

TELECOM Review

THE TELECOMS INDUSTRY MEDIA PLATFORM

telecomreview.com



du in 2023: INNOVATING AND NETWORKING ICT SERVICES OF THE FUTURE

FAHAD AL HASSAWI
CEO, du

Telecom Review Makes History Again With Successful 16th MEGA Summit Edition

Telecom Industry Enters New Year With **Hopes and Challenges**

The Actual Position and **Advancement of 5G Globally** in 2022

SUMMIT
TELECOM Review
LEADERS' SUMMIT
17th EDITION

THE 16TH EDITION

WAS A GREAT SUCCESS

SEE YOU

AT THE NEXT SUMMIT

“GLOBAL. REGIONAL. DIGITAL.”

06-07 DECEMBER 2023

THE LARGEST VIP ICT gathering

telecomreview.com/summit

TELECOM Review

THE TELECOMS INDUSTRY MEDIA PLATFORM

telecomreview.com

4



■ du in 2023: Innovating and Networking ICT Services of the Future

10



■ ZainTech Aims to Be the Partner of Choice for Digital Transformation

14



■ Interplay of New Technologies, Innovative Business Models and Agile Ecosystems Is Key to Industrial Digitalization, Says EY's Fuad Siddiqui

16



■ The e& international Mantra: Delivering on Promise and Providing Great Customer Experience

12 Digital Offerings in MEA: Superapps in Service

18 What Comes Next Requires Innovation, Agility and Partnership

22 BNET Aspires to Continue Its Leadership Position in Fiber Infrastructure

24 BlueJeans by Verizon: Creating an Inclusive, Hybrid Work Environment

26 Telecom Industry Enters New Year With Hopes and Challenges

30 Telecom Review Makes History Again With Successful 16th MEGA Summit Edition

54 The Actual Position and Advancement of 5G Globally in 2022

58 An Elevated Future: The UAE Space Sector Is Thriving

64 Cloud Computing for Business: Types, Benefits and Evolution

**Founder of Telecom Review Group
CEO of Trace Media International
Editor in Chief**

Toni Eid
toni.eid@tracemedia.info

Director of Content
Chris Bahara
chris.bahara@tracemedia.info

Senior Journalist
Elvi Correos
elvi@tracemedia.info

Journalist
Jonathan Pradhan
jonathan@tracemedia.info

Editorial Team
Camille Bersola (Philippines), Chris Bahara (USA), Corrine Teng (Singapore), Elvi Correos (UAE), Elza Moukawam (Lebanon), Jeff Seal (USA), Jonathan Pradhan (UAE), Marielena Geagea (Lebanon), Pia Maria El Kady (Lebanon), Toni Eid (UAE)

Advertising Enquiries
Ershad – Sales Director – Group
ershad@tracemedia.info

Responsible Manager
Nada Eid

Chief Operating Officer
Issam Eid
issam@tracemedia.info

Operations Director – Group
Anna Chumak
anna@tracemedia.info

Graphic Designer
Tatiana Issa

News
Provided in cooperation with AFP,
the global news agency

Published by

www.tracemedia.info

Trace Media Ltd.
Zouk Mikael, Lebanon,
Kaslik Sea Side Road,
Badawi Group Building, 4th Floor,
P.O. Box 90-2113, Jdeidet el Metn
Tel. +961 9 211741
M. +961 70 519 666

Trace Media FZ.LLC.
Dubai Media City, UAE
Building 7, 3rd Floor, Office 341
P.O. Box 502498, Dubai, UAE
Tel. +971 4 4474890
M. +971 55 639 7080

Printing
United Printing and Publishing

© All rights reserved
Publication of any of the contents is
prohibited

Year 18 | Issue 193

Toni Eid,
Founder of Telecom Review Group
CEO of Trace Media International
Editor in Chief



The Important Role of the ICT and Technology Industries

Despite some ongoing global issues, 2023 is looking amazing, and in our industry, we are looking at how to make this even better and create even more opportunities!

The ICT industry, influenced by rapid technological innovation, has prepared us to face one of the largest challenges of the 21st century: the COVID-19 pandemic. Can you imagine the pandemic without communication between people, families, colleagues, etc.?

This is what our industry is aiming for: to always be ready! All the investments made in the sector are paid back to humanity!

At the 16th edition of the Telecom Review Leaders' Summit, the human side of technology was among the hot topics discussed. Notable leaders have been open regarding the role of the industry in serving people and how they will continue to do so in the years to come.

In the Summit series of Telecom Review, we are taking this seriously, and we are encouraging our partners and customers to continue along this path with organizations such as GSMA and ITU.

In his speech at the Summit's 16th edition, GSMA Director General Mats Granryd articulated very well these human aspects and our responsibility toward them.

And in the fruitful discussion I had with Head of ITU Asia-Pacific Dr. Atsuko Okuda, she conveyed the role of ICT in improving lives in Asia's small island communities, as well as improving the roles of girls and young women in Asian society.

We will continue, as always, to support this objective with our partners, and together, we will create the largest, most impactful CSR initiatives, hand in hand!



Fahad Al Hassawi, CEO, du

du in 2023: Innovating and Networking ICT Services of the Future

As a digital-first telco, du aims to deliver on its ambitions to become a more innovative, purpose-driven, customer-centric, performance-focused organization with excellent customer service. CEO Fahad Al Hassawi discussed how they will continue building on recent progress and deliver even greater value moving forward.



As head of one of the leading operators in the region for almost two years now, what have been the key changes you have observed, and how will the company continue its transformation journey in 2023 and beyond?

The challenges of the past two years have underscored the essential services that du and our industry provide. Thanks to our team's dedication and our investment in connectivity, our network performance has been exceptional, even with significant growth in demand and shifting consumption patterns. Our responses to changes caused by the pandemic have showcased the strength of our networks and the resilience of our talented team members as they navigated unprecedented challenges and continued to provide outstanding communications services to our customers.

du opened a new headquarters (HQ) in Dubai Hills to accommodate rapid growth and accelerate its transformation journey to a digital telco. The new space supports the company's growth strategy as part of its ongoing transformation agenda through four key elements: design, culture, productivity and employee well-being. As part of its strategic growth initiative, the purpose-built HQ is designed to inspire innovation, collaboration and efficiency in a future-proof, sustainable environment. du has a strong culture of employees from diverse backgrounds working towards a shared vision, taking pride in what they do and sharing their successes collectively.

As a digital-first telco, du is increasing investment to dramatically improve coverage, reliability and speed by leveraging technologies such as 5G. In terms of Industry 4.0, du is accelerating Industrial IoT (IIoT) adoption for manufacturing and other industries in the UAE to drive the digital

“

du has undertaken its largest digital transformation project to date to maximize its business and operational capabilities

”



We support a green future through our environmental sustainability efforts aimed at helping to protect the planet

transformation of production facilities and operations. du aims to deliver on its ambitions to become a more innovative, purpose-driven, customer-centric and performance-focused organization with excellent customer service. As part of our ongoing transformation agenda, we are expanding staffing and capabilities in multiple departments, as well as increasing the telco's ability to service current and future markets.

In addition, du has undertaken its largest digital transformation project to date to maximize its business and operational capabilities. The project supports the launch of new services that utilize new technologies, facilitate a world-class experience, improve reliability and empower stable systems and platforms. It is an initial step in one of the important transformations at du in line with its aim to become the best digital telco in the world and contribute to the UAE leadership's transformation agenda.

du's largest digital transformation project further accelerates its journey to a digital telco and supports the company's growth strategy as part of its ongoing transformation agenda. Complementing du's strategic growth initiative, the project will enable the telco to improve its time to market, customer experience and engagement, as well as avoid customer and service interruptions. As a result, du will be able to offer customers a wide range of differentiating services that will

add value to their lives and redefine customer service in the country.

As du continues its transformation to exceed customer expectations, our partners and team members have played a significant role in the success of our journey to becoming a fully integrated, customer service-oriented company that leverages technology to provide the highest quality services for customers.

du prides itself on having a positive impact on the community. How will the digital telco continue to deliver its CSR initiatives in the new year ahead?

du has a longstanding commitment to Corporate Social Responsibility (CSR) to grow the positive impact we have as a business, especially in areas where we are uniquely positioned to make a lasting difference. As industry leaders, we utilize our resources to pursue the possibilities and potential that accompany the new digital era and facilitate sustained development. Ensuring technology is seamless, accessible and democratized for every UAE community aligns with the UAE National Agenda, and we are committed to making an invaluable contribution to transformation and sustainability.

du is also engaged in strategic collaboration that will ensure support for humanitarian and charitable initiatives in and outside the UAE. These partnerships allow us to continue to make a positive difference in the lives of people who need it when they need it the most. In addition, du regularly participates in volunteering initiatives to support the elderly, the younger generation and people of determined groups. In one of du's activities on this matter, du partnered with the United Nations Children's Fund (UNICEF) to spread awareness of online risks for children to ensure their safety. We have launched several initiatives in the field of online safety education with the objective of ensuring a safer internet for the UAE community. These initiatives include school-focused digital well-being sessions with Injaz UAE and EdComs Middle East. du will continue its contribution to providing solutions and spreading awareness to protect the young generation.



We support a green future through our environmental sustainability efforts aimed at helping to protect the planet. With regard to sustainability, du has initiated steps to remove and fuel generator-powered mobile sites and link them directly to the electrical grid. In the near future, the company will also look into large-scale solar installation to speed up its move to clean, sustainable energy sources. We have put in place a comprehensive sustainability strategy that aims to guide us towards achieving our vision to add life to life. These will help us deliver the benefits of ICT to everyone, make our people happier and most importantly, operate ethically and responsibly.

As part of our efforts to support the UAE's business sector, du is committed to empowering entrepreneurs and paving the way for SMEs to contribute to bolstering the national economy. Our innovative new space at the new HQ in Dubai Hills has enabled du to align with the UAE leadership's directives to provide a conducive environment that supports business for SMEs.

Honored as the "Best Middle Eastern 5G Innovation Operator" at the 2022 Telecom Review Excellence Awards, how will du continue to innovate and provide customers with the best possible experience?

Exploring and harnessing the latest technologies to drive innovation, accelerate digital transformation and deliver a digitally inclusive future through customer and society-centric benefits is among our top priorities at du. As a digital-first telco, du is increasing investment to dramatically improve coverage, reliability and speed.

du is committed to creating growth and opportunities for the UAE and enabling customers to fulfill their business needs by leveraging technology and our 5G network and succeeding in the new digital world. By leveraging our 5G capabilities, we are designing and innovating use cases that take advantage of this technology to transform client organizations. We have investments allocated to develop the 5G network, enhance performance and efficiency, and ensure customers avail the very best communication services.



We are also focusing on forging alliances with global and local partners to deliver economic and social benefits to the UAE.



The United-IX initiative is the first cooperation of its kind in the Middle East. How do you see it impacting the interconnection system at the national level and in the long run?

The Internet Exchanges Union initiative "United IX," aims to link the SmartHub-IX platform, supported by Etisalat by e&, and the UAE-IX platform, supported by du, to form an integrated interconnection system at the national level. As part of this partnership, du will harness the world-class capabilities of our "datamena" center to create and design hybrid environments for ICT systems. Our interconnection services and solutions that we will provide under this partnership will enhance the capabilities and quality of modern communication technologies, enabling our partners and all stakeholders to establish direct and secure communications and link their operations across multiple sites, as well as achieve savings in time and costs.

In its 10th year, UAE-IX is the first carrier and data center for neutral internet exchange in the Middle East, connecting global networks, network

We are also focusing on forging alliances with global and local partners to deliver economic and social benefits to the UAE



operators and content providers in the GCC region. With 3 terabytes of connected customer capacity, United IX serves nearly 100 customers, including global corporations, carriers, cloud, content providers and emerging technology platforms, as well as banking and financial service companies.

Diversity and Inclusion have been brought into the spotlight in the ICT industry. As a telecom brand, how do you raise this awareness and encourage this framework in the workplace?

At du, we strive to create equal and exciting opportunities at the workplace through our continuing efforts to promote Diversity, Equity and Inclusion in our workforce and beyond. We believe that empowerment and diversity make us a stronger, more capable and more creative company. It heightens the chances for new opportunities and for developing new ideas. To this end, over the past year, we took a number of important steps in this area; therefore, we at du have established councils such as the Gender Balance Council and Youth Council. Each of these councils has principles that promote equality, break stereotypes, enhance collaboration and reduce the gaps between generations. Moreover, du culture believes in its people and its customers. We have relaunched new values that we believe will serve us better and align with our vision and company identity. The changes will improve the workplace environment and help us serve our customers better.

As an organization, du has always believed in the UAE leadership's vision to reach new horizons by driving change and pushing our collective boundaries. Our talent is key to driving du's progress towards our goals by leveraging a rich training and development culture. Each member of our team at du adds highly specialized expertise focused on agile business transformation. We invest in our people and in our communities with excellent growth prospects and industry-leading skills development programs that open advancement opportunities.

Our goal is to achieve significant, sustainable organizational and

cultural transformation by rallying people around a shared purpose and introducing new ways of working in a transformative journey — one that will inspire unimaginable results and strong leadership at every level.

Further, we aim to scale our value proposition by unleashing the unique talents of our human capital to ensure both the short- and long-term success of our organization and expand our capabilities as we adapt to thrive and grow in the face of constant disruption. Looking forward, we will work towards solidifying du's position as an employer of choice and an active supporter of transformation in the areas of organization, culture and technologies.

Through the execution of knowledge-driven initiatives powered by next-generation technologies, we are allowing employees to develop a growth mindset and take control of their learning path. Each year, the People Learning & Growth team at du recognizes learning champions who embrace our curiosity-driven values that focus on professional development.

Initiatives such as the Harvard Manager Mentor Program, Huawei certificated courses and Seeds for the Future program have successfully trained du employees to use cutting-edge technology and accelerate innovation, improve customer experiences and elevate du's performance as a leading digital telco.

What steps is du taking to remain at the forefront of the UAE's global standardization process? Why is standardization important for telcos?

Digital technologies supported by international standards are powerful tools to enable collaboration and open new possibilities. As a steadfast supporter of the UAE leadership's vision for a knowledge-driven future, we have partnered with the Ministry of Industry and Advanced Technology (MoIAT) to join the UAE's Champions 4.0 Network. It will enhance the adoption of advanced technologies and their integration into the daily operations of industrial companies in the country.

By joining the network, du will support five small and medium enterprises (SMEs) through its extensive expertise in technology, to promote the adoption of advanced technologies and create new industrial investment opportunities, which will help contribute towards sustainable economic growth.

The UAE's Federal Decree-Law No. 20 on standardization and metrology is a solid foundation for developing the national specifications and standards system, which will strengthen the industrial sector and boost the national economy. du is establishing itself as a MENA standardization work leader at the forefront of the UAE's global standardization process.



Our talent is
key to driving
du's progress
towards our goals
by leveraging a
rich training and
development
culture



What are du's net-zero goals, and how will you fulfill them while offering the best digital solutions and connectivity services?

Today, we consider ourselves a leader and enabler for sustainability in the UAE. Through our technology solutions, environmental management and social projects, we have been able to create a very positive impact on the UAE, its economy, its environment and its people.

As we expand our network, i.e., the base transceiver stations and data centers, our environmental impact is bound to increase due to energy consumption. To address this impact, we have invested in a range of energy-efficient technologies, such as energy-efficiency hybrid generators, solar energy and free cooling systems. Our latest state-of-the-art Nautilus data centers have been designed with the lowest achievable Power Utilization Effectiveness (PUE) of 1.35. This is better than the regional average PUE (1.8) by 25%. This results in a significant energy reduction and, hence, a reduction in CO2 emissions.

We have shops, offices, warehouses and call centers that consume energy, and we employ a number of electricity reduction strategies to address our sustainability impact at these sites. To date, our LEED-certified stores located in Fujairah, Mirdiff and Me'aisem City centers have saved a total of 696,468 KWhr (AED 287,690).

We are also proud of our recent partnership with Masdar City to leverage our world-class sustainable Internet of Things (IoT) technology to deliver a complete view of the sustainability of Masdar City's assets while facilitating processes such as asset benchmarking, performance and predictive analytics, along with insights on digital operations.

If you could describe 2023 in one word for du, what would it be? How do you see du performing this coming year and contributing further to the growth of the UAE's digital economy and the overall Middle East ICT industry?

Innovation. du focuses on networking the ICT services of the future by acting

as a key enabler of government entities' digital transformation and innovation in the public sector. In line with our continuous efforts to improve national digital infrastructure, we aim to build on recent progress and deliver even greater value moving forward.

Further, du aims to support industries in their digital transformation journey by capitalizing on new technologies. We continue to be a pioneer in 5G and network solutions, as well as delivering best-in-class network infrastructure. We are working towards accelerating enterprise 5G use case development and enabling UAE enterprises to experience the future on our 5G network.

du is committed to providing "a network that gets you" in terms of customers' network needs, whether it's an enterprise or an individual. Optimal network performance is an important key to enabling digital transformation in various industrial sectors. du is committed to smart networks transforming individual and businesses by delivering the best network experiences across the UAE.

Are there any promising collaborations or projects in the pipeline for du in 2023? How do you plan to solidify du's relationship with stakeholders and customers and achieve strong and sustainable growth?

As industry leaders, we utilize our resources to pursue the possibilities and potential that accompany the new digital era and facilitate sustained development. Ensuring technology is seamless, accessible and democratized for every UAE community aligns with the UAE National Agenda, and we are committed to making an invaluable contribution to transformation and sustainability.

As a digital telco, we embrace the disruptive technologies of tomorrow to create further growth and opportunities. In the 2022 edition of GITEX, we signed more than 15 MoUs to further develop concepts that are accelerating the development of future-ready cities in the new digital world, in line with the UAE government's innovation

roadmap. We are highlighting ICT services of the future by acting as a key enabler of government entities' digital transformation agendas and will continue to do so in 2023.

du is focusing on networking the ICT services of the future by supporting and implementing smart city infrastructure and facilitating visualization and optimization. We continue to transform services in the public sector through cloud migration and the adoption of disruptive technologies such as Blockchain and AI.

We aim to infuse the concept of blockchain and the Metaverse to deliver an enriched experience for anyone accessing government services, whether that's an investor or someone looking for healthcare, transportation services and so on. **TR**



du aims to
support industries
in their digital
transformation
journey by
capitalizing on new
technologies





Andrew Hanna, CEO, ZainTech

ZainTech Aims to Be the Partner of Choice for Digital Transformation

During the 16th edition of the Telecom Review Leaders' Summit, ZainTech was recognized for regional and global excellence, specifically for the Best Middle Eastern ICT Investment for its deal to acquire managed secure multi-cloud provider BIOS Middle East and Best Global Enhanced Service Provider awards for its Drone-as-a-Service arm.

In an exclusive interview with ZainTech CEO Andrew Hanna, he shared details on the company's initial performance and progress since its establishment in October 2021, plans for 2023 and beyond, his outlook on MENA's ICT growth, and the digital transformation trends impacting ZainTech's products and solutions.

After a year of being launched, how is ZainTech performing and serving its markets across the MENA region?

It's been a very positive experience, not only for ZainTech but also for our customers, and the industry awards and accolades we have received since we launched are gratifying, reaffirming our strategic business growth strategy and the faith our parent Zain Group has placed in us.

We have gained significant momentum, proving that our vision to introduce leading-edge enterprise technologies and solutions in the region was well-placed.

ZainTech was established to provide enterprise and government customers across the Middle East with a complete range of quality products and services to enhance and

protect their businesses. With significant investments in automation, partnerships with innovative global players, and our network of data centers, we are providing end-to-end multi-cloud capabilities across advisory, professional, and managed services that are traditionally delivered by global consulting firms for large enterprises, to regional mid-sized enterprises at price points tailored to them. We ensure our customers can solve their toughest transformational challenges today while future-proofing their businesses for tomorrow.

We will continue to grow organically through strengthening and expanding existing operations, as well as inorganically through acquisitions and strategic alliances with leading technology partners like Oracle, VMware, Amazon Web Services, Cloudera, and more.

The agreement to acquire BIOS Middle East, headquartered here in Dubai, is highly relevant and a critical business area for our region. With BIOS's established strong customer base, years of experience, and exceptional team, this strategic acquisition will supercharge ZainTech's capabilities in hybrid and multi-cloud managed services and expand our offerings.

Can you explain how ZainTech empowers customers to embrace innovation, digital disruption, and future technologies?

At ZainTech, we have taken an integrated approach to our solutions, and our purpose is to empower customers. We stand as a regional digital & ICT solutions provider unifying Zain Group's ICT assets to offer a unique value proposition of comprehensive digital solutions and services under one roof.

The company is strategically positioned to drive the transformation of enterprise and government customers in the MENA region by providing a center of excellence and managed solutions, across the ICT stack, including but not limited to cloud, cybersecurity, big data, IoT, AI, smart cities, drones, and emerging technologies.

ZainTech leverages Zain Group's global reach, unique regional footprint, and infrastructure across its operations in

Kuwait, Saudi Arabia, Bahrain, Jordan, Iraq, and the United Arab Emirates, as well as in other key markets in the Middle East, to achieve its objectives.

From your perspective, which digital transformation trends would require more of ZainTech's products and solutions, and how will you address this evolving demand?

We're witnessing a full spectrum of engagement from customers, from infrastructure modernization moving all the way up the value chain. We have clients seeking support in offering vertical solutions or securing data in transit and on-premise. We are also seeing clients looking to maximize the predictive capabilities of big data and analytics.

The pandemic and the restoration of the best normality possible thereafter have seen a shift in the expectations and operation of today's workforce, and all our products and services are geared towards supporting this new reality. Remote working and cloud computing, with the additional requirements around data sovereignty and cyber security, have seen significant interest and growth in this post-pandemic era, and we are catering to those requirements. We also see a rise in artificial intelligence and smart city applications, and we have the right products, services, and know-how to help companies maximize the business benefits in these important and expanding areas.

How does ZainTech plan to expand its regional scale and local presence in 2023 and beyond?

We are looking forward to 2023 and building further upon the strong foundation we have already established. As I am sure many of your readers will already be aware, we have entered into several technology partnerships and acquired companies to add to our overall portfolio of solutions and offerings. Our acquisition of BIOS Middle East is set to be fully integrated into our operations during the course of 2023, for example.

Furthermore, we are focused on working closely and supporting Zain's local B2B teams across its footprint, to drive market development and cross-sell advanced ICT services to differentiate Zain's position in the regional enterprise market.

The operations will continue to spearhead local execution, in line with the current successful model.

We will continue along the path we have already established, which is to deepen and widen our portfolio of products and services organically, and where it makes sense, look at inorganic growth opportunities as they arise, such as further partnering with technology stalwarts or assessing acquisition options.

What is your outlook on the ICT industry growth in the MENA region, and what is ZainTech's key contribution to this?

I'm extremely optimistic about 2023. The region is certainly catching up with the most developed markets in the world with regard to digital transformation, and that's something we are well-positioned to drive further.

Forecasts from market researchers and analysts alike for the growth of business services and enterprise solutions across the board in our region of operation are strong, and we are dedicating resources to these areas at just the right point in time. **TR**



At ZainTech, we
have taken an
integrated approach
to our solutions, and
our purpose is to
empower customers





Digital Offerings in MEA: Superapps in Service

The MEA region is paving its digital journey with superapps on the horizon. Telcos have shown great interest in this business model, in addition to fintech organizations and banking institutions.

Leveraging mobile experiences to meet user needs in a world increasingly powered by 5G, superapps present a great opportunity, particularly in a region expected to be the home of more than 3 billion people by 2050. The Middle East is at the forefront of investing in emerging technologies and fintech, while Africa is home to a digitally-savvy population set on innovation.

USP: Simple and Convenient Digital Platforms

From messaging a friend and sending money to booking a ride or an appointment, digital transactions

are made easier when done in one single app. Highly beneficial for both businesses and end users, the reality enabled by superapps is ideal in a melting pot of cultures, languages and ambitions.

The MEA region's growing digital-native generation can benefit from superapps' mobile-centric experience. They can be powerful tools to streamline and customize the user experience while potentially saving time and money for enterprises.

Essentially designed for simplicity and convenience, superapps are digital platforms that serve as a single portal to a wide range of virtual products and services for consumers. After noting

a preference for fragmentation and unbundling of services in their lives, rebundling is taking its turn in the spotlight. Instead of having multiple apps, the diverse demographics in MEA are particularly suitable for specialized apps that attract large customer traffic and frequent customer visits.

More superapps are yet to surface in the region, but social media, telecom and food delivery apps are already checking boxes on these parameters. Technology giants and companies, such as banks and telecom providers, are certainly moving into the superapp space and maximizing their big data and powerful analytics capabilities, which increases the chances of creating valuable add-on products.

From a merchant or user perspective, any tool that is easy-to-understand and easy-to-use will be in demand, especially in this time of economic uncertainty and increased digital demand.

Telcos Invest in Superapps

Some of the ways that superapps create more value include growth, customer engagement, client expansion through partnerships, user retention and higher investment streams. Thus, telcos are continuing to explore the superapp model, playing between B2C and B2B customers to maximize the potential of revenues and profitability.

Most successful superapp business models follow a three-branched approach: gaining customer insights, identifying relevant revenue opportunities and launching new service segments. With this in mind, telcos have the right assets to launch a superapp: a subscriber base, customer data and a strong balance sheet.

Some examples of telecom-backed superapps in the MEA region are etisalat by e&s GoChat Messenger, MTN's Ayoba, Safaricom's M-PESA and Vodacom's VodaPay. These combine messaging, financial, beauty, entertainment and health services, among others. With a number of active users and partnerships on board, this form of telecom investment could materialize in a productive and lucrative manner in the coming years. **TR**



THINK TOMORROW TODAY

Leveraging Zain's global reach, unique regional footprint, and infrastructure, ZainTech drives the transformation of enterprises and governments across eight countries in the MENA region by providing a center of excellence and managed solutions through multiple ICT verticals including Cloud, Cybersecurity, Big Data, IoT, Smart Cities, Drones and Emerging Technologies.

ARE YOU READY TO STEP INTO THE FUTURE, TODAY?



www.zaintech.com



zaintech



Fuad Siddiqui, Global Partner, EY

Interplay of New Technologies, Innovative Business Models and Agile Ecosystems Is Key to Industrial Digitalization, Says EY's Fuad Siddiqui

This year's Telecom Review Leaders Summit's Knowledge Partner was EY, the leading global consulting firm. Fuad Siddiqui, Global Partner at EY spoke to the Telecom Review about his company's efforts in helping enterprises in their digital transformation journeys.

How is EY helping businesses to transform in the digital economy?

I am delighted to be here at this prestigious conference with so many leaders. When it comes to EY approach to digital transformation, we have established ourselves with a dedicated sector focus working across industries such as manufacturing, transportation, government, life sciences, technology, and telecoms. We're working to bring the promise of emerging technologies and new business models to help our clients through their transformation journey, so that they can make no-regret moves. When it comes to business model innovation, that is innovation at scale, deploying the necessary architectures which are future proof, that's technology at speed, and helping industries with their transformation by putting people at

“

Our advice to customers is that they have to think about their core business — what they are good at, and what adjacencies they need to venture into

”

the heart of this. Human at the center is a big deal for helping successfully navigate the transformation journeys for enterprises in sectors across different verticals.

How are 5G and the cloud going to change business models? How can businesses prepare for this?

The whole notion or the imperative of what 5G and cloud offer, is, in my mind, still not fully understood or exploited to its maximum potential. What do I mean by that? What it might mean is that the digital connectivity solutions that 5G offers are built around distributed cloud architectures, and what organizations, and industry verticals have to figure out is how to deploy digital multi-access connectivity and computing solutions at the edge to drive automation of the use cases. Bringing 5G, Edge clouds together with embedded AI, security, and the application suites on top with a business model that is more consumable for the enterprises i.e., as-a-service. We, at EY, believe that's the future — an interplay of new technologies, and innovative business models with humans at the center will be essential for the success of the industrial transformation and future enterprises.

How should companies strategize for their sustainability initiatives given the growing environmental consciousness of global markets?

Sustainability is big on the agenda for many companies. We speak to several CEOs, and they now have a focus to put ESG and sustainability at the core of their strategic plans. The Intergovernmental Panel on Climate Change (IPCC) has put together a number of interesting and meaningful recommendations. And one of the work items is around the digitalization of the sector and how we use technology better. I think that's the area the tech sector must double down on because the efficiencies and the advantages that 5G and the associated technology ecosystem provide could have a pronounced and meaningful impact. Extending that to all sectors,

changing the operating model with tech assistance and enabling new ways of doing business will bring change, resulting in lowering global greenhouse gas emissions (GHG) and consequently improving the corresponding GHG/GDP ratio. The digitalization of sectors through technology will be critical in driving toward and achievement of IPCC goals.

How can companies build a culture of innovation in their workplace? What are EY offerings to meet these parameters?

Innovation is central. With all the major headwinds, including rampant inflation fears, emerging from the COVID-19 pandemic downside, some of the companies have been retrenching a bit and going into a more sustaining innovation, which is fine because they want to maximize the promise of today's technology options and continue to innovate sustainably. At the same time, you don't have to be super disruptive but instead can be creatively innovative in making sure that you are fully harnessing the power of advancements in technology and the resulting ecosystem that needs to come together. That is where EY is connecting the dots for ecosystem enablement, making sure that the transformation journey, which must put humans at the center, is driven and supported by EY, working hand in hand with our clients, and industry stakeholders delivering outcome-driven transformation and positive change.

What is your advice for companies that are looking at mergers and acquisitions as a growth strategy in the current global market dynamics?

Every year, we do a number of surveys, and one of them was a CEO outlook survey, where we spoke to CEOs around the world in 51 countries and 13 sectors. We found out that the majority of CEOs consider M&A a strategic growth opportunity. Approximately 40% of them are thinking about investing, divesting assets, and figuring out a JV strategy as central to diversification and finding new

growth. Our advice to customers is that they have to think about their core business — what they are good at, and what adjacencies they need to venture into. For example, we are working with an energy company that wants to make sure that they have well-connected networks, not just in their localized factory environments, but out in the oil fields as well. As a result, they are trying to venture into partnerships with satellite providers while building partnerships with local telcos around private and public networking as well as in non-terrestrial space. M&A is going to continue, but with enhanced due-diligence and financial rigor. **TR**



Human at the center
is a big deal for
helping successfully
navigate the
transformation
journeys for
enterprises in
sectors across
different verticals





Mikhail Gerchuk, CEO, e& international

The e& international Mantra: Delivering on Promise and Providing Great Customer Experience

Telecom Review caught up with Mikhail Gerchuk, CEO, e& international, to better understand how e&'s international operations arm was fostering innovation and enhancing user experience in its service offerings.

Given the current uncertain economic scenario globally, what have been the key challenges as well as opportunities for e& international's operations?

With rising uncertainty in many global markets due to challenges such as currency devaluation, inflation and rising fuel prices, we must continue to provide high quality connectivity to our customers at a reasonable price and also to maintain the performance of our networks amidst frequent electricity shutdowns. To deliver on this promise and provide a great customer experience, we focus on energy continuity using renewable sources and other network elements to ensure that our networks operate without interruption. Despite the current situation, we continue to accelerate our network investment program. For example, in Pakistan last year, we brought 4G spectrum, and we are extensively rolling out our 4G networks. As a result of these activities, we see continuous increases in internet traffic consumption. We also see that customers like our services in terms of net promoter score (NPS) as well as customer satisfaction. We see very good results in all our main operating companies.

e& international recently partnered with global insurance leader AIG to offer customers an innovative digital insurance solution. What other sectors do you plan to delve into in line with e&'s overall global ambitions?

e& is now transitioning from a telecom operator to a technology company enabled by the great connectivity that we provide. Our partnership with various companies is part of the strategy. A great example would be our partnership with AIG, which allows us the opportunity to provide a full range of mobile insurance products to our customers. It could be mobile insurance, purchase insurance or health insurance, and they are very accessible and easy to use, and easy to buy because they are affordable for the majority of our customers in emerging markets where we


operate. Another great example is our partnership with MoneyGram International, whereby our customers can use the MoneyGram platform for international money remittances instantaneously across India, Saudi Arabia, Pakistan, Morocco, Egypt, UAE and other countries.

How is e& international leveraging emerging technologies, especially AI and ML, in its service offerings? What are the challenges?

Our ambition is to provide the best customer experience to our customers in every country where we operate. Our products are expanding from only connectivity, voice and internet to provide a variety of digital services in finance, insurance, content and other services. To create the best user experience, we need to understand their requirements, usage patterns and information about our customers to offer the most relevant offers to each customer. We have a world-class AI Center of Excellence in the UAE with affiliates in other countries. We use them to create data models and other AI solutions which help us to tailor our offerings, as a result of which we are witnessing an uptake in our services. For example, our mobile wallets in Pakistan or Egypt enjoy a 30 to 40% year-on-year increase because of this strategy.

Please give us an overview of e& international operations and collaboration with strategic partners.

e& international is a division of e& Group that is responsible for telecom operations outside of the UAE. e& international operates in 15 countries in Africa, the Middle East and Asia, with 164 million customers. In the current challenging economic environment, our mandate is to continue providing great customer experience to our consumers and enterprise clients in a more efficient manner. For example, we are focusing heavily on solutions for energy efficiency as energy costs are rising globally. Our operation stations are using low-carbon energy solutions with a dual objective to provide great connectivity at an affordable price as well as to protect the environment. Further, to enhance operational efficiency, we cross-pollinate the best

practices and partnerships between our companies for developing digital products. Our recent partnerships with AIG or MoneyGram are some of the best examples. We are investing through our venture capital funds in the most promising startups, and we acquire regional digital companies such as video streaming leaders like StarzPlay or HelpAG, who are leaders in cybersecurity. We then leverage their products to offer innovative solutions to our 150 million customers in 15 countries. 

“

In the current challenging economic environment, our mandate is to continue providing great customer experience to our consumers and enterprise clients in a more efficient manner

”



Leslie Shannon, head of ecosystem and trend scouting, Nokia

What Comes Next Requires Innovation, Agility and Partnership

During the 16th edition of the Telecom Review Leaders' Summit, Leslie Shannon, head of ecosystem and trend scouting, Nokia, shed light on one of the hottest tech trends of today – the metaverse – and how 5G works alongside it.

In an exclusive interview with Telecom Review, Shannon tackled the key to innovating and succeeding in the digital era, and how and why women should step up and realize the huge potential of involvement in the ICT industry.

You focused on metaverse and 5G in your Telecom Review Leaders' Summit keynote. Can you give a brief on this and how Nokia is investing in these technologies?

My role at Nokia is as the head of the ecosystem and trend scouting. Over the last five years, the trends have shown

how important 5G will be to realizing the full suite of virtual reality and, particularly, augmented reality. This is something that we at Nokia have really been focusing on.

Right now, 5G is playing a very strong role in the industrial and the enterprise

metaverses, making it possible to see and control complicated digital twins and to get a better understanding of the underpinnings that we think we understand on the surface, but that require us to go deeper, digitally.

That's what the metaverse is for, and 5G completely enables that. A lot of the hardware for the metaverse runs on Wi-Fi, but if you are dealing with a really complicated digital twin or any other kind of large object, you need 5G to be able to transmit that accurately in all of its detail.

We're also seeing that enterprises are starting with use cases that require them to have these digital objects and to manipulate them, and then that leads them to private 5G. We are ready with solutions in that area.

As one of the prominent women in the ICT field, how would you encourage other women to be involved and thrive in this sector?

I'm lucky to be working for a company that has promoted women within the ICT sector, and Nokia is really a leader in this field. As a signatory to the Women's Empowerment Principles, Nokia has committed to promote gender equality in the workplace, marketplace and community. One of the things we're doing is partnering with the UN Women and launching four pilot projects to bolster inclusion and diversity for equality in the Middle East and Africa region. These pilots aim to address areas such as increasing the number of women employees, promoting STEM (science, technology, engineering and mathematics) education and empowering gender-based violence victims. In August last year, Nokia in Saudi Arabia launched its inaugural program for women STEM graduates. Through forward-leaning initiatives, this is how we're going to bring women into the ICT industry from the corporate side.

On the other hand, as a woman, I personally come from the life sciences; I don't have a STEM background. Hence, the message that I want to say to women is, "Don't be afraid of ICT." Just because you don't have an engineering degree doesn't mean you

can't play here. Have the confidence to understand that if computing and telco products are going to serve the entire world, we need to have a representation in creating those products.

Remember that you always have the power, and your voice is needed within this industry. Have the courage to say, "Hey, you know what? I can play there," and it's only when we women step up and realize that we can — and should — play here that we put ourselves forward for these roles.

As head of ecosystem and trend scouting, you must have been looking at the industry at macro level as well as micro level. What is one of the biggest observations that you would share with our readers?

From my career experience spanning over two decades, it is a must for all companies to never think that you already have the answer to the world's problems and there are no better solutions. Always be innovative. Always know what the next thing is, because even when you think that you are central to everything, there is something new to be done — some kind of innovation to explore.

We're never done, so don't think that you are done. Always be looking for the next thing, and give space for the voices in your company that are talking about innovation and talking about what's coming next, which is what we at Nokia are always looking for.

We're living in a hyper-connected world. What do you think is needed to ensure that there's a sustainable and efficient ecosystem empowered by technologies?

One of the most important things that we're learning about the new era that we're entering, as we move into a much more computer-driven, artificial intelligence-driven decision-making analytics, is that no single company is going to have the answers and be able to provide the solutions of the future.

Partnership is the absolute key to everything. If you're going to create some kind of augmented reality program, for it to be beneficial, you're going to need to partner with

companies that can provide artificial intelligence, three-dimensional digital rendering and mapping, among others, and you're going to need to learn to work with companies.

In my experience, when I first joined Nokia, I ran a development lab in application development, and when something fails, it was never because of a technical problem. It was always because of a business problem — companies that couldn't work well together. As companies need to move into developing new products, it's not just about technical innovation; it's about business agility and about establishing good partnerships with multiple partners in creating a single product together. It's the companies that win partnerships who are going to win in the next decade. 



As companies need to move into developing new products, it's not just about technical innovation; it's about business agility and about establishing good partnerships with multiple partners



Nokia and etisalat by e& Demonstrate the First 100 Gbps Fiber Broadband in MENA Region



Nokia has announced that the company, in collaboration with Etisalat UAE, branded as etisalat by e&, demonstrated the fastest passive optical network (PON) speed in the Middle East and Africa region. Nokia Bell Labs' PON proof-of-concept (PoC) demonstration achieved speeds of up to 100 gigabits per second (Gb/s) on a single wavelength — four times faster than the most advanced networks available today.

In the long-standing partnership between both technology leaders, they have achieved multiple industry firsts, including the world's first single-carrier terabit-per-second field trial, setting an optical transmission capacity record over etisalat by e&'s fiber network in the UAE. To achieve 100 Gb/s on a single

wavelength, Nokia Bell Labs used pioneering digital signal processing (DSP) techniques. Once advanced DSP is adopted, the steps to 50G and 100G are straightforward, and 100G could be commercially available in the 2030s.

The Nokia Bell Labs 100G PON prototype is the world's first application of flexible rate transmission in a PON network. Flexible rate transmission works by grouping fiber modems (ONUs) that exhibit similar physical network characteristics (e.g., loss or dispersion) and makes data transmission more efficient. Using flexible rate transmission results in lower latency on a PON and cuts power consumption in half — two essential characteristics for fiber networks that have a rapidly growing role in the massive delivery of fixed and mobile broadband services.

The PoC is Nokia's most recent industry-first in fiber access, following XGS-PON, TWDM-PON and 25G PON. 100G PON could be commercially available in the 2030s.

Marwan Bin Shakar, senior vice president/ Access Network Development, etisalat by e& said: "Fiber networks are fast evolving into becoming the backbone of the entire telecommunications sector, as they play an important role in delivering any service to any end point, including residences, businesses, and cell sites. As their use case evolves, they must become quicker, smarter and more cost-effective. We are thrilled to have showcased a working prototype for 100G PON with Nokia."

Samer Makke, head of the customer team for etisalat by e&, UAE, Nokia, said: "etisalat by e& is a pioneering operator in the region, and we are proud to have demonstrated our industry-first prototype technology with the company. Fiber broadband continues to evolve and will play a critical role in enabling services for enterprise customers and premium consumers and supporting 5G rollouts. 10G XGS-PON is now mainstream; the first 25G city is a reality, and 50G and 100G are being developed. This just shows the unlimited potential of fiber broadband."

5G Blows Away Fans of FIFA World Cup 2022 in Qatar



Awarded in December 2010 to Qatar, this year's FIFA World Cup is the first to take place in the Middle East and the first to be supported by commercial 5G networks.

Qatar's hosting of the 2022 FIFA World Cup has provided a significant boost to the country's digital economy and information and communications technology ecosystem. The tournament was intended to attract investment and drive innovation in 5G, the Internet of Things (IoT), virtual reality (VR) and augmented reality. These new technological innovations will be used throughout the tournament and are

expected to have a long-term impact on Qatar's technology industry. Qatar was wired and prepared for 5G technology. Peak gigabit speeds were provided by multiple vendors and operators in Qatar to massive crowds attending the premier global football event.

However, increased investment in wireless communications infrastructure has benefited the entire country. Mid-band spectrum has also been allocated, allowing for high-speed internet access.

5G Infrastructure

Qatar has made great strides in rolling out 5G infrastructure across the country ahead of the tournament. This next-generation technology offers higher peak Gbps data speeds and ultra-low latency compared to 4G. 5G readiness will enable telecom providers to offer consumers a wider range of content

and services, assisted by faster and more reliable connections. According to global network intelligence firm Ookla, Qatar ranks fifth in the world for its 5G availability as of the end of 2021. This statistic measures the percentage of users of 5G-enabled devices who spend most of their time on its 5G network. In the same year, Doha was ranked sixth in the world for average 5G speeds, recording 382.51 Mbps.

Network Performance

Using data from Speedtest Intelligence to analyze the network performance of national operators in Qatar World Cup stadiums, it has been found that Al Janoub Stadium has the fastest average 5G download performance at 757.77 Mbps, while all World Cup stadiums have 400 Mbit. Among the most popular fan sites, Ras Bufontas and Airport Free Zone recorded the best 5G performance.

Aqaba Digital Hub

Your digital gateway to the MENA region



MENA's First Fully Neutral and Integrated Digital Hub



Largest Data Center In Jordan and One of the Largest in the region



Open Access and Neutral Cable Landing Station



Lowest Cross-Connection Cost in MENA



Highly Secured Facility for Data Protection



Aqabadh.com



Ahmed Jaber Aldoseri, CEO, Bahrain Network (BNET)

BNET Aspires to Continue Its Leadership Position in Fiber Infrastructure

In an exclusive interview with Bahrain Network (BNET) CEO Ahmed Jaber Aldoseri, he shared details about the company's journey, goals and aspirations, as well as his perspective on the growth of the country's telecom industry.

Notably, at the 2022 Telecom Review Excellence Awards, BNET was recognized for its regional excellence, receiving the "Best Middle Eastern Fiber Infrastructure Deployment" award.

It's been a year since you were appointed as the CEO of BNET. Can you share with us your experience and what BNET's journey has been in 2022?

BNET provides a one-of-a-kind experience with a business model unlike any other in the world. BNET is not only a national broadband provider but also a provider of infrastructure for all types of connectivity, including empowering next-generation mobile technologies such as 5G, 5.5G and other leading technologies. It has been a very rewarding experience as we continuously develop such a prosperous organization. BNET serves many of the Kingdom's national objectives, especially the availability of high-speed, accessible and reliable fiber connectivity at fair and reasonable prices. BNET is uniquely positioned to serve all its customers while also establishing relationships and opportunities with regional and international counterparts.

What is the importance of Bahrain's 5th National Telecommunication Plan (NTP5), and how did this impact BNET's establishment?

In general, national telecommunications plans are a tool used by governments to set a multi-year direction for the telecommunications sector. Bahrain Network is a key component of Bahrain's 5th National Telecommunication Plan (NTP5), which was set up to accelerate the growth and economic diversification of the telecommunication sector, including rolling out a fiber optic network to 100% of all businesses and 95% of all households across the Kingdom of Bahrain. Given Bahrain's macrogeographic presence, the

market structure has been updated to allow the separation of the competing operators and the establishment of BNET, as well as the strict set of separation obligations for the equivalence of inputs in terms of information, processes and service characteristics for all licensees served by BNET, so that there is no competition in the infrastructure layer and BNET continues to be the sole provider in the infrastructure layer.

How does BNET provide the backbone for new mobile technologies such as 5G and access to international cable systems?

BNET's goal is to connect any technology with any kind of access needs, whether fixed or mobile. BNET offers connectivity to all cable landing stations in Bahrain, enabling the delivery of ultra-high-speed mobile services and other providers for mobile backhaul and mobile fronthaul, ensuring the availability of international capacity to local operators.

To support the goal of accelerating broadband growth, how does BNET invest in its workforce to fulfill the demand for highly-skilled talents?

BNET sets a high standard requirement for the development of its talents by ensuring each employee has access to a minimum number of training hours in addition to encouraging the buy-in of professional certifications and credentials, [thus] setting a high standard demand for the growth of its talent. We ensure empowering our team by providing the necessary tools to be more effective and efficient in their day-to-day jobs. We facilitated a collaborative environment that fosters teamwork and constant communication to ensure that our employees feel rewarded and appreciated for their hard work and dedication. We are happy to say that BNET is maintaining a low turnover rate in the industry, and we aim to always remain the employer of choice for employees in telecoms and the digital sector.

From your perspective, how will Bahrain's telecom sector continue

to expand and remain competitive regionally and internationally?

Bahrain's telecom sector needs to be aware of the changes taking place not only in the region but also globally. When we have the mindset of competing as a nation, we will be setting policies and directives locally to ensure that we can attract foreign direct investments; therefore, it will enable forward-looking regulations, coherent policies and enhanced working relationships between the different parties in the sector.

What are BNET's aspirations for 2023 and beyond?

BNET aspires to continue holding its leadership position in fiber infrastructure, as evidenced by recent awards received by BNET, and to ensure Bahrain is well positioned as an ICT hub in the region, supporting its customers with a blend of quality services that meet their requirements. **TR**



BNET is uniquely positioned to serve all its customers while also establishing relationships and opportunities with regional and international counterparts





Joe McStravick, managing director of international for BlueJeans by Verizon

BlueJeans by Verizon: Creating an Inclusive, Hybrid Work Environment

In an exclusive interview with Joe McStravick, managing director of international for BlueJeans by Verizon, he explains why the future of work is hybrid and how digital platforms are driving a new era with virtual, remote and hybrid events.

Can you give us some insights into your product roadmap? Engagement in today's hybrid workplace is so important — especially in this next phase with more people going back into the office. But the truth is, virtual

events and meetings aren't going away.

You could say we are in the perfect storm of transformation of hybrid work. Organizations rushed to deploy collaboration tools during the pandemic, and now organizations are evaluating the engagement of said tools.

How many times have you heard about "video fatigue" over the past few years? Or feelings of isolation and team disconnect? The challenge has now become a matter of: how do you make sure there's an equally engaging experience for those in person and those attending virtually. And how do you make sure creating these experiences is simple, polished

and open for everyone to take advantage of?

During the pandemic, a range of features was added to collaboration solutions to help make meetings more user-friendly for virtual attendees. But those don't necessarily translate across a hybrid experience, especially when it comes to large-scale events.

At BlueJeans, we're focused on creating a hybrid work environment that is inclusive for all; one that delivers immersive, TV-production-grade experiences that drive audience engagement and interactivity.

Our platform is designed with inclusivity in mind, where any team — large or small — can extend its brand and message to its peers, employees and fans in a way that promotes engagement.

This is why we've launched BlueJeans Studio and BlueJeans Expo in 2022 and will continually look to improve these offerings and our Events platform through customer feedback and co-innovation.

Studio equals the playing field for any organization or content creator to design professional and engaging videos and livestreams with TV production quality tools in the hands of the user.

Expo combines live and on-demand video, event management and content hosting into one powerful yet easy-to-manage platform.

From individual creators to enterprise marketers and everyone in between, there's a real need for these solutions, and we're excited about the projects our customers are looking to deliver through BlueJeans, both now and in the future.

What kinds of features and benefits will you bring to your customers over the coming 12 months?

Video has become a fundamental part of the enterprise. And while the COVID-19 pandemic forced organizations around the world to

quickly pivot to a virtual environment, now business leaders are taking a step back to reevaluate their overall communication strategies and supporting technologies to determine the best path forward.

The key to creating a collaborative workplace in today's environment is to ensure a seamless experience for employees across devices and work modes. The same must also be true for how customers and audiences consume your content.

With the combined strength of BlueJeans and Verizon's 5G network, we're making the hybrid work experience one that's immersive, inclusive and engaging.

It's all about connectivity and mobility. This is the benefit that Verizon and BlueJeans bring to customers. And we look forward to showing you more of what's to come soon.

What trends are you seeing in the market currently?

Creating a sense of inclusion and equity for all workers, regardless of what work mode they've chosen — hybrid, remote/field, home or office. This is something that will be especially important as more workers start heading back into the office.

Employees expect a level of connectivity and experience parity, no matter where they are working from. This means being browser-agnostic, having mobile experiences on par with desktop experiences, being able to quickly and seamlessly switch between modalities and more.

A key part of our platform is interoperability, which gives us a leg up when it comes to designing and partnering with technologies that can help bridge the digital divide.

Furthermore, as I've said, virtual and hybrid events are here to stay. There's no doubting their value in terms of cost savings, audience reach and scale, especially when it comes to reaching large, distributed audiences.

And while the COVID-19 pandemic gave a major boost to the creative economy, not all creators and brands have the resources and tools necessary to compete in today's crowded marketplace.

BlueJeans Events already leads the virtual event industry with the ability to host up to 150,000 worldwide interactive event participants and multi-language support for over 70 languages. Now, with the addition of Studio, users can easily create TV production-level events that engage and wow audiences while helping to elevate their brand and expand their reach.

I anticipate we'll continue to see more innovation in the market focused on making event production and livestreaming more polished and easy-to-use for all.

What tips do you have for managing challenges with hybrid work?

What I would say is that one size doesn't fit all, which is a good thing. The culture of an organization is extremely important in helping to facilitate different work models and expectations for employees. Verizon has done a particularly good job with this through the company's Work Forward program, which provides guidelines and allows flexibility in how we work.

Personally, I am a strong believer in personal equity and setting boundaries you're comfortable with. There are always going to be instances where meeting someone in person is ideal. The connection and trust that can be built in person is powerful. From there, you can better leverage the digital tools at your disposal to stay connected.

Regardless of how you meet, spending time getting to know your employees and peers is so important. Making a connection with an individual really can make all the difference.

Ultimately, emphasizing culture and leading with kindness will enable choice and drive change. **TR**



Telecom Industry Enters New Year With Hopes and Challenges



UNLEASHING TOMORROW'S TECHNOLOGY – TODAY

The world's largest and most
influential connectivity event.

Register for your pass
mwcbarcelona.com

MWC[™]
GSMA

BARCELONA
27 FEBRUARY – 2 MARCH 2023

Jumping into 2023, we are facing another year of opportunities and challenges. As one of the most dynamic and biggest sectors of society, telecommunications is on the verge of new paradigm shifts and trends. With the previous year's aggressive push for more connectivity, partnerships and digital services, let's have a glimpse at what lies ahead – the good and the bad.

In the modern, digital world, the telecom industry plays a crucial role in fulfilling digital transformation goals across verticals. Evolving from a more traditional environment, the requisite tools and techniques have changed to respond to situational demands and customer behaviors.

What to Look Forward To

The telecom industry has undergone a massive transformation since the introduction of telephones and the first SMS until today's mostly cloud- and digital-based interactions and operations. This fundamental transition of the connectivity industry is deemed to be never-ending to be able to meet new customer demands, competitive dynamics and emerging business models.

To keep the world connected in a secure and stable manner, here are some of the forward-looking trends and principles that should be met, followed and accelerated from 2023 onwards:

- **Network expectations for next-generation use cases:** Whether for enterprises, consumers or other industry partners, a telco's network is expected to deliver low latency, high capacity and a consistent, trusted, adaptable and standard-compliant connection. Carriers must work to meet all network expectations for 5G adoption, cloud deployment and other Industry 4.0 use cases.
- **5G and fiber infrastructure investments:** The 5G cycle is booming worldwide, with many CSPs starting to invest more in 5G standalone (SA) and continuing to invest in 5G infrastructure. According to the Ookla 5G Map, there were 127,509 5G deployments in 128 countries as of November 2022, and 5G download speeds stabilized with a median global 5G download speed of 168.27 Mbps in Q3 2022. In addition, Omdia estimated that over 20 operators globally have launched 5G SA networks commercially. It is likely that in 2023, these numbers will grow significantly. Along with high speed, there is deemed to be a big focus on the Quality of Experience (QoE) and initiatives to increase ARPU (average revenue per user) and customer retention by next year.
- **Fiber networks** were once regarded as a high-risk asset class, but investment in fiber infrastructure is on the rise, with Omdia forecasting that by 2023, 95% of the broadband investment will be in FTTH. Fiber is a fast-growing infrastructure asset class that is gaining attention, as the deployment of high-frequency 4G and 5G spectrum needs a fiber backhaul. Thus, telcos' ambitions of increasing FTTH penetration for residences, buildings and enterprise customers will boost the demand for fiber layouts. EY highlighted Wi-Fi 6, 10G PON, terabit ethernet and flexible optical service units as technological advancements that would empower progressive fiber network upgrades. The importance of fiber connectivity to sustain the level of data growth has become paramount, and larger bandwidths, along with reduced latency, jitter and packet loss, can be achieved with the incorporation of these fiber-enhancing technologies.
- **Cloud momentum:** A hybrid, multi- and hyperscale cloud has gained tremendous support because operators and enterprises are aiming to generate efficiencies, operate more

cost-effectively and make a return on their investments. In 2023, we can expect more operators to move their workloads into the cloud, with more enhancements underway for BSS/OSS. Hyperscalers, such as AWS, will not only host telco workloads but also launch more connectivity products and services.

From a regional perspective, the adoption of a hyperscale data center would enable UAE technology partners to be part of a global partner network



In the modern, digital world, the telecom industry plays a crucial role in fulfilling digital transformation goals across verticals



and generate more revenue by serving customers worldwide. Having said that, telcos will thrive with the cloud through robust partner support that could assist them in successful cloud deployments, both for setup and optimization. The use of SaaS deployment models is also anticipated in the telecom industry in 2023, with operators using SDN and cloud-native IP networking technologies. More so, utilizing renewable power would further reduce the carbon footprint of workloads in the cloud.

- **Automation and immersive experiences:** The age of automation of telecom infrastructures is here, and we will see further advancements in that domain in 2023. Telcos have a multitude of data — from external and internal sources. Much of it is scattered and siloed, making data harder to consolidate, govern and protect. Leveraging analytics tools and enabling intelligent automation would drive this process to increase revenues and enhance the user experience.

With the metaverse being one of the hottest topics being explored by telcos, we can expect to see more operators getting involved with businesses adopting VR and AR applications. The use cases for these technologies are vast, and they are a good opportunity to stay ahead of the competition. Training, employee onboarding and hybrid workforce experiences can be transformed by delivery via the metaverse. Operators will also need to use modular components that can be modified independently to avoid disruptions and adopt standardized interfaces. When put to best use, AI/ML and intelligent automation can optimize the distribution of work across telcos, monitor their networks and automate operations for better business continuity and resilience.

- **Environmental sustainability:** We've seen sustainability emerge among telcos' priorities in 2022. A lot of agreements and initiatives were launched, both regionally and globally, to fight climate change and ensure that telcos' networks and operations are contributing to

making the world a sustainable place. This is set to continue in 2023, with telcos expected to deliver on their sustainability commitments in time. It's not an overnight job, which is why the industry is bound to act in a more eco-friendly manner.

Current and Emerging Risks

As with any other technology-powered industry, risks are part of the journey. With inflation, the geopolitical scenario and other societal pressures surrounding the industry, telecom players must brace themselves for a challenging 2023 landscape. The demand is obviously there, but fulfilling the requirements would oblige a systematic and feasible plan altogether.

EY has identified the top risks across the sector and shared some views on how to mitigate them. Some of the most important ones are anticipating growing cyber threats, rebalancing talents, managing partnerships, ensuring network reliability, maximizing infrastructure assets and adapting to regulatory changes.

Given the fast pace at which digital technologies are being integrated within the telecom industry, the digital infrastructure must be protected, no matter where it resides. In 2023, there should be heightened preparation and response for cybersecurity requirements. This can include data collection, storage, processing and traffic flow implementing zero-trust architectures to address cyber threats at all levels.

Remote work culture is being considered by many employees, and with better collaborative tools, communication and skills enhancement can be encouraged within a telco workplace. A recent initiative to enhance the skillsets of employees and accelerate efforts to drive talent development in the UAE involved Nokia holding training and development programs that covered technology competence and knowledge transfer to du employees.

Solidifying partnerships is indeed key to holistic industrial growth, as no single company has what it takes to

deliver all products and solutions to customers. Within 2023, we are yet to see more collaboration between telcos, hyperscalers, system integrators, towercos and other ICT players. The risk of harmonizing and garnering desirable results should be handled accordingly.

Maximizing infrastructure assets and adapting to new regulations would indirectly impact network reliability. In this case, telcos are expected to plan out their investments for the greater good by weighing the pros and cons. Reaching out to rural areas, expanding fiber networks and engaging with the right verticals and spectrum, among other factors, must be taken into account.

Overall, we see an exciting — and unstoppable — year ahead for the telecom industry, filled with innovation and cooperation among players, resulting in new offerings and propositions for end-users. **TR**



We see an exciting — and unstoppable — year ahead for the telecom industry, filled with innovation and cooperation among players, resulting in new offerings and propositions for end-users





Telecom Review Makes History Again With Successful 16th MEGA Summit Edition

Under its annual theme “Global. Regional. Digital.” the 16th edition of the Telecom Review Leaders’ Summit successfully concluded its two-day gathering with the participation of a broad range of professionals, including telecom operators, telecom vendors, industry regulators, government officials, content providers, cybersecurity experts and consultants, among other attendees.



Toni Eid, Founder of Telecom Review Group and CEO of Trace Media International



OFFICIAL OPENING KEYNOTE:
H.E. Mohammad Al Ramsi, Deputy Director General for the Telecommunications Sector, TDRA



OPENING FIRESIDE CHAT:
Masood M. Sharif Mahmood, CEO, Etisalat by e&
Jawad Abbassi, Head of MENA Region, GSMA



KEYNOTE:
Saleem Al Blooshi, Chief Technology Officer, du

The Telecom Review Leaders' Summit once again made history as one of the most anticipated and largest ICT events in the industry, with the continued presence of thousands of distinguished guests across the ICT industry — physically and virtually — and the support of 2022's esteemed lineup of sponsors, namely the Telecommunications and Digital Government Regulatory Authority (TDRA), du, e&, EY, Amazon Web Services (AWS), PCCW Global, Huawei, MTN GlobalConnect, NEC,

Netcracker, Nokia, Verizon, Cisco, CSG, CommScope, Emircom, MYCOM OSI, Reailize, SES, Sofrecom, China Mobile International (CMI), Gulf Bridge International (GBI), Mavenir, ZTE and APTelecom.

From December 7–8, 2022, the huge conference hall and demo exhibition area were fully packed with attendees, fulfilling the event's goal of providing informative sessions and delivering an extensive platform for brand promotion and networking.

Commenting on the success of the event, Toni Eid, founder of Telecom

Review and CEO of Trace Media, said, "This year, we are back together again in Dubai for two days — with a more diverse audience and insightful panel discussions. Impressively, many notable industry leaders have joined us for the first time. This two-day hybrid event of the Telecom Review Leaders' Summit has been built on the success of many years of informative gatherings, finally culminating in this, the 16th edition. I would like to thank every partner for their support. See you again next year for another amazing edition, where, once again, we'll promise to deliver the Best ICT Leaders' Summit!"

**KEYNOTE:**

Andrew Feinberg, Founder, Chairman & CEO, Netcracker Technology and BostonGene

**KEYNOTE:**

Leslie Shannon, Head of Ecosystem and Trend Scouting, Nokia

**KEYNOTE:**

Fuad Siddiqui, Global Partner, EY

**KEYNOTE:**

Bernard Najm, VP Telco MEA, AWS

Telecom Review Leaders' Summit

This year's summit was bigger than ever, raising the bar higher with distinctive and top-notch speakers, all thanks to the participation of the most influential figures in the ICT industry from all over the world, representing the Middle East, Africa, North America and Asia Pacific regions, among other locations.

During the first day, His Excellency Mohammad Al Ramsi, deputy director general for the telecommunications sector, TDRA, graced the event with his presence and delivered the official opening keynote speech. This was closely followed by the opening fireside chat between Masood Sharif Mahmood,

CEO, etisalat by e&, and Jawad Abbassi, head of MENA region, GSMA.

Pioneered by the ICT Leaders' Panel, other exclusive panels were arranged on day one to cover the topics of cloud innovation, sustainability and green tech, wholesale and digital transformation.

During the second day, the official opening debate discussing "Building the Asian Dream" took place between Dr. Atsuko Okuda, head of ITU Asia Pacific, and Toni Eid, founder of Telecom Review Group.

Exclusive panels conducted during day two covered the topics of infrastructure

deployment, 5G performance, women in ICT and the future of technology.

Over the course of 2022's Telecom Review Leaders' Summit, impressive keynote speeches were also delivered by notable individuals across the ICT industry. Among the list were du CTO, Saleem Al Blooshi; Netcracker Technology and BostonGene Founder, Chairman & CEO, Andrew Feinberg; Nokia Head of Ecosystem and Trend Scouting, Leslie Shannon; EY Global Partner, Fuad Siddiqui; AWS VP of Telco MEA, Bernard Najm; MTN GlobalConnect Chief Mobility Business Officer, Kedar Gupte; NEC Head of Business Development, Viplob Syngal; TELUS CTO, Ibrahim Gedeon; and Zain KSA GM & VP, Maha Ibrahim AlQernas **TR**



KEYNOTE:
Kedar Gupte, Chief Mobility Business Officer, MTN GlobalConnect



Toni Eid, Founder of Telecom Review Group and CEO of Trace Media International
Jeff Seal, Managing Partner, Telecom Review North America



PANEL: THE ICT LEADERS



PANEL: CLOUD INNOVATION FOR THE MEA REGION - POWERED BY AWS



PANEL: SUSTAINABILITY IN ICT & GREENTECH PANEL



PANEL: WHOLESALE INDUSTRY - SIGNIFICANT INFLUENCE



PANEL: DIGITAL TRANSFORMATION IS HAPPENING – THE NEW CONNECTIVITY



OFFICIAL OPENING DEBATE: Building the Asian Dream
Dr. Atsuko Okuda, Head of ITU Asia-Pacific
Toni Eid, Founder of Telecom Review Group and CEO of Trace Media International



KEYNOTE:
H.E. Dr. Mohamed Al-Kuwaiti, Head of Cybersecurity for the UAE Government



KEYNOTE:
Karim Benkirane, CCO, du



KEYNOTE:
Mats Granryd, Director General, GSMA



KEYNOTE:
Mark Birch, Global Startup Advocate, AWS



KEYNOTE:
Viplob Syngal, Head of Business Development, NEC



KEYNOTE:
Mounir Ladki, Co-Founder, President & CTO, MYCOM OSI



KEYNOTE:
Ibrahim Gedeon, CTO, TELUS



KEYNOTE:
Imad Kreidieh, Chairman and Director General, Ogero



KEYNOTE:
Maha Ibrahim AlQernas, GM & VP, Zain KSA



PANEL OPENING:
Leslie Shannon, Head of Ecosystem and Trend Scouting, Nokia



FIRESIDE CHAT:
Hatem Dowidar, Group CEO, e&
Toni Eid, Founder of Telecom Review Group and CEO of Trace Media International



PANEL: THE "POTION" FOR THE RIGHT INFRASTRUCTURE DEPLOYMENT



PANEL: MEASURING 5G PERFORMANCE



PANEL: WOMEN IN ICT



PANEL: THE FUTURE OF TECHNOLOGY













Telecom Review Excellence Awards

One of the highlights and most exciting parts of the 16th Telecom Review Leaders' Summit was the annual Telecom Review Excellence Awards ceremony, which honored leading ICT brands and leaders for their achievements throughout the year and was followed by the annual gala dinner.

The night started with an interesting fireside discussion between Toni Eid and Hatem Dowidar, Group CEO, e& about the company's transformational journey.

Jeff Seal, Chief Awards Officer, Managing Partner and Editor-in-Chief, Telecom Review North America, noted, "2022 brings out the biggest

Telecom Review Excellence Awards program yet, garnering a very high-interest level from the industry. We received a record-breaking number of nominations from around the world. Thus, we added more distinct awards and categorized them into global and regional scopes. The Excellence Awards continue to be the 'standard' for which the industry judges its peers. The Telecom Review panel of judges are leading experts from around the world and spent a thorough deliberation in the process. Congratulations to all winners and we hope to welcome you again next year!"

This year, the Excellence Awards and Leaders' Merit Awards were split into global and regional categories. The full

list of award winners can be viewed [here](#).

On December 6, prior to the 16th Telecom Review Leaders' Summit, the International Telecommunication Union (ITU) CxO meeting was also hosted by Telecom Review in a hybrid format, with the Telecommunications and Digital Government Regulatory Authority (TDRA), du, TELUS, IBM and Huawei as co-hosts.

As a token of appreciation for hosting the ITU-T high-level industry executives meeting for the 5th consecutive time, Toni Eid was awarded the Certificate of Appreciation by Chaesub Lee, director of the ITU Telecommunication Standardization Bureau during the ITU CxO meeting. [ITU](#)

Telecom Regional Excellence Awards



Best Middle Eastern Operator - **e&**



Best Asian Operator - **China Mobile International**



Best American Operator - **Verizon**



Best African Operator - Best African CSR Initiative - **Ooredoo Algeria**



Best Middle Eastern Fiber Infrastructure Deployment - **BNET Bahrain**



Best African Fiber Infrastructure Deployment - **MTN GlobalConnect**



Best Middle Eastern 5G Stand Alone Network - **Zain KSA**



Best Middle Eastern 5G User Growth - **stc KSA**



Best Middle Eastern 5G Infrastructure Deployment - Kuwait
Telecommunications Company (stc)



Best Asian CSR Initiative - du



Best Middle Eastern CSR Initiative - Zain KSA



Best Middle Eastern Digital Customer Experience - Ooredoo Oman



Best African Cloud Provider - Orange Egypt



Best Middle Eastern Cloud Provider - Zain KSA



Best Middle Eastern Vendor - Huawei ME



Best Middle Eastern 5G Innovation (Operator) - du



Best Middle Eastern 5G Innovation (Vendor) - Huawei ME



Best Middle Eastern Brand - Zain Group



Best Smart Africa Infrastructure Solution - MTN GlobalConnect



Best Middle Eastern ICT Investment - ZainTech



Best African ICT Investment - Global Partnership for Ethiopia B.V.



Most Innovative Middle Eastern Product/Service - stc KSA – MYCOM OSI



Best African Diversity & Inclusion Program - MTN GlobalConnect



Best American Diversity & Inclusion Program - Verizon

Telecom Review Global Excellence Awards



Best Global Sustainable Technology - **Nokia**



Best Global Green Technology (Operator) - **China Mobile International**



Best Global Smart Infrastructure Management/Solution - **Atrebo**



Best Global Loyalty & Rewards Program - **TIMWETECH**



Best Global Digital Transformation Provider - **Netcracker Technology**



Best Global AI Use for Network Monetization - **Realize**



Best Global Cloud Provider - **Amazon Web Services**



Most Globally Innovative Product/Service (Operator) - **Console Connect**



Most Globally Innovative SD WAN Solution - **APTelecom**



Best Global Satellite Operator - **SES**



Best Global Climate Initiative - **TELUS**



Best Global Fiber Infrastructure Deployment - **EXA Infrastructure**



Best Global 5G Infrastructure Deployment - **Mavenir**



Best Global Carrier Enterprise Service - **China Mobile International**



Best Global Enhanced Service Provider - **ZainTech**



Best Global Technology Deployment - **ZTE**



Best Global Vendor - NEC



Best Global DDoS Detection & Mitigation Solution - Verizon

Telecom Review Regional Merit Leader Awards



Africa CEO Merit Leader of the Year – Operator
Frédéric Schepens, MTN GlobalConnect



Middle East CTO Merit Leader of the Year – Operator
Eng. Abdulrahman Al-Mufadda, Zain KSA

Telecom Review Global Merit Leader Awards



Global Merit Leader CEO of the Year – Operator
Eng. Hatem Dowidar, e&



Global Merit Leader CTO of the Year – Operator
Dr. Ibrahim Gedeon, TELUS



Global Merit Leader CTO of the Year – Vendor
Mounir Ladki, MYCOM OSI



Leader of the Year – Gov. or Non-Profit Organization
Secretary-General, Mr. John OMO of African Telecommunications Union





Karim Benkirane
CCO, du



It's a great opportunity to meet our colleagues and people whom I haven't met with since pre-pandemic. Also, it's a great chance for me to network and promote what du is planning and how the metaverse is going to be a huge opportunity for telcos moving forward.



Jasim Al Awadi
Head of
Government &
Key Accounts
Segments, du



It is not the first time I attended this summit. The summit was an excellent platform to connect with the leaders in the region and even leaders abroad. It is the right event where we can socialize and where we can share a lot of thoughts with other players in the field on how we can elevate this industry to the next level.



Mark Birch
Global Startup
Advocate, AWS



I attended the Telecom Review Summit this year here in Dubai because, if you think about where the innovation is happening, it's happening in many different corners, particularly in the telecom industry. I thought it was a natural opportunity to see where the intersection of the telecom industry and cloud computing is and to have the opportunity to talk specifically about metaverses. What I found fascinating is that there was a thirst and energy for innovation in the audience and the leaders that were present. So to me, it's a natural place to be to have engaging conversations and bring innovation forward.



May Li
VP of Solution
Marketing,
Huawei



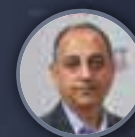
Telecom Review Summit is always one of the important events that Huawei participates in every year. It's a great forum for Huawei to share its experience with our partners to outline future development requirements. This year, it is great to see that Telecom Review is packing a 2-day event. In these two days, we can cover more subjects about transformation in the industry, envision how future technologies should look like, and discuss a lot of issues that are relevant to the industry and society.



Sylvia Anampiu
Managing
Director, MTN
GlobalConnect
Kenya



This is the first Telecom Review Summit that I have attended. It is a great platform to network with leaders across the sector. It was also a good opportunity to meet a number of colleagues; it was a good time to interact, catch up and see what we can do together.



Viplob Syngal
Head of
Business
Development,
NEC



The reason why I'm here is that I represent NEC. It's a key event in the region represented by CXOs, and our team from the Middle East is over here in full force. Also, I've been invited to speak at the event, so that's one of the reasons why I'm attending. In terms of what I've seen, the kind of attendance here is truly representative of senior-level people talking about the various issues that are affecting the region, so it's great to be here and be able to hear that because we can take that back into our organization and see how we support the businesses over here.



Bob Titus
Chief
Technology
Officer,
Netcracker



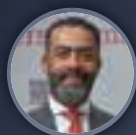
The reason I attended this conference this year is because Netcracker sees the region as strategic toward growth. We have a lot of strategic BSS and OSS transformation programs happening in the region. This summit is the opportunity to meet the leaders of those organizations. So it made perfect sense not only for me to be here, but for Netcracker to be a major sponsor of this event because we see the growth in the region. We see the critical needs of our customers in their transformations to become techcos.



Leslie Shannon
Head of
Ecosystem and
Trend Scouting,
Nokia



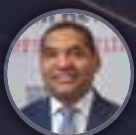
My focus is the metaverse, and part of the reason that I came in person to the Telecom Review Summit this year, even though I could have joined virtually in the metaverse, is that Dubai, as a location, is one of the thought leaders in the metaverse. This whole region is really going forward with blockchain and addressing questions of legality within the metaverse. I had to come here in person to see this. I've actually learned so much from the people who were up on stage – absolutely worth the trip!



Mohamed Tantawi
Managing Director
Telcos and Service
Providers – META,
Cisco



Telecom Review [Summit] has always been an industry-leading event; gathering us together in order to share our thoughts, and most importantly, how to overcome our challenges. It's an iconic event for all of us. Every year, we come and share our experiences, and at the same time, drive a lot of thought leadership.



Femi Oshiga
VP Sales,
Outdoor Wireless
Solutions, MEA
and APAC,
CommScope



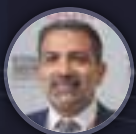
The Telecom Review Summit for us, at CommScope, is a must-attend event because we get to meet industry leaders, peers and even competitors. The exchanges are very worthwhile for us. The experience is always, this year included, very enriching – from the formal panel discussions and keynotes as well as the exchanges we had over coffee and within the exhibition booths where we ran into fellow industry participants.



Imran Malik Khan
Senior Vice
President,
Network Sales,
SES



This is an event that we always attend, and the main reason is because it attracts the industry leaders. We have C-level executives showing up on panels and we get to find out about industry trends, what the customers are expecting and learn where the industry is and where we are going. This is, by far, the best place to do so.



Elias Saab
CCO, Sofrecom



It's always a pleasure to attend Telecom Review events, and the Leadership Summit is a really valuable one. It's an amazing place where we can meet leaders, friends and partners from the ICT industry and to exchange ideas about the new technologies and trends in the market.



Eric Handa
CEO and
Co-Founder,
APTelecom



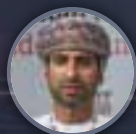
It's great to be here at the Telecom Review Summit. This is my sixth year attending and the team at Trace Media does an awesome job. Coming to Dubai, in the Emirates, every year in December is an amazing experience.



Dr. Bilel Jamoussi
Chief, Study
Groups
Department, ITU



The Telecom Review Summit is becoming a yearly event that all the telecom leaders attend. It's an amazing opportunity to be able to exchange with the leaders around the world. From the ITU perspective, we find it quite useful to have our CxO meeting where we bring the executives in the industry a day before the Telecom Review Summit to exchange on the priorities of technology and standardization in the next years to come.



Bader Al Zidi
CEO, Vodafone
Oman



The Telecom Review Leaders' Summit is an incubator for intellectual debate, partnerships and innovation that are instrumental for today's and future emerging challenges. At Vodafone, we have a strong belief in the joint power of human and technology as together we can navigate through a very difficult transformational journey to the future of emerging technologies.



Stelios Savvide
CTIO, Vodafone
Oman



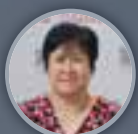
It's been a great experience to be at the Summit. It's an industry-leading forum with a lot of peers, partners and colleagues. This summit addressed a lot of key initiatives that we're looking at in our industry such as the introduction and deployment, or further use, of 5G which is a key for me as a CTO, as well as sustainability and how we develop and emerge our technologies, along with other very important things happening, especially around digitalization, etc.



Anwar Soussa
CEO, Safaricom
Ethiopia



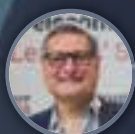
The Telecom Review Summit is a very well-known summit. Here we find the giants of the industry; there are the new giants but there are also the old giants. When I was younger, I really couldn't imagine myself talking to some big people, and now here I am talking to them and learning about their experiences. It is a fantastic way to mingle. It is a really good way to get new information on the industry, and it is a good platform to discuss your projects and to get new ideas for your own projects.



Dr. Atsuko Okuda
Head of ITU
Asia-Pacific



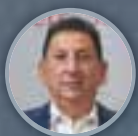
This is an excellent conference where we heard the thoughts, plans, challenges and opportunities of the industry leaders. I think this collective sharing of knowledge and information is very unique. I am happy to participate from the Asia and the Pacific region because it is not common or frequent that we have this inter-regional dialogue between Asia and the Pacific, Arab states and even beyond. For me, it was a very good opportunity to learn from what is happening in the Arab states and Africa, and I hope that I could bring it back to the Asia and the Pacific region.



Dr. Ibrahim Gedeon
CTO, TELUS



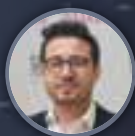
The Telecom Review Summit is one of the most relevant global conferences for our industry. The experience was great, it was a great size and the mix of CxO provided a truly global experience with a personal touch while covering topics across user experience, network technologies and commercial.



Ahmad Farroukh
CEO, Smile
Telecoms



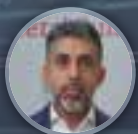
It might look [like] this conference is away from my territory. However, I make sure to attend each and every year. I think that for me, it is the best way to recap certain connections and to meet a lot of friends and leaders in the industry. It is significant for the networking and socialization that goes along with meeting people. In addition, the various topics raised are also important, and the challenges that are addressed will hopefully be solved.



Yahia Sefraoui
Director
of Digital
Transformation,
inwi



For me, it was a great opportunity to actually connect with the peers of the region and to learn about the hot topics and the trending topics that our peers are facing. Clearly, quite a few of those topics we ourselves are facing today and it is very much refreshing to have different perspectives on how others are thinking about similar issues and how they are tackling those issues and solving them. It's also a nice opportunity to connect with some of the partners that are leading the way in terms of thinking about what's next, so it was a great experience being here, connecting with the people and discussing those topics.



Fuad Siddiqui
EY Global 5G
Industry and
Emerging Tech
Leader



An event like this helps us debate and figure out mechanisms on how can we tap into different industry actors' strengths and then accelerate the transformation agenda and eventually helping our economy and society. That's why EY is here to help our clients and partners work together, think through the challenges and enable that future collectively for all of us.



The Actual Position and Advancement of 5G Globally in 2022

In April 2019, South Korea launched a global-first 5G network, which has been adopted by KT Corporation. 5G networks have been delivered by at least 209 operators globally, spreading across 83 countries. 5G offers significantly improved performance over earlier network technologies such as 3G and 4G.

According to Ookla, they have looked at Speedtest Intelligence data by undergoing Speedtest results in the third quarter of 2022 to assess the following: how 5G performance has changed since last year; where download speeds are the fastest at the country level; and how satellite technologies are providing

further connectivity options. They have also verified the countries where 5G isn't yet available to see where consumers are seeing improvements in 4G LTE access.

As of November 30, 2022, there were 127,509 5G deployments in 128 countries, up from 85,602 in 112 countries the previous year. Further, this year saw 5G speeds stabilize, with the median global 5G download speed

hitting 168.27 Mbps in Q3 2022 as compared to 166.13 Mbps in Q3 2021.

Difference Between 4G and 5G

When compared to third-generation mobile networking, 4G enabled a previously unattainable quality of video streaming and calling on the go, meaning live TV is now routinely watched on the daily commute. However, increased video streaming has caused network congestion.

Chris Mills, head of industry analysis, at Tutela, has explained that the difference between 5G and 4G is that the network congestion will be eliminated in 5G because it will bypass the technical limits of 4G, greatly enhancing how much data can quickly transfer across blocks of spectrum.

In addition, under suitable conditions, 5G download speeds can reach 10 Gigabits per second, up to 100x faster than 4G, and reach the level of performance needed for an increasingly connected society. For instance, American telecommunication company AT&T's 5G network can achieve download speeds of 75 Mbps, managing movie downloads in 49 seconds. The same on 4G can take up to an average of 50 minutes.

To summarize, the differences between 4G's long-term evolution and the emergence of 5G basically come down to low latency, high speed and high density. This results in a higher number of connected devices and more capacity, the latter ensuring that much more data can be transferred from source to destination within a decreased timeframe and increased energy efficiency.

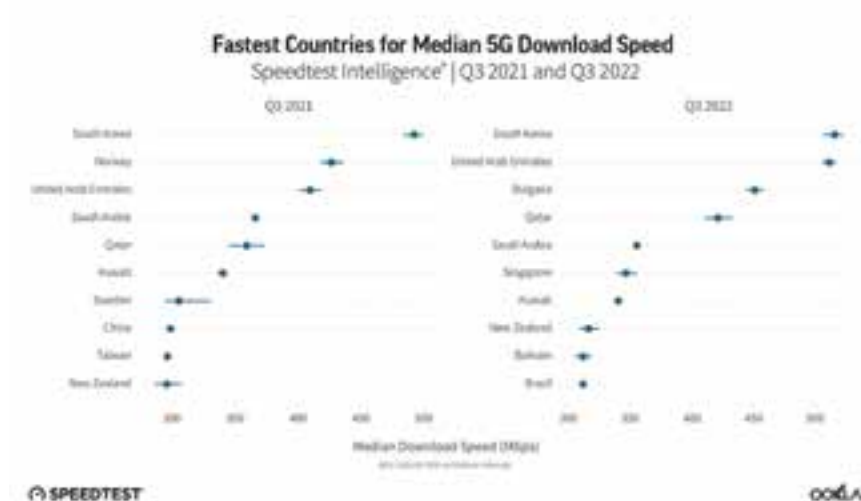
The Rank of the Fastest Download Speed by Using 5G in Different Countries

According to Ookla, South Korea and the United Arab Emirates have the fastest average download speeds on 5G in Q3 2022, with 516.15 Mbps and 511.70 Mbps, respectively, followed by Bulgaria, Qatar, Saudi Arabia, Singapore, Kuwait, New Zealand, Bahrain and Brazil. Bulgaria, Singapore, Bahrain and Brazil are new to the top 10 for 2022, while Norway, Sweden, China and Taiwan have dropped out of the top 10.

Satellite Availability

In 2022, the satellite internet has seen a rapid expansion from Starlink, which is a satellite internet constellation operated by SpaceX and provides satellite Internet access coverage to many countries.

Starlink speeds have increased over the years, particularly in Canada and



the United States. In the first quarter of 2022, Starlink reached the fastest satellite internet in Mexico, in North America; Lithuania, in Europe; Chile, in South America; and Australia, on the continent of Oceania.

Some countries were decreasing in the second and the third quarters of 2022, including Canada, France, Germany, New Zealand, the U.K. and the U.S.

5G Inaccessibility

Speedtest Intelligence found that more than 20% of the countries in the third quarter of 2022 had 2G and 3G connections that met the statistical threshold to be included (down from 70% in Q3 2021). These are primarily for the large portion of the population who are technologically behind and have to rely on decades-old technology that is sufficient for basic voice and text messaging, social media, and navigation apps — countries still eager for 5G. While it's an improvement to see so many countries have been removed from this list, many 2G and 3G consumers remain hopeful that mobile operators will make 4G and 5G networks more efficient.

Future Vision of 5G

The future vision of 5G sees sustainability that meets the requirements of 1000x traffic growth. 5G will provide users with fiber-like data rates and a "zero" latency user experience. 5G will be able to connect 100 billion devices. 5G will be able to deliver a consistent experience

in a variety of scenarios, including ultra-high traffic density, ultra-high connection density and ultra-high mobility. 5G will also provide intelligent optimization based on service and user perceptions, improving energy efficiency and cost efficiency by more than a hundred-fold. **TR**



The future vision
of 5G sees
sustainability
that meets the
requirements of
1000x traffic growth



e& Concludes Fourth Cohort of AI Graduate Programme



e& (formerly known as Etisalat Group) has successfully concluded the fourth cohort of the AI Graduate Programme, which aims to invest in the UAE's future leaders and enables graduates to build their capabilities in emerging technologies and leadership skills to help lead the country's digital future.

The 66 new graduates were welcomed by Ali Al Mansoori, CHRO of etisalat by e&, UAE, and will be

offered a unique learning-by-doing opportunity.

Addressing the graduates, Ali Mansoori said: "We are beyond excited to welcome these talented graduates to the AI Graduate Programme this year. It is a priority for us to nurture the future leaders and digital architects of tomorrow with the right skills from day one to ensure you are all ready for a rapidly changing, technology-driven world. This Programme is a great platform for them to kickstart an illustrious career."

The rising talents will work on business-critical projects and real-life cases, providing the next generation of leaders with authentic learning experiences that will set their career pathways up for success.

Launched by e& in 2021, the AI Graduate Programme has set a new milestone with over 82 graduates enrolled in the Programme in 2022.

The candidates joining this cohort were selected through intense hackathon and thinkathon assessments, where they were challenged to attempt a functional case study and present solutions back to the business.

These graduates will embark on an exciting and challenging nine-month journey in three phases: understanding data culture and analytics, deep-diving into power skills such as communication and decision-making, emotional intelligence, learning AI for business leaders and leadership development.

Zain KSA Wins Four Awards at Telecom Review Leaders' Summit



Zain KSA won four awards at the annual Telecom Review Leaders' Summit, which honors ICT leaders for their pioneering achievements. Zain KSA won awards for "Best Middle Eastern 5G Standalone Network", "Best Middle Eastern Cloud Provider", "Best Middle Eastern CSR Initiative", and "Middle East CTO Merit Leader of the Year" during the summit's 16th edition held in Dubai on December 7 and 8 2022.

Zain KSA was awarded "Best Middle Eastern 5G Stand Alone Network" in recognition of its roll-out of the Kingdom's first 5G Stand Alone network in January 2022. This paved the way for 5G-based applications and use cases, and opened up new horizons for the growth of digital services enabling individuals and businesses to keep up with the nationwide digital transformation, in line with the goals of Saudi Vision 2030. With this technology,

Zain KSA has provided added value to its individual, business, and government customers by providing a reliable and secure telecommunications infrastructure that achieves the best possible response times.

In addition, Zain KSA received the "Best Middle Eastern Cloud Provider" award in recognition of its contributions to developing the Middle East's cloud computing sector by supporting Saudi Arabia's digital transformation through Zain Cloud. Combining the best technologies through partnerships with world-class cloud providers while adhering to the highest cybersecurity and data protection standards, Zain Cloud supports a wide array of flexible and practical applications. This allows customers from governmental entities, the business sector, and individuals to grow their businesses and benefit from cloud-based infrastructure, services, and software to manage their businesses through strategic and interactive decision-making without human intervention.

Zain KSA won the "Best Middle Eastern CSR Initiative" in recognition of its corporate sustainability and social

responsibility strategy, specifically its efforts in empowering Saudi women and increasing their representation in leadership positions within the Saudi ICT sector. Zain KSA's initiatives to empower women and increase diversity and inclusion, most notably "Women in Technology", have inspired national talent and motivated them to work in the sector.

The Telecom Review Leaders' Summit also awarded Zain KSA's Chief Technology Officer, Eng. Abdulrahman Al-Mufadda, with the "Middle East CTO Merit Leader of the Year" in recognition of his leadership within the company that also reflected on the whole ICT sector, as well as his remarkable efforts in developing advanced digital services and solutions, and his role in helping the company to redefine the role of telecom providers to achieve sustainability in the sector. Eng. Al-Mufadda and his team led key initiatives that contributed to empowering a digital knowledge-based society and accelerating the Kingdom's digital transformation, making Zain KSA a key partner in achieving the Kingdom's goals of spreading the social and economic advantages of digitalization and transforming into a hub for innovation and technology.

du and Nokia to Uplift Employees' Expertise in the Digital Field



du, from Emirates Integrated Telecommunications Company (EITC), announced a partnership with Nokia to enhance the skillsets of employees and accelerate efforts to drive talent development in the UAE. As part of the agreement, Nokia will institute training and development programs covering technology competence and knowledge transfer to du employees.

The program will ensure that du employees at all levels are equipped with the technical knowledge and skills to respond to the increasingly complex challenges within the digital, technology and telecommunication industries.

Fahad Al Hassawi, CEO at du, said: "du is committed to expanding the expertise of our learning and development programmes. Our engagement with Nokia and subsequent training programmes are in line with du's transformational ambition and are geared toward developing and enhancing our workforce. As a technological partner, Nokia will play a vital role in helping us attain Vision 2030 by elevating the UAE's digital profile."

The structured development programs, based on Nokia's global best practices, will focus on technology and digital trends, provide an opportunity to broaden horizons, change mindsets, improve organizational execution and support strategy implementation. A broad spectrum of training and development programs — including web-based trainings, workshops, events, demonstrations and practical experience

— will offer flexibility to participants' learning preferences. The program is designed to equip du employees with the skills, confidence and demonstrable abilities needed in today's technologically competitive environment.

Amr K. El Leithy, SVP, Middle East and Africa Market, Nokia, said: "We are delighted to partner with du to empower the UAE's workforce toward the next phase of growth in the digital era. The program will help du nurture home-grown talent with global knowledge and world-class technical expertise. Nokia's global learning and experience hubs around the world will provide du's personnel the opportunity to learn and successfully perform in a fast-changing multicultural environment. As a global technology leader, Nokia is fully committed to helping du play a pivotal role in UAE's human capital development."

stc's Success Story Signifies Regional Development and Expansion



With a market value of more than 187 billion riyals, stc Group has transformed from a company that merely provides communication and internet services to a digital enabler that is considered the most prominent in the Middle East region. The comprehensive strategy launched by the Group had the superlative role in endorsing digital transformation in the Gulf region as it sought to diversify investment opportunities.

During the past two years, stc Group launched many subsidiaries in the fields of cybersecurity, Internet of Things, Artificial Intelligence, cloud computing, infrastructure and 5G technologies that serve different Gulf communities and support the digital transformation

in the region. The success story of this development, growth and accomplishments achieved by the Group extended to becoming the main driving force of the ICT sector in both Kuwait and Bahrain.

ICT Transformation in Gulf Region

The beginning of the Group's success story in the expansion and growth process was in Kuwait, where in 2008 it witnessed the birth of a new star that shone brightly over the communications landscape, and its features emerged as the shape a giant that will lead the ICT sector to a promising future. During its first year, the Group attracted half a million customers in Kuwait, and within only four years, it began to achieve profitable returns for investors. The company's official listing on the Kuwait Stock Exchange was indicative of emerging success and growth, as the volume of retained profits increased with the development of the company's revenue. During the third quarter of 2022, stc's market share reached 39.8% of the telecommunications sector's revenues

in Kuwait — a sector high — for the first time since the company's inception.

In the Kingdom of Bahrain, stc entered the telecom market in 2010 as the third telecom operator in the Kingdom. The group quickly became a major driving force towards achieving the digital transformation vision, as it captured 41% of the market revenues and proved its strength in the competition to become the first operator in the mobile phone markets, carrier sector customers and operators in the Kingdom of Bahrain. It also proved the fastest-performing company throughout the region and the first in developing local, regional and global networks through continuous investments in infrastructure development. It was approved as the first commercial operator of the 5G network in Bahrain, in the fields of cybersecurity and cloud computing. The company also provided services outside the scope of communications, including insurance and financial services, and at the highest levels, in order to keep up with the requirements of customers' daily lives.



An Elevated Future: The UAE Space Sector Is Thriving



16–18 MAY 2023
DUBAI WORLD TRADE CENTRE

CREATIVE. CONNECTED. CONSCIOUS.

THE MEASA REGION'S LEADING EVENT FOR CONTENT CREATION, BROADCAST, PRODUCTION, AND SATELLITE INDUSTRIES

Tap into new business potential as thousands of key buyers, thought leaders and decision makers from over 120 countries come together to design, shape and co-create the future.

CREATIVE

Discuss and dive into trends, challenges, innovations and opportunities.

CONNECTED

Explore, meet and exchange experiences with a diverse range of stakeholders including industry executives, integrators, engineers, solutions providers and more.

CONSCIOUS

A focus on sustainable practices across the content creation and delivery ecosystem with special conference content and workshops.

Get in touch with us to exhibit, sponsor or visit: www.cabsat.com

[f](#) [t](#) [in](#) [@](#) @cabsatofficial

#CABSAT2023

Organised by



مركز دبي التجاري العالمي
DUBAI WORLD TRADE CENTRE

2023 is set to be a busy year for UAE's space exploration, from making history as the first Arab nation to land a rover on the Moon to sending an Emirati astronaut for a six-month trip to the International Space Station.

Indeed, space plays a critical role in sustainable development. His Highness Sheikh Mohamed bin Zayed Al Nahyan affirmed that the United Arab Emirates will continue to consolidate its leading position in the space sector, as it is one of the vital spheres for securing sustainable development. The sector creates significant economic and scientific opportunities.

The latest initiatives to establish international partnerships to conduct space missions that would increase scientific knowledge and drive innovation will enable a strong and sustainable national space sector that can help strengthen specialized local skillsets and push the country's ambitious leadership forward.

Historic Breakthroughs

The Middle East is the known birthplace of astronomy and was the center of its development during the medieval period. In the 21st century, the region maintains its space aspirations, with the UAE at the forefront. Figures from 2019 show that the UAE's investments in space exceeded Dh22 billion (\$5.99 billion), with over 50 space-related establishments operating in the country and creating around 1,500 jobs.

In February 2021, in its first excursion into deep space, the UAE's nearly 7-year planetary mission became a reality when the Hope probe successfully entered orbit around Mars. This made the UAE the first Arab country, and the fifth globally, to ever reach the Red Planet.

In July 2022, the UAE established a Dh3 billion (\$817 million) national investment and development fund for the space sector. The National Space Fund will support groundbreaking new programs launched to support international and Emirati companies

cooperating in the latest engineering, science and research applications. As part of this fiscal initiative, the UAE announced plans to be the first Arab country to develop a constellation of advanced imaging satellites using Synthetic Aperture Radar (SAR) that will address the critical need for better environmental and land usage monitoring, data collection and analysis.

Salem Al Qubaisi, director general of the UAE Space Agency, said, "The National Space Fund will encourage global partnerships to establish themselves here in the Emirates, providing new and vital technology platforms and development to answer the needs of the UAE Space Programme and other global customers for vital innovation and technologies that answer the needs and possibilities of today's world."

Despite several delays, before 2023 started, the UAE made further history by successfully launching the Arab world's first lunar rover, Rashid. The low-energy route, which started in early December 2022, will comprise a 385,000 km odyssey that will make the UAE the first country in the Arab world and the fourth worldwide to land on the Moon. The rover is expected to touch down about five months after its launch, around April 2023.

His Highness Sheikh Mohammed bin Rashid Al Maktoum, vice president and prime minister of the UAE and Ruler of Dubai, shared an aspirational message regarding this: "Explorer Rashid is part of an ambitious space program for the UAE.. that started with Mars.. passing through the Moon.. to Venus.. our goal is to transfer knowledge, develop our capabilities and add a scientific footprint in human history."

Following up on its successful launch of the Hope spacecraft into Martian orbit and manifesting the UAE's Projects of

the 50, the GCC country also plans to send an unmanned spaceship to the Moon in 2024. There have also been suggestions of branching into space tourism, exploring Venus by 2028 and landing on an asteroid, making it the fourth country to do so if successful.

Collaboration Is Key

Over the last decade, the UAE space sector has accelerated its activity, driven by its technological advancements and an increased number of stakeholders that fuel such rapid development.

International and cross-sector collaboration is thriving, and for the high-growth sector to continuously succeed, there is a real need to effectively collaborate, organize the ecosystem and integrate the activities with existing and upcoming national space programs.

"As we implement our long-term ambitions in space, the first steps of which are clearly outlined in our National Space Strategy 2030, we cannot over-emphasize the importance of international collaboration to our plans. Our space program has been built on such collaboration, with partners in Europe, South Korea, the US, Japan and elsewhere," Sarah bint Yousif Al Amiri, minister of state for public education and advanced technology and chair of the UAE Space Agency, noted.

One of the latest collaborations, between the UAE's Mohammed Bin Rashid Space Centre (MBRSC) and the China National Space Agency (CNSA), was announced in September 2022. The agreement marks the first joint space project between the UAE and China as they work together on future lunar efforts.

Tapping China for future Moon explorations is thought to be beneficial,

given the nation's impressive record of successfully launching three lunar surface missions.

In a similarly advantageous agreement, the Philippine Space Agency (PhilSA) also inked a cooperation memorandum with the UAE Space Agency to promote joint space research and development, capacity-building, people-to-people exchange and space industry building. This pioneering agreement executed in December 2022 will help promote collaboration in applications that include not only space exploration but also research, access to data and its utilization for challenges such as climate change, disaster management, emergency response and agriculture.

Latest Developments

The United Arab Emirates has made momentous strides in its space program, positioning itself as a hub for advanced technology, diversifying the economy away from oil and rekindling a curiosity in space culture in the new generation.

Nearing the end of December 2022, the UAE Space Agency launched a six-month training program for graduate Emiratis, aimed at providing young nationals with the space-related skills and expertise necessary to support national space programs. The "Space Workshops" is an intensive, experiential space systems development accelerator that bridges academic knowledge with the realities of space development projects.

Ibrahim Al Qasim, deputy director general of UAE Space Agency, said, "Today, the space sector has become an integral pillar of sustainable economic growth for the UAE and other countries globally. With a regionally unique regulatory framework, the UAE's space program is perfectly positioned to become a key sector in our future vision for the next 50 years."

The upcoming geospatial analytics platform of the Space Data Center is set to contribute to meeting the main requirements of the transformation projects announced by the UAE government. Through the platform —

expected to be fully operational by Q4 2023 — the UAE Space Agency aims to facilitate access to satellite data for scientists, researchers, government and private institutions, startups and community members to develop solutions in the form of space data apps and value-added services (VAS).

Addressing the procedures and regulations of non-geostationary satellite systems, the Telecommunications and Digital Government Regulatory Authority (TDRA), in cooperation with the ITU, held a three-day workshop targeting satellite operators, academia and other relevant organizations in the UAE that already own or have initiated space and satellite launch programs. These projects would require particular knowledge of ITU procedures and regulations related to satellite networks and systems.

Presented by ITU experts, the workshop strengthened participants' knowledge of the regulatory procedures of satellite systems and network filings to better develop their current and future space projects — endeavors that would contribute to capacity building and enhance the UAE's position in the space sector.

Notably, the UAE Space Agency and Amazon Web Services (AWS) have signed a statement of strategic intent and cooperation, designed to support the nation's vibrant, sustainable, competitive and innovative space sector. AWS will collaborate with the Space Agency and related UAE government space organizations on three initiatives: the Emirati — AWS Space Industry Development Program (EASID); the Emirati — AWS Talent for Space Program (EATS); and the Emirati — AWS Open Data Sponsorship Program.

The EASID initiative focuses both on the growth of existing commercial space organizations as well as the establishment of an environment for new entrants like space startups. In addition, the EATS initiative includes outreach and training designed to support talent development for the space industry in the UAE, particularly

with regard to cloud computing and big data.

The open-data program will encourage collaboration among the UAE space and research communities through the sharing of data sets on AWS related to space-data-driven initiatives. These include space surveillance and space situational awareness programs.

The agreement between the hyperscaler and the space agency builds on AWS's ongoing support of regional space endeavors such as Hope Probe, which utilizes AWS to analyze and share scientific data about the Martian atmosphere. **TR**



2023 is set to be a busy year for UAE's space exploration, from making history as the first Arab nation to land a rover on the Moon to sending an Emirati astronaut for a six-month trip to the International Space Station



Huawei Shares Detailed Approach to Reach Its 2023 Business Goals



Huawei's rotating chairman, Eric Xu, confirmed that the company had successfully pulled out of crisis mode in 2022 and managed to get back to business as usual with external restrictions still in place. The company expects to round off the year with a total revenue of 636.9 billion yuan, in line with forecasts and slightly higher than last year's total revenues.

According to the company's rotating chairman, 2023 will be the first year that Huawei returns to business as usual with external restrictions still in place. It will be a crucial year for the company; hence, the priorities for Huawei moving ahead would be to actively drive progress, keep inspiring passion across the organization and further hone everyone's capabilities. By doing this, Huawei can create greater

value for its customers, partners and society at large.

In specific, looking ahead to 2023, Mr. Xu shared a detailed approach on how the company aims to reach its business goals for 2023 and lay a solid foundation for Huawei's continued survival and development:

1. Maintain heavy investment in R&D. The company is fully committed to future-oriented basic research and open innovation and will focus its limited resources on value-creating domains while upholding open collaboration across the value chain to guarantee its supply continuity and resilience.

2. Secure victory through quality. Huawei aims more than ever to make the company's name synonymous with high quality in the ICT industry and secure victory through quality. To continuously create value for customers, Huawei will work towards enhancing total quality management based on ISO 9000 standards and implementing a strategy-driven, all-hands, full-process

quality management system across our entire value chain in alignment with our customers' needs. Additionally, Huawei will invest more and improve quality together with its suppliers in order to deliver high quality to all customers.

3. Commit to progress and seize opportunities to grow the harvest. Huawei's strength lies in our diverse business portfolio and strong business resilience, and we will focus on leveraging this to realize high-quality growth. All of Huawei's business domains need to optimize resource allocation, pass down and enforce business performance accountability and enhance key capabilities in operations management, which will encourage all operating units to create greater value.

4. Press ahead with transformation to inject vitality into the organization and motivate everyone to forge ahead. Huawei will continue moving forward to cultivate local teams as a crucial factor in the company's long-term survival and development in local markets outside of China.

AWS Initiates AWS Local Zones Location in Muscat, Oman



Amazon Web Services, Inc. (AWS), an Amazon.com, Inc. company, announced the launch of a new AWS Local Zones location in Muscat, Oman. AWS Local Zones are a type of infrastructure deployment that places AWS compute, storage, database and other services near large populations, industry and information technology (IT) centers—enabling customers to deploy applications that require single-digit millisecond latency to end users or on-premises data centers. Customers can run workloads with low latency requirements on AWS Local Zones while seamlessly connecting to the rest of their workloads running in AWS Regions.

AWS now has 25 AWS Local Zones around the world, with announced plans to launch 27 more AWS Local Zones globally. To get started with AWS Local Zones, visit aws.amazon.com/about-aws/global-infrastructure/localzones/locations.

"AWS Local Zones contribute to the Sultanate's efforts to accelerate digital transformation and burgeon the digital economy while strengthening Oman as a major global hub for cloud services hosting," said Dr. Ali Amur Al Shidhani, undersecretary of the Ministry of Transport, Communications and Information Technology. "AWS Local Zones help Oman businesses store their data locally and benefit from select AWS cloud services like analytics, artificial intelligence and computing. Oman aspires through these investments to progress the National Digital Economy Program and Oman's Vision 2040 to accelerate

digitization in strategic and economic sectors."

For applications that require single-digit millisecond latency or have to remain within a geographic boundary for regulatory reasons, the location of cloud infrastructure matters. Most customer workloads run in an AWS Region, a geographic location where AWS clusters data centers to serve customers. However, when a Region is not close enough to meet low latency or data residency requirements, customers need AWS infrastructure closer to their data source or end users. Organizations have traditionally maintained these location-sensitive workloads on premises or in managed data centers that require customers to procure, operate and maintain their own IT infrastructure and use different sets of APIs and tools for their on-premises and AWS environments.

Rolf Werner Appointed as Nokia's Head for Europe



Nokia announced that Rolf Werner has joined the company as the Senior Vice President of its European region, reporting directly to Chief Customer Experience Officer Ricky Corker.

Werner expressed: "This is an excellent time to join Nokia. It is clear that Nokia has an excellent opportunity to seize the market as one of the very few companies that can offer solutions to its customers across the full range of technologies available in the industry."

Bringing more than 25 years of business and industry experience, Rolf joins

Nokia from Cognizant Technology Solutions, where he was the CEO of Germany with responsibility for the DACH region. Under his leadership, the company delivered double-digit growth for the region, including the acquisition of ESG Mobility.

Heading Nokia's Europe Region, Rolf will help drive Nokia's already significant growth and market share. In addition, he will deepen Nokia's relationships with key European customers and support the company's growth ambitions into new market segments. Nokia will also continue to support Europe's ambitions to be a powerhouse of innovation globally, and Rolf's team will guide CSPs and enterprises as they deploy 5G, fiber broadband and private wireless.

Corker said: "I am thrilled to welcome Rolf to the company. Having a broad experience across the industry, gained

in software, service providers and in many other areas, means that Rolf will be able to help guide Nokia's European organization through the next stage of our corporate development."

Nokia is supplying 5G and many other technologies across its portfolio to major service providers and leading operators, as well as hyperscalers, enterprises and government organizations throughout Europe. Nokia provides the critical networks that European governments and service providers depend on, relying on the decades of experience and investment that Nokia has across European infrastructure. Nokia has an unrivaled track record of innovation in Europe, including hosting nine Nokia Bell Labs research centers. Bell Labs pioneered many of the fundamental technologies that are being used to develop 5G and fiber broadband standards.

CommScope Launches Next-Gen Wi-Fi 7 Home Network Solutions



CommScope announced its entry into the Wi-Fi 7 retail market with the launch of the SURFboard G54 DOCSIS 3.1 quad-band Wi-Fi 7 cable modem.

The flagship SURFboard G54 provides significant performance enhancements, including the latest Wi-Fi 7 technology, and supports multi-gigabit Internet plans. The SURFboard G54 is designed to include other advanced features, including DOCSIS 3.1, quad-band Wi-Fi 7 (BE17880, or the total speed the system can support), a 10 Gbps Ethernet port and four 1 Gbps LAN ports.

As the journey to the multi-gigabit network of the future continues, consumers can be ready to support

next-generation, higher-speed internet plans with the SURFboard G54. Coupling the latest DOCSIS 3.1 technology with new Wi-Fi 7 capabilities, the SURFboard G54 provides multi-gigabit speeds (dependent upon the service provider plan) throughout the home. In addition, a 10 Gbps Ethernet port ensures the home network can support additional gigabit services directly to the Ethernet connection.

Jonathan Wu, vice president of product and customer support, CommScope Home Networks, said: "The flagship SURFboard G54 takes innovation to the next level with DOCSIS 3.1 and quad-band Wi-Fi 7. It provides a superior home networking experience for our customers — no matter what next-generation plans are to come in the years ahead."

As new smart devices are released and added to the home, the SURFboard G54 ensures that older devices with previous Wi-Fi

technology (Wi-Fi 5 and earlier) do not degrade the performance of the home network.

The SURFboard G54 features intelligent quad-band steering to ensure all devices have the optimal connection to the network depending on usage and balances the system as needed, especially when varied Wi-Fi generation devices are present. Smart channel management technology avoids channel interference and improves bandwidth to ensure the home network is not impacted by neighboring networks. Alternatively, users may choose to manually set devices to each band to personally manage the connections.

Moreover, CommScope Home Networks is developing Wi-Fi 7 solutions for service providers, which will include the potential of Wi-Fi 7 for higher levels of deterministic, service-aware, low-latency Wi-Fi with a range of solutions based on technology provided by multiple silicon partners.



Cloud Computing for Business: Types, Benefits and Evolution

Cloud computing can be a way to store and access data and programs remotely using the web instead of using the information on your computer's hard drive.

Four Types of Cloud Computing
IaaS and its benefits:
The first type of cloud computing designed to provide basic computing, network and storage resources to users on demand, over the Internet and on a pay-as-you-go basis is Infrastructure-as-a-Service (IaaS).

IaaS eliminates the need for large upfront investments and unnecessary "owned" infrastructure by allowing end users to authorize the scaling or reduction of resources as needed.

This type of cloud computing allows all users to manage applications, data, operating systems, middleware and runtimes. Virtualization, storage, networking and servers are all offered by IaaS providers. Users don't need an onsite data center and don't need to worry about physically updating or maintaining these components.

The three most common benefits of IaaS are as follows:

- **Pay-as-you-go:** In contrast to traditional IT, IaaS does not necessitate any upfront capital investments, and end users are only responsible for paying for what they use.

- **Performance and Latency:**
Most IaaS providers have large geographic footprints, so it's easy to put applications and services closer to users, to provide lower latency and improve performance.

- **Speed:** With IaaS, end users can provide minimal or vast sums of assets in a matter of minutes, testing unproven ideas rapidly or scaling previously demonstrated ones quickly.

PaaS and its benefits:
The second type of cloud computing is Platform-as-a-Service (PaaS). This goes a step beyond full on-premises

infrastructure management. Here, the provider puts the hardware and software on its own infrastructure and makes this platform available to users as an integrated solution or as a service over an internet connection.

PaaS technology provides virtual endeavor infrastructure such as data centers, servers, storage, network equipment and intermediate software layers that include tools for building apps.

Some of PaaS benefits are as follows:

- **Maintenance:** PaaS means developers do not have to deal with building, configuring and updating their own servers.
- **Timesaving:** PaaS lets you build applications faster than if you had to build, configure and deploy your own platform and backend infrastructure. It provides instant access to a complete software development environment and tools to cut your coding time by tens of thousands of times.
- **Reachability:** Many PaaS providers offer development options for multiple platforms, such as computers, tablets, mobile devices and browsers. This makes building cross-platform apps faster and easier. Additionally, because PaaS is accessible over the Internet, developers can work together even if some employees are remote.

SaaS and its benefits:

Software-as-a-Service, or SaaS, is the third model type where access to software is provided on a subscription basis and where the software resides on external servers rather than internal servers.

This is software that allows you to access your data from any device with an internet connection and a web browser. In this web-based model, software vendors host and maintain the servers, databases and code that make up the application.

Some of the benefits of SaaS are:

- **Easily operated:** You don't

have to worry about setting up infrastructure because SaaS is already installed and configured in the cloud (which can be complicated). Typically, implementation entails simply registering and downloading a web browser extension or application to your computer.

- **Stack integrated:** Because most SaaS applications are built to be integrated, the SaaS model is highly customizable. SaaS integration allows apps to "talk" to one another. SaaS integration automates the process of synchronizing data across multiple locations or moving data from application to application.
- **Cost-effective:** Because SaaS is typically subscription-based (no license fees), it has lower upfront costs. Because SaaS is hosted in the cloud, there are no hardware installation costs. Free Hardware — there are no ongoing fees for hardware maintenance. As a result, startups can profit from SaaS.

The Purpose of Cloud Computing

Cloud services ensure that your data is securely stored in an offsite cloud storage system that is accessible from any internet-connected location or device. Cloud storage allows you to securely share files and sync files across devices. Dropbox, Microsoft OneDrive and Google Drive are examples of popular cloud storage services.

In addition, cloud computing consists of a cloud backup service — a protected solution if your business suffers a server crash, cyberattack or other data loss. The best cloud backup services combine storage, data sync and restore, real-time backup, archiving and strong security. Many cloud storage services also offer cloud backup functionality.

Moreover, cloud hosting services can facilitate different forms of information sharing, such as email services, application hosting, web-based phone systems and data storage. A cloud hosting service

can host your business website, manage your database and manage your domain name. Since the cloud hosting service is external, scaling to handle peak loads is easy.

Evolution of Cloud Computing


The growth of technology has been the catalyst for the evolution and development of cloud services over the past few years.

We can take, for example, Amazon, Google, Microsoft and OpenStack, which each launched divisions by 2010. These companies have made cloud computing services more accessible to the public, and they have taken on significant importance in the information and technology industries.

As we all know, it's easy to make mistakes when multiple team members are working on the same digital file. Cloud-hosted files are in one central location, so data is automatically synced across all devices, and users always have access to the latest file versions.

Businesses often rely on specialized software that employees don't have on their home computers. Cloud computing allows users to access files and special applications as if they were in the office. The remote work benefits of cloud computing are especially important given that 1 in 3 of remote workers are likely to quit if they need to return to the office full-time after the pandemic.

A natural disaster, power surge, or hardware failure can cause catastrophic data loss that cripples your business at any time. When organizations store or back up critical data, files and applications in the cloud, that information is safe and accessible.

To sum it all up, implementing a new technology requires training staff during and after implementation and establishing an effective troubleshooting system. You may also encounter initial resistance from your employees, especially those who are new to technology. 

Iristel Continues Its Global Expansion with Launch of Service in Kenya

Iristel, a global telecommunications services company, has announced its expansion into Kenya.

Company CEO Samer Bishay (@SBishayIRIS), declares: "Today is an exciting day as we are pleased to bring Kenya businesses carrier-grade communication solutions. We will begin with our best-in-class wholesale services and expand our product offering in the coming months."

This development gives Iristel a presence on the continent of Africa as the company seeks to grow its diverse portfolio of communications solutions into new emerging markets.

For the first phase of its worldwide growth, Iristel will offer the possibility to acquire SIP trunks, which can be combined with its OnNet footprint, as well as decentralized identifiers (DIDs).

In addition, Iristel's voice service offers comprehensive, facility-based local telephone number coverage as well as inbound voice origination service, enabling OTT and voice service providers to offer innovative voice and messaging (SMS) services to their business or consumer end users.

All calls to Iristel-managed phone numbers are collected and routed to either a single or many customer IP addresses via this wholesale service. Iristel customers use this service to provide next-generation primary line phone services to consumers, to replace current toll-free lines with more cost-effective local numbers — providing a local touch — or to build new mobile or OTT-based consumer apps. Iristel's voice service is distinctive in that it offers service providers near-ubiquitous local service reach, network scale and cost-effectiveness.

ITU Introduces New Management Team

The new senior leadership team of the International Telecommunication Union (ITU) took office on January 1, 2023, after being elected by member states in September 2022.

The team includes experienced ITU officials and leaders from the industry. The team is expected to bring the United Nations' specialized agency for information and communication technologies into its next era of connecting the world, with particular emphasis on reaching the billions of people that remain offline.

The first woman to head the organization since its establishment in 1865, Doreen Bogdan-Martin became the ITU's 12th Secretary-General since it was designated a UN-specialized agency in 1947.

Member states elected Bogdan-Martin as Secretary-General in September at the ITU's Plenipotentiary Conference (PP-22) in Bucharest, Romania. She comes to the post from the ITU's Telecommunication Development Bureau, where she had served as a director since 2019.

"The world is facing significant challenges — escalating conflicts, a climate crisis, food security, gender

inequalities and 2.7 billion people with no access to the Internet," said Bogdan-Martin upon her election. "I believe we, the ITU and our members, have an opportunity to make a transformational contribution. Continuous innovation can and will be a key enabler to facilitate resolution of many of these issues."

Working Together as One ITU

Tomas Lamanauskas has joined the ITU's new leadership team as Deputy Secretary-General while Mario Maniewicz has begun his second term as Director of the ITU's Radiocommunication Bureau, which oversees the ITU Radio Regulations.

Seizo Onoe has assumed the role of Director of the ITU's Telecommunication Standardization Bureau and Cosmas Zavazava has taken over as Director of the ITU's Telecommunication Development Bureau.

All five senior officials were elected to four-year terms.

The new team takes over from the ITU's 11th Secretary-General, Houlun Zhao, former Deputy Secretary-General Malcolm Johnson and former Telecommunication Standardization Director Chaesub Lee.

First Two SES O3b mPOWER Satellites Successfully Launched

SES announced that the first two O3b mPOWER satellites were successfully launched into space by a SpaceX Falcon 9 rocket from Cape Canaveral Space Force Station in Florida, United States.

Built by Boeing and designed to deliver unprecedented performance with a first-of-its-kind software-driven payload, O3b mPOWER is SES's second-generation medium earth orbit (MEO) system. Customers leveraging O3b mPOWER are set to transform their operations and benefit from terabit-level scale; the highest, most flexible, guaranteed throughput; roundtrip latency of less than 150 milliseconds; and unmatched service availability.

The O3b mPOWER ecosystem is easily scalable and comprises an initial 11 powerful satellites, each equipped with more than 5,000 digitally formed beams, and an extensive next-generation O3b mPOWER ground infrastructure. It enables SES to address current and future connectivity needs for governments, mobile network operators, energy companies, world-class cruises, and enterprises across the globe. Key customers who have signed up for O3b mPOWER include Microsoft, Princess Cruises, Marlink, Jio Platforms, Orange, Claro Brasil and the newly-announced Vodafone Cook Islands.

US Continues to Limit China's High-Tech Sector With Fresh Bans

The tech war between the US and China continues to gain momentum. To counter a move by the US to disrupt China's semiconductor technology supply, China is allocating \$143 billion to boost its capabilities in advanced chip design and manufacturing. As one of several measures, this fund will provide financial subsidies and incentives for Chinese chipmakers to develop and acquire the required semiconductor technology.

Since 2005, China has been the world's largest importer of semiconductors, relying heavily on TSMC to provide its supplies. Other large chip importers include the US, Japan and South Korea.

In October, the US barred companies from supplying semiconductor chips or devices to Chinese companies in a bid to thwart China's ability to manufacture advanced chips. The sale or import of new telecommunications equipment from Huawei and ZTE has also been banned, with the Biden administration citing national security risks.

China responded that it will "adopt necessary measures to safeguard the legitimate rights of domestic firms."

In September, the Biden administration issued a ban on US tech firms that receive government funding to build advanced technology facilities in China for a decade. This coincided with its plan to increase US semiconductor production and reduce its reliance on production from Chinese factories.

In one of its most recent initiatives, the US Commerce Department added 36 Chinese companies to its trade blacklist, with the goal of derailing China's advanced chip development and impeding the growth of military modernization. This move makes it difficult for US companies to obtain licenses to export essential technology for Chinese firms. Non-US companies will also be prohibited from exporting products that contain specific US technology to Chinese firms. However, this does not only directly impact the semiconductor industry but also electronics and automobile manufacturing.

EXA Infrastructure Expands With Second Terrestrial Transport Route in Iberian Peninsula

EXA Infrastructure, the largest dedicated digital infrastructure platform connecting Europe and North America, will be further investing in the Iberian Peninsula with a second new diverse terrestrial transport route between Spain and Lisbon connecting to EXA's Spanish backbone. The new northern route will serve increasing customer demand across the Iberian Peninsula connecting to data center hubs across Europe.

EXA's strategic investment in southern Europe promises to enable the most diverse transport to high-growth cable landing stations (CLS) and data centers powering connectivity throughout Europe.

"Resilient connectivity is critical and EXA is absolutely committed to meet the rising demand of digital traffic by strategically expanding our network investment across Spain and Portugal," said Steve Roberts, Vice President of Network Investments at EXA Infrastructure. "We continue to deliver on our promise to be the most expansive and dedicated infrastructure network in Europe with our focus firmly set on delivering the most diverse transport options for our customers."

In October, EXA announced a new terrestrial transport route to Lisbon and Sines in Portugal after identifying that Spain is quickly becoming the epicenter for digital traffic.

ACCC Denies Network Sharing Deal Between Telstra and TPG

The Australian Competition and Consumer Commission (ACCC) has rejected a proposed 10-year infrastructure-sharing deal between mobile network operators Telstra and TPG Telecom.

Under the statutory test, the ACCC must not grant authorization unless it is satisfied the proposed arrangements would not be likely to substantially lessen competition or that the likely public benefits from the arrangements would outweigh the likely public detriments.

In a statement, ACCC Commissioner Liza Carver said, "We examined the proposed arrangements in considerable detail. While there are some benefits, it is our view that the proposed arrangements will likely lead to less competition in the longer term and leave Australian mobile users worse off over time, in terms of price and regional coverage.

"Mobile networks are of critical importance to many aspects of our lives, including our livelihood, our wellbeing and our ability to keep in touch with friends and family. Any reduction in competition will have very wide-ranging impacts on customers, including higher prices and reduced quality and coverage."

Telstra is currently the strongest mobile network operator in Australia. Consenting to the network sharing agreement will only entrench Telstra's dominant position in Australia and reduce the incentive for mobile companies to improve their service and coverage in regional areas.

Twitter's New Feature Won't Be a Must, Says Elon Musk

Twitter has undergone massive institutional changes in 2022, and these changes have constantly earned mixed reactions from Twitter's audience. Just days before the new year hits, the social media platform has rolled out its new feature showing view counts of tweets.

The new feature, aimed at being an additional social engagement metric, has received complaints about being messy, distracting and useless. In response, Twitter CEO Elon Musk says that they will "tidy up the [a]esthetics and add a setting to turn it off," making it optional for users later on.

This is just one of the plans Musk has for Twitter. The mercurial CEO has overseen the introduction of several new Twitter features since he purchased the platform in late October, including Twitter's new paid-for-verification model. But as observed by many, rollouts have not been seamless.

Going forward, Musk claims that there will be voting for major policy changes on the digital platform, but such voting might only be limited to paid subscribers with a blue tick on their profiles. Previously, a blue tick was used as a badge of authenticity and was offered for free.

Twitter has been on a bumpy ride since Musk took over its ownership. Massive layoffs occurred, and the platform slowly lost ground in social media dominance against Facebook, Instagram and TikTok. Clear policymaking under the new regime is yet to be implemented, which could affect how the overall algorithm of Twitter works for people.

Rogers-Shaw Merger Deal: An Ongoing Battle

The Rogers-Shaw merger deal has been approved by the Canadian Competition Tribunal, but the Competition Bureau is fighting to be further convinced. Moreover, before the merger successfully proceeds, the Honourable François-Philippe Champagne, minister of innovation, science and industry, must also approve spectrum license transfers.

Pending since March 2021, the Canadian Competition Tribunal published its approval to the CAD26 billion (US\$19.2 billion) Rogers-Shaw merger, as long as Shaw first completes its disposal of Freedom Mobile. As per the Tribunal, this judgment related to selling Shaw's Freedom Mobile subsidiary to Quebec-based Videotron is unlikely to result in higher prices for consumers.

The Tribunal has also determined that the "strengthening of Rogers' position

in Alberta and British Columbia, combined with the very significant competitive initiatives that Telus and Bell have been pursuing since the merger was announced, will also likely contribute to an increased intensity of competition in those markets."

Following this, the Tribunal dismissed the application by Competition Bureau Head Matthew Boswell to block the transaction. Despite this, the Competition Bureau says a Federal Court has issued an emergency stay temporarily suspending the Tribunal's dismissal of its case against Rogers' takeover of Shaw.

As reported, Canadian Minister Champagne says that he will wait for legal proceedings to conclude before making his final decision.

Meta Advertising Faces Legal Repercussions for Data Breach, Discrimination

Meta, the parent company of Facebook and Instagram, was hit with hefty fines at the start of the new year. A penalty of €390 million was assessed by the Irish Data Protection Commission (DPC) for Meta's breaching of EU personal data laws on its social media platforms. Moreover, a Canadian court of appeals will allow a class action suit to be brought by social media users accusing Facebook of age, gender and race discrimination in online advertisements.

As per the DPC's statement, Meta breached "its obligations in relation to transparency" and used an incorrect legal basis "for its processing of personal data for the purpose of behavioral advertising."

The California-based company expressed its disappointment with the news and will appeal the latest decision. "We strongly believe our approach respects GDPR, and we're therefore disappointed by these

decisions and intend to appeal both the substance of the rulings and the fines," it stated.

Adding to Facebook's advertising woes, court documents supporting a class action could result in the social media giant paying damages to thousands of Quebec residents who have used Facebook to search for jobs and housing since 2016.

In an email to AFP, lead lawyer Audrey Bector alleged "widespread discriminatory practices" in Facebook's targeted ads.

In Canada, "algorithmic discrimination that prevents certain groups of people, such as women and older workers, from receiving job advertisements is just a modern form of the same type of discrimination that is prohibited," Bector explained.

LEAP

Join us in 2023 for the second edition of the tech event that shook the technology world by storm. If you are seriously interested in new technology and its positive, unlimited potential, you cannot miss it.

Place: Riyadh Front Expo Centre, Saudi Arabia



06
-
09

FEBRUARY

MWC Barcelona

MWC Barcelona is a dazzling, future-facing reflection of our connectivity ecosystem, one that unleashes the convergence of technology, community, and commerce. Join us and experience our world in a new light

Place: Fira Gran Via, Barcelona, Spain



27
-
02

FEBRUARY - MARCH

Capacity Middle East

The largest carrier meeting for the Middle Eastern region will once again unite the region's key ICT players.

Place: Grand Hyatt Dubai, UAE



07
-
09

MARCH

GISEC Global

GISEC Global brings together the leading ecosystem leaders to anticipate the next major movements, threats, innovations and strategies that will strengthen cybersecurity across organizations, industries and economies.

Place: Dubai World Trade Centre, UAE



14
-
16

MARCH

Latest updates on:
www.telecomreview.com

FutureNet MENA

FutureNet Middle East & North Africa is dedicated to driving the agenda around 'Network Automation and AI,' a key foundational pillar for the next wave of growth in telecoms.

Place: Sofitel Jumeirah Beach, Dubai, UAE



20

MARCH

Cabsat

The event brings together key international decision-makers, buyers and thought leaders, eager to meet face-to-face and learn more about your company's products and solutions.

Place: Dubai World Trade Center, UAE



16

- 18

MAY

COMEX

Under the slogan Future Tech Redefined, COMEX 2023 is a great opportunity for enterprise-level companies and startups alike to interact and connect with investors and buyers of future technologies.

Place: Oman Convention & Exhibition Centre, Muscat, Oman



22

- 25

MAY

Telecom Review Leaders' Summit 2023

The 17th edition of the leading ICT gathering will convene industry leaders and partners, held in a hybrid format to tackle the latest industry trends.



06

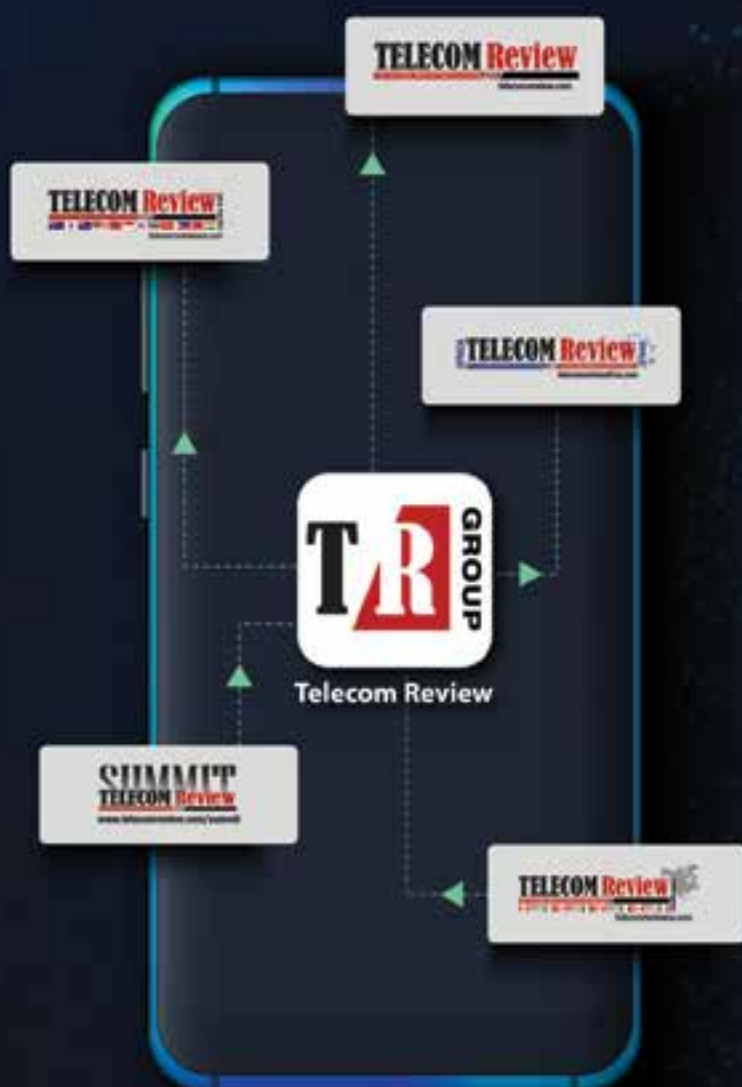
- 07

DECEMBER

Latest updates on:
www.telecomreview.com

SCAN AND DOWNLOAD OUR TELECOM REVIEW GROUP APP

Stay up-to-date with our most recent news, announcements,
and events.



Leading Global ICT Media Platforms

Middle East



Arabia



Africa



North America



Asia

