure and services was a "proven global model" and that incumbents have to open up their networks to generate new revenue even if that means they will get a "smaller piece of the pie." Ms Opeke said that this is an opening step that many African countries will need to go through, adding that "in the most advanced markets, we're seeing OTT merging" with larger operators.

> ❝ *What's happening in Thailand, I can call it a digital revolution.* ❞

Lars-Åke Norling,
CEO of the Telenor-
owned Thai mobile
provider Total Access
Communication PLC (dtac)

> ❝ *The biggest barrier is getting competitors to become allies. Competition needs to come together to share the networks.* ❞

Funke Opeke,
CEO of MainOne
Cable, Nigeria

New models for sharing infrastructure and services

Mr Norling mentioned the need to share network infrastructure costs and resources. Most fellow panelists at the Industry Roundtable agreed as they gave examples of sharing everything from fiber to spectrum to cloud services in order to save money and time so that they could focus on new products and services that create new revenue streams. Norling also emphasized the need to work more closely with OTT players as well as digital payments players on new products.

"The biggest barrier is getting competitors to become allies. Competition needs to come together to share the networks," said Ms Opeke. "It's amazing to watch the significant shift from cash to cashless banking. … What has happened could not have been achieved without a high degree of collaboration."

But it's just the beginning of a more collaborative era on digital finance. "We take it for granted, the [digital] financial services success, but just think about the two and a half billion people without financial inclusion," said **Yvette Oh**, Group Executive, Market Development, APMEA, International Markets (IMK), MasterCard Worldwide, Singapore. Ms Oh mentioned examples of how those unbanked could be financially included – and how a mix of technologies could be leveraged to enable payments that can boost the average revenue per user (ARPU) of both operators and payment service providers.

"Interoperability is key, because that will drive usage," said Oh, driving home the point about cooperation. "It means all the different verticals coming together working as one to deliver the solutions."

Ram Sewak Sharma, Chairman, Telecom Regulatory Authority of India (TRAI), echoed the need for a broader range of industries, such as health, finance and transportation, to coordinate more. "All these sectors will have to collaborate together," said Mr Sharma, who added that the Indian government is seeking to create policies that encourage this private-sector collaboration, which will be increasingly important as India moves forward with its digital ID and financial inclusion programmes.

> **Interoperability is key, because that will drive usage. It means all the different verticals coming together working as one to deliver the solutions.**

Yvette Oh,
Group Executive, Market
Development, APMEA,
International Markets
(IMK), MasterCard
Worldwide, Singapore

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"We have open source, API, and open-standards policies — so we don't get into a vendor-lock situation. That's very important."

In today's converging ICT ecosystem, "the success of the industry is founded on a collaborative model," said **Hossein Moiin**, Executive Vice President and Chief Technology Officer for Nokia Mobile Networks. "There are plenty of opportunities for growth. The only way we can get there is collaboration."

" There are plenty of opportunities for growth. The only way we can get there is collaboration. "

Hossein Moiin,
Executive Vice President and
Chief Technology Officer for
Nokia Mobile Networks

Collaborative regulation

While increasing collaboration between private-sector players is crucial, so too is regulatory collaboration. And **Ari Sarker**, Co-President for Asia Pacific at MasterCard Worldwide in Singapore pointed to the increasing collaboration between the telecom and financial regulatory environments as an encouraging sign.

Dr Shiv Bakhshi, Vice President of Industry Relations for Ericsson said that regulators must maintain a nuanced balance of making sure that the local operator is healthy while also ensuring that the local operator "does not become the bottleneck for innovation in society." Regarding OTT regulation, Mr Bakhshi suggested that regulators "show a little regulatory forbearance." He warned of defining OTT too narrowly in the beginning, saying: "See where it goes, then you bring the hammer down."

Several participants throughout the event mentioned a range of problems stemming from the fact that policy innovation struggles to keep pace with technological and market changes.

"The legal and regulatory framework has not caught up to the digital economy," said **Natasha Beschorner**, Senior ICT Policy Specialist, The World Bank, Singapore, which has programmes to help share experiences among governments.

"We have to find a way to make this environment work," said **Robert Middlehurst**, Vice President International Regulatory Affairs, Emirates Telecommunication Corporation — Etisalat. "Every regulator tends to be passive and look to the history and feels constrained through laws. This industry needs to move quickly and these laws are constraining us.

Policymakers today are not thinking about how we shift from regulating a utility to how we manage in a competition law environment."

On many multinational telcos' wish list is a common regulatory framework for various regions. In Europe, that's being put in place as the European Commission works on its Digital Single Market, said **Maria de Fátima Henriques da Silva Barros Bertoldi**, Chair of the Board of Directors for Portugal's regulator, ANACOM, who was also representing the Body of European Regulators for Electronic Communications (BEREC). "The big challenge is: How do you achieve connectivity, but build a single market and sustain competition?" said Ms Bertoldi. She also mentioned how the European Commission launched a new code for electronic communications, which means all regulators will have the same code, but with also the flexibility to make their own rules.

Several regulators across the world will be watching Europe's regulation to see how it works for operators as well as governments and citizens.

Yet, while some norms apply and some models can be replicated elsewhere, every situation is different. "You cannot cut and paste. You have to look at the situation in your country," said **Bruno Nabagné Koné**, Cote d'Ivoire's Minister for the Digital Economy and the Post and Government Spokesman. Many participants echoed this view.

> *The big challenge is: How do you achieve connectivity, but build a single market and sustain competition?*

Maria de Fátima Henriques da Silva Barros Bertoldi, Chair of the Board of Directors for Portugal's regulator, ANACOM

ITU's role in a people-centered approach

During the event, Thailand's Deputy Prime Minister and Acting Minister of Digital Economy and Society, **Air Chief Marshal Prajin Juntong**, said that Thailand attaches great importance to a people-centered approach and that ITU can play a big role in helping his country and others.

"I believe ITU can build on its past achievements to encourage governments to play a greater role in building their digital economies," said Mr Juntong, adding that Thailand was one of the winners of the **2015 ICTs in Sustainable Development Award**, which honours the important contribution made by leaders, on behalf of their country, towards harnessing the potential of ICTs for sustainable development.

"Thailand is ready to cooperate and share our experience, including … south-south cooperation agreements," said Juntong.

This was welcome news, as it builds off ITU Secretary-General **Houlin Zhao**'s earlier message, when he said that more developed countries need to help developing countries with policy guidance and funding if they are to continue to make progress. And it helped show why ITU Telecom World 2016 proved to be an excellent opportunity for government and private sector leaders to meet and discuss how to collaborate for success.

▶

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Why startups are key to growth

I n many markets worldwide, tech small and medium-sized enterprises (SMEs) have become an important engine of economic growth and job creation. They are a vital source of innovation and talent, market diversification and industry adaptation.

Fostering entrepreneurship and providing ecosystems where tech SMEs can thrive is now a key factor in driving the growth of the digital economy. So how can governments and large information and communication technology (ICT) companies help to create fertile ground for tech SMEs to flourish?

These dynamics were on display at ITU Telecom World 2016 as tech SMEs shared important issues, ideas and requests for support directly with corporate ICT players in attendance.

"The relationship between tech SMEs and large ICT companies is multi-layered and has the potential to benefit both parties enormously," said ITU Secretary-General Houlin Zhao. "It is vital that we find new models of collaboration between tech SMEs and corporations at local, national, regional and international levels to enable SMEs to flourish."

SMEs: Built for speed and innovation

Several corporate ICT leaders mentioned during the event how important SMEs are because they provide innovative solutions at a pace large corporations simply cannot muster. Such speed is more critical than ever, they said.

"It's no longer about the transformation that's going to take place, it's about the transformation that's happening right now," said **John Galvin**, Vice President, Government and Education for Intel Corporation during a B2B dialogue on harnessing disruptive innovation through corporate-SME collaboration. "We're going to be collecting data at a rate we can't even imagine right now. We need to be prepared for change."

SMEs are far better prepared for change than bigger corporations, Galvin said. The big corporations want to innovate but they think long term and have to be slow due to longer investment time horizons, said **Max Cuvellier**, Head of Ecosystem Accelerator at GSMA. "[CEOs of big operators] would love their companies to move faster," he said. "They may be moving towards that, but it may take decades."

❝ *It's no longer about the transformation that's going to take place, it's about the transformation that's happening right now.* **❞**

John Galvin,
Vice President,
Government and Education
for Intel Corporation

How can SMEs learn from big companies?

Many tech SMEs in attendance described a need to learn from big ICT companies how to scale their growing businesses.

David Manset, CEO of the France-based company, Gnúbila, brought up an old saying: "If you want to go fast, go alone. If you want to go far, go together."

"As SMEs we want to go far, so we want to go together [with larger corporations]," said Manset. He mentioned that this involved tradeoffs for SMEs, such as loss of some speed and control, but that it was worth it for the chance to grow. "The value chain is fragmented and is better addressed by multiple players," he added.

ServisHero wins Host Country SME Award

The ITU Telecom World Awards, now in their second year, offer a unique launch pad for business growth. Award winners enjoy global visibility, United Nations recognition, and partnership and investment opportunities.

ServisHero, a marketplace that improves the way local services are discovered and delivered in Southeast Asia, was the winner of the 2016 Host Country SME Award.

"It's a surprise because ServisHero just started in January this year. We started in a tiny room with only three people. And today, we're standing in front of a global audience," said the visibly moved co-founder Noppol Toochinda as he paused to gather himself while accepting the award. "We have a mission to empower our local heroes – those who don't have the opportunity to get jobs. We truly believe that what we have will make a big impact on our economy." ■

> **" We truly believe that what we have will make a big impact on our economy. "**
>
> Noppol Toochinda

Many tech SMEs at Telecom World expressed gratitude for the event venue to discuss key issues but bemoaned the lack of other platforms.

"We need a platform to discuss each other's issues. Many issues can be solved by talking about these issues," said **Birendra Sasmal**, CEO, Subah Infosolutions Ghana Ltd, suggesting the creation of government-funded SME centers where local businesses can come and connect with larger foreign businesses.

Many SMEs pointed to the fact that some of the largest ICT companies were startups not that long ago and could have learnt valuable lessons that aren't being shared.

"You need to teach us like your own son or daughter how to do entrepreneurship," said **Oranuch (Mimee) Lerdsuwankij**, CEO and Cofounder of Techsauce, a website for Thai startups. "Please don't let us feel like our own parents are our own worst enemy."

> **We need a platform to discuss each other's issues. Many issues can be solved by talking about these issues.**
>
> Birendra Sasmal,
> CEO, Subah Infosolutions
> Ghana Ltd

Education and the skills gap

Both corporates and SMEs — as well as government players — mentioned the key role of education to address a talent shortage that is growing as the Internet of Things (IoT) era evolves.

"I think education is where it all starts. Education has to change," said Intel's Galvin. "As we look to the future, the emphasis should be on 21st-century skills. Many of the jobs that exist today won't exist later. It's a complete transformation. We need to prepare students for change."

But it's not only the younger generation that needs better skills training and education, participants agreed. In today's world it's often the youth that are leading the change and identifying the new technologies and business models. And it's the established businesses and governments that need the new training for a new set of digital skills.

"It is the young people who are building the networks in the villages. It is the young people that are creating the apps," said **Kathy Brown**, President and CEO of the Internet Society. "Regulators need to come into the 21st century."

Take a look

Here are more winners and finalists of the ITU Telecom World Awards.

Several SMEs spoke about the lack of interest from bigger companies that they approach for advice, partnership or investment. GSMA's Max Cuvellier had some advice in response: "Don't give up. There are great partnerships to be built."

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