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Salam: Compete Today, Shape Tomorrow

Ahmed Al-Anqari CEO, Salam

AI: Accessing a Customer-First Approach Through Data Sustainability Fulfillment in 5G Networks IoT and Telecom ESG Goals



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Salam: Compete Today, Shape Tomorrow



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Al: Remembering Who Was Ahead of the Curve!

A few years back, I wrote my editor's letter on the subject of AI, saying how IBM was among the first corporates to use AI in their labs in order to push their technology and solutions forward.

Today, with the hype over AI the highest its ever been, I thought it would be a great time to revisit just who started it all those years ago and give credit where credit is due!

While a number of definitions of artificial intelligence (AI) have surfaced over the last few decades, John McCarthy offered the following definition back in 2004: "It is the science and engineering of making intelligent machines, especially intelligent computer programs. It is related to the similar task of using computers to understand human intelligence, but AI does not have to confine itself to methods that are biologically observable."

However, decades before this definition, the birth of the artificial intelligence conversation was denoted by Alan Turing's seminal work, "Computing Machinery and Intelligence," which was published in 1950. In this paper, Turing – often heralded as the father of computer science – asked the following question: "Can machines think?"

From this simple query, he suggested a basic assessment, now famously known as the "Turing Test," where a human interrogator would try to distinguish between a computer and a human through the text response. While this test has undergone much scrutiny since it was first posited, it remains an important part of the history of AI as well as an ongoing concept within philosophy itself, as it utilizes ideas around linguistics, the bedrock of the language model landscape of today.

Later, in 1994, Stuart Russell and Peter Norvig proceeded to publish *Artificial Intelligence: A Modern Approach*, which went on to become one of the leading textbooks in the study of AI.

As we enter into this new AI frontier, it's important to remember where it all began.



Salam: Compete Today, Shape Tomorrow

In an exclusive interview with Telecom Review, Ahmed Al-Anqari, CEO at Salam, shares his company's efforts in 2022, how they will drive Salam's growth in the future, how the company is contributing to Saudi Vision 2030, as well as other insights.





the company's performance and deliverables as part of your longterm roadmap?

Salam racked up major milestones in 2022 as we continued our transformation from a B2B company to a human-centered tech company for consumers and enterprise, rolling out a slew of new product innovations for homes, enterprise and today's most exciting growth segments, including cybersecurity, cloud and Al. It was a year in which we saw rapid expansion of our mobile and home segments along with robust growth in our wholesale and business segments, earning us recognition as the fastest-growing and most innovative telco in Saudi Arabia.

As part of our strategic transformation into a more agile and

customer-centric company, one of the year's most important developments was our move to streamline core operations by transferring the management and operation of our underlying infrastructure to a dedicated company within the Group. We expect this to have an immediate and transformative impact on our ability to focus more on our customers and serve them more powerfully with more agility, higher availability, deeper collaboration and more innovative products.

We have also been very active at some of the region's biggest industry events to bring our vision closer to more audiences and strengthen our presence as a major Saudi telco and technology brand. From the largest exhibition of future tech to the region's largest gathering of carriers, we connected with the biggest players and innovators, showcased our latest solutions and, along the way, rolled out our sustainability and green thinking initiative. Green thinking is a core corporate value at Salam, and we 66

Green thinking is a core corporate value at Salam







Salam is poised for an exciting period of transformation and growth



have embedded this in all our practices and thinking. To give our new vision and human-centric philosophy a home, we capped the year with the launch of a one-of-a-kind flagship showroom in the heart of the capital filled with engaging and immersive experiences — all these clearly positioning Salam as a telco for the New Saudi, one that embodies and empowers all the exciting possibilities of Vision 2030 and beyond.

For all the amazing work of our team, we earned numerous accolades and recognition from industry experts during the year. In October, Ookla ranked Salam as the Best Video Experience in Saudi Arabia, a strong validation of many years of investment in our infrastructure. Salam was also named the Most Innovative and the Fastest Growing Saudi Telecommunications Brand at the 2023 Global Brand Awards. Recognized alongside leading companies from around the world, Salam was one of only two Saudi telecom providers to be awarded since 2018, a source of great pride for us at Salam. Finally, at the recent Capacity Middle East 2023 event in Dubai, Salam was honored as the first recipient of the Going Green Practices Awards for being the Most Sustainable Exhibitor during the event.

It was truly a landmark year for Salam, and we're just getting started.

With the addition of mobile to our portfolio, which is beating expectations, the growth of our own 5G network, expanded capacity in new

growth segments from cybersecurity to cloud and AI, and our commitment to green thinking in everything we do, Salam is poised for an exciting period of transformation and growth. We continue to leverage our strong fundamentals to strengthen partnerships, penetrate new segments and solidify our position as the only other truly homegrown Saudi telco in the market. We call it The Next Big Thing. Watch out for us!

Can you summarize the primary business strategies deployed by Salam and how they drive the company's growth?

This is a different Salam that you are seeing today from where we were a few years ago. Today, we have the network and the reach. We are in smart cities, neighborhoods and homes. We are in people's hands and connect them wherever they go. We connect businesses and the government. We give carriers and providers the bandwidth and capacity they need to grow. We drive e-commerce, enable the latest AI and IoT technologies, manage whole digital and network infrastructures for the biggest organizations, and monitor and manage the security of all your connections. Indeed, our solutions now span the whole digital and telecommunications spectrum.

We believe that to manage and navigate this growing array of lifestyle enablers and enterprise solutions, we need to place greater focus on our customers, put them at the center of innovation and design, and deploy an agile customer experience and innovation engine that is at the heart of our transformation strategy. We also believe that even as we power technology's forward leap, we want technology that is not only for the future but also cares for the future. We believe in making technology more human-centric, more efficient, more clean and more sustainable. As a company founded on green values, this is a philosophy that guides Salam today as we design, innovate and create solutions for tomorrow.

How is Salam contributing to Saudi Vision 2030 in terms of its digital



transformation journey as well as the diversification and sustainability of the economy?

Saudi Vision 2030 has inspired a whole nation and catalyzed investment and participation from every part of society. And we are doing our part in bringing this vision to life. As a Saudi company, we are extremely proud to be at the center of this transformation, providing the capacity, technology and smart solutions that make this vision of the future possible.

Our numerous achievements reflect our commitment to the Kingdom's digital transformation agenda. We have been named the fastestgrowing and most innovative telecommunications brand in Saudi Arabia, highlighting Salam's continued investments and ambitions in the sector. We have also forged partnerships with key developments and initiatives under the vision, such as the Diriyah Gate development and other banner projects, a testament to our commitment to play an active part in accelerating the Kingdom's Vision 2030 goals.

Green thinking is a big part of the Kingdom's vision, and this is an area that is especially close to our hearts. After all, we are a company Our numerous achievements reflect our commitment to the Kingdom's digital transformation agenda



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Technology and innovation hold the key to a greener world



that was born green and is rooted in green thinking – all reflected in the green butterfly icon of our identity. We believe in paving the way for future generations by championing responsible and sustainable technology. We believe that technology and innovation hold the key to a greener world. We have committed our resources, talent and expertise towards bringing and deploving solutions that make a cleaner, more efficient and more sustainable future possible - a big part of Vision 2030 like smart cities, AI-enabled industrial systems, the cloud and many other smart and efficient environments.

How are you helping Saudi businesses work smarter and stay ahead of change and disruption as Saudi Arabia's digital transformation moves forward at full speed? Salam has built a reputation for making the business of our clients our business, with highlytrained specialists in every sector. Organizations have come to trust Salam to help them improve business operation, reduce cost and enhance performance. Thanks to our robust infrastructure, our next-gen international connectivity network supports massive capacities, which we deliver with 99.99% network availability through a Kingdomwide network of day-and-night command operations centers. We host and manage IT and information infrastructure for organizations large and small and continue to innovate in new areas such as IoT. All these have allowed us to help our customers focus on what they do best: manage their growth and stay ahead of rapid digital disruption and transformation everywhere.

How do Salam's state-of-the-art data center facilities promote business connectivity and continuity? Salam is one of only three telecommunications providers in the Kingdom with Uptime-certified data centers. We operate a network of state-of-the-art, fully redundant data centers in all major cities of Saudi Arabia, offering highly reliable and available connections to Salam's core network with massive amounts of bandwidth capacity and high redundancy. This includes a new state-of-the-art, 200-rack, 1 MW data center in Riyadh's Nargiss region with Uptime Tier 3 design certification.

Salam Data Centers feature an openstandards-based infrastructure, allowing our customers to use and share network resources better, lower costs, improve business continuity and move with greater agility and flexibility. This also enables us to offer state-of-the-art colocation and cloud services, such as the Saudi Executive Cloud, which have helped us grow our managed-services business exponentially. We have also recently been placing a special focus on our cybersecurity services, including secure web gateways and DDoS firewalls. These security services have become the fastest-growing category in Salam's managed services portfolio.

With the explosion of data and information assets that companies manage today, can you tell us a bit more about Salam's new Backup as a Service (BaaS) solution and why it's important?

Salam's Backup as a Service (BaaS) solution is part of our fast-growing family of cloud-based solutions. This mission-critical service helps companies protect their growing volumes of data. The service is managed by a dedicated team of world-class engineers at our Next-Generation SOC (NG-SOC) facility. Our BaaS service is a widely preferred backup solution by many of our clients because of the way it allows them to streamline operations. Using a single unified platform, we can deliver a multitude of capabilities across multiple locations at any scale. Now we can help companies protect complex environments, physical and virtual servers, remote offices - even

information on laptops and desktops — all with a single solution.

With more threat vectors putting modern businesses at risk, how is Salam's SIEM solution helping companies adapt to new and advanced threats?

Today, workforces and workloads have become more distributed than ever before. leading to the emergence of new threat vectors. Organizations need to re-evaluate their risk profiles to adapt to these threats. This is why we believe our new SIEM service is one of our most important solutions. We collect, correlate, analyze and store security events and use marketleading technologies to provide real-time monitoring and threat management from within our locallybased data centers. Our cyber security engineers are constantly looking out for unusual patterns, protecting traffic and ensuring the security, continuity and availability of customer servers and networks 'round the clock.

The service is also fulfilling a very important role: we help organizations meet compliance and regulatory requirements, which are mandated today. Salam helps meet all these requirements by providing real-time and continuous monitoring of our customers' IT infrastructure and by generating alerts, reports and audit logs that allow customers to monitor their level of compliance.

What are some of the principles guiding you in your role as Chief Executive Officer at Salam?

There has never been a more exciting time to be the CEO of Salam. As a leading Saudi telecommunications company in a country undergoing rapid digital and economic transformation, the aspirations of the whole Kingdom are driving unprecedented levels of innovation, investment and growth. This represents opportunities never seen before, especially since we own and hold many of the solutions and capabilities that make this vision possible.

My goal is to make sure that Salam is fully aligned with the Kingdom's vision

for the future, and that our team is fully inspired, focused and empowered to innovate and deliver on this future. To paraphrase an old saying, transformation starts from within. Even as our customers are seeing and feeling our transformation, a big part of what we call our Next Big Thing is really happening from within. From empowered employees to innovative mindsets and green thinking, we are creating a new culture within Salam that will allow us to not only compete today but to shape tomorrow. We are always proud of the fact that we are the only other truly home-grown Saudi telecommunications company in the sector, and it is our duty to make sure we do our part in achieving THE vision.

The future depends on it. And we are extremely proud to be a part of it. \blacksquare



We help organizations meet compliance and regulatory requirements, which are mandated today





UAE Hackathon 2023: Today's Challenges, Tomorrow's Solutions

Bringing together all segments of society, the Telecommunications and Digital Government Regulatory Authority (TDRA) disseminated the culture of digital transformation in the 6th edition of the UAE Hackathon, the largest competitive national event for innovation.

verall, the total number of participants in the UAE Hackathon 6.0 edition was 2,488. They formed hundreds

of teams, of which 311 reached the judging stage.

In terms of geographical participation, Abu Dhabi ranked first with the most number of participants, followed by Dubai, Sharjah, Fujairah, Ras Al Khaimah, Umm Al Quwain and Ajman.

Winning Teams

TDRA announced the winning teams of this year's UAE Hackathon, with awards amounting to AED 400,000. In the school students' track, the victorious teams were Eduverse, UAE Happiness Centre Robot: Facial Expression Recognition ML Model, AIAL, AI Zawraa Innovators 3, Virtual Imam, Automated Recycling Box, Mohammed Bin Rashid School-1, Electricity from Desert, Elite Birds and Emirati Heritage Application (EHA).

In the university students' track, the winners were Sustainable Aquaponic, Mosef, Es3afa, Katara, Waffer, the Flybolans, A8, Miles Ahead, Roots, and the Quick Nerve Relaxation team. In the entrepreneurs, experts and employees track, the Mental Life, Asma'ak: Sign Language Translator, Afia, Newlink, Trust Teaching, Co On, Smart Umm Al Quwain, Hassad, Front Line Innovators and Ajman Municipality and Planning Department teams have been selected.

Both of the above-mentioned tracks will have opportunities for project incubation that will give them the chance to start implementing their ideas and transform them into real projects that serve the government and private sectors.

Furthermore, the winner out of the four qualified teams in the researcher track will be announced at the next GITEX Impact, to be held between May 10–12, 2023. These include Expert Systems for Site Selection of Emergency Facilities, Smart Education, Droxide: Carbon Dioxide Redefined

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and the University of Dubai Wireless Communications Research Lab.

Pursuing National Strategies

The UAE Hackathon 2023 set a number of pillars inspired by the "We Are the UAE 2031" vision, namely: consolidating national identity; protecting the environment; achieving principles of sustainability; developing the educational system; expanding UAE's international economic partnerships; and accelerating Emiratization. A wide range of nextgeneration technologies, such as blockchain, artificial intelligence, big data, data analysis, the Internet of Things, metaverse and augmented reality, would support these objectives.

TDRA said that the "UAE Hackathon is an important annual event in the field of innovation." Renewed in form and content to incorporate lessons from the past and developments of the present, this event is "in line with the directions of the UAE and its wise leadership."



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Setting the groundwork for the UAE Hackathon, TDRA is working towards designing a sustainable digital future to contribute to realizing the UAE Centennial 2071 as well as the UAE's active role in the Industry 4.0 era.

The UAE Hackathon is an integral part of addressing the 4th Industrial Revolution Strategy, the National Innovation Strategy, and other national plans. This project aims to draw attention to and derive the high value of data and advanced solutions that can enhance the economic, social, environmental and scientific aspects of life.

Empowering Youth

More importantly, the UAE Hackathon aims to maximize youth competencies and refine the skills of the winners by integrating them with innovation centers, business accelerators and technology incubators to reach real prototypes and start-ups.

By category, the track of school students is between the ages of 11 and 18 who have not yet reached university, while the track of university students is for the ages of 18 and above who do not yet have lengthy professional experience. Joining these youth is the track of startups and entrepreneurs as well, which targets experts from various fields with strong technical expertise.

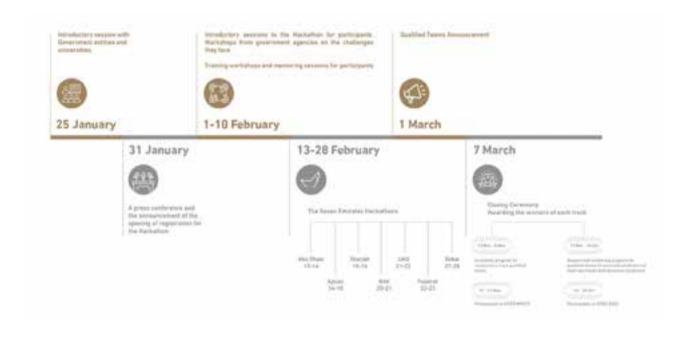
Emphasizing the culture of innovation as an integral part of building capabilities in the country, TDRA's UAE Hackathon 6.0 is made possible thanks to strategic partnerships with numerous government entities across the emirates, the private sector, which comprises leading ICT players in the country, and national universities.



The UAE Hackathon aims to maximize youth competencies and refine the skills of the winners



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Encouraging Applied Research

For the first time, the 2023 edition of the UAE Hackathon dedicated a part of the hackathon-related activities to encouraging applied research, with a prize allocation of AED 100,000 for the winning research.

TDRA emphasized that successful solutions nowadays are the "result of innovation and creative thinking." The hackathon environment is ideal for "generating and discussing ideas and turning them into projects that can be implemented in a realistic way."

The new track, launched for earlycareer researchers and experts working on interdisciplinary applied research, intends to achieve the UAE's mission of preparing a generation of innovators. These teams must be affiliated with and funded by a university in the UAE.

By the end of the incubation and technical support phase, the qualified teams will get the chance to present their professional projects at GITEX, the global tech show, happening on October 16–20, 2023.

In this context, the UAE Hackathon aims to discover advanced and flexible solutions that meet the requirements of digital transformation, consolidate the principle of partnership with the private sector to achieve SDGs and, at the same time, enhance knowledge sharing and modernization.

The UAE Hackathon 2023 Journey

The practical stages of the UAE Hackathon 6.0 started at the end of January 2023 with the submission and registration stage and the introduction session with government entities and universities.

This is followed by the second stage in February 2023, where teams have undergone trainings and workshops according to the challenges they participated in.

And for the third and final stage – the evaluation stage – the teams are divided according to their location in the seven emirates of the country, and the top three teams from each emirate are chosen.

TDRA appreciated the participating entities for their "loyalty and tireless efforts" to make the annual UAE Hackathon event a success. This nationwide initiative fosters "innovation, creative ideas and projects that simulate the needs of the future."



This nationwide initiative fosters innovation, creative ideas and projects that simulate the needs of the future





e&'s Evolution Into a TechCo Delivers Industry-Leading Financial Results

e& announced its consolidated financial results for fiscal year 2022, reporting an impressive growth in consolidated net profit by a record 7.4% to AED 10.0 billion.



onsolidated revenues reached AED 52.4 billion, a growth of 4.7% year-over-year at constant exchange rates, underpinned by the Group's successful business transformation, which included expanding to new business verticals and diversifying the revenue streams.

Consolidated EBITDA increased by 3.7% year-over-year at a constant

exchange rate to AED 26.2 billion, leading to an EBITDA margin of 50%.

Reporting strong growth in subscriber base in the UAE, etisalat by e& recorded 13.8 million subscribers, an increase of 8.8% compared to last year, and the Group's aggregate subscribers reached 163 million, an increase of 2.5% over 2021.

Underlining the Group's commitment to value creation for its shareholders, e&'s Board of Directors proposes a dividend of AED 0.40 per share for the second half (July to December) of 2022, representing a total dividend of AED 0.80 per share for FY 2022.

e&'s Pathbreaking Evolution as a Tech Group

The impressive growth achieved by e& in 2022 underscores the success of e&'s transformational evolution as a global technology and investment group. The strategic pivot reflected the vision of the Group's leadership to embrace the new realities and stay ahead of the curve by delivering innovative digital solutions to its customers.

Building on its rich, 47-year legacy of excellence, the Group achieved significant progress in its transformational journey by expanding into new business verticals, diversifying revenue streams and optimizing operations. This cemented e&'s position as a leading global technology group, delivering growth and building resilience despite global macroeconomic challenges.

The Group strengthened its partnerships regionally and globally to deliver high-value solutions that meet the evolving needs of communities and markets and foster digitally connected communities.

The strong financial results are backed by e&'s focus in 2022 on unlocking new opportunities for growth and accelerating its innovation journey by leveraging cutting edge technologies such as 5G, artificial intelligence and the Internet of Things. This positioned the Group at the forefront of the digital era.

Building on the Trust of 163 Million Subscribers

Commenting on the results, Chairman of e&, H.E. Jassem Mohamed Bu Ataba Alzaabi, said: "The exceptional financial results achieved by e&,

	Financial Highlights for F12022			
	2022	2021	Percent change	
Revenue	AED 52.4 billion	AED 53.3 billion	~1.7%*	
Net Profit	AED 10.0 billion	AED 9.3 billion	+7.4%	
EBITDA	AED 26.2 billion	AED 26.7 billion	-1.9%*	
Earnings per Share	AED 1.15	AED 1.07	+7.4%*	
Aggregate Group Subscribers	163m	159m	+2.5%	

Einancial Highlights for EV2022

(') At constant exchange rates, revenue increased by +4.7% percent and EBITDA increased by +3.7% percent year-over-year

with revenues of AED 52.4 billion and a record net profit of AED 10.0 billion in 2022, is a strong testament to the success of our business transformation strategy. We are inspired by the UAE's leadership to push our boundaries and be at the forefront of the digital era by developing next-generation digital connectivity and cutting-edge solutions.

"From diversifying our business and revenue streams to expanding to new verticals and introducing innovative services, we had a laser focus on leveraging the potential offered by digital transformation to create value for our 163 million subscribers across 16 markets.

"As one of the top global telecom companies by market capitalization today, our foremost priority in 2022 was to be the digital transformation champion and create unique solutions that meet the aspirations of our subscribers, while delivering added value to the economies we serve. We take pride in being the trusted digital and tech partner and in bringing the latest innovations to the fingertips of our customers.

"We remain committed to serving our customers and creating long-term value for our shareholders. As a global technology and investment group, we will continue to work towards making a positive impact in the communities we serve. Our outstanding results in 2022 are the result of the dedication and hard work of our management team, who are relentless in their pursuit to establish e& as one of the world's most admired, trusted and valuable brands, and help communities shape their digital future."

Committed to Innovation and Value Creation

Hatem Dowidar, Group chief executive officer of e&, added: "2022 has been a defining year for e& as we strengthened our transformation into a global technology and investment group committed to digitally empowering societies. Despite various global challenges, our domestic and international operations achieved impressive results, reinforcing our



leadership position in highly competitive and evolving markets.

"Our strong fundamentals, knowledgeable and passionate team, and focus on developing innovative solutions, products and services positioned us as one of the top providers across the communities we serve, as we empower them to unlock the true potential of the digital era. Our growth mindset enables us to achieve our goals while creating additional and long-term value for our customers and shareholders.

"e&'s strategy and progressive vision allow us to explore future opportunities while fostering strong strategic partnerships with global technology players. Prudent mergers and acquisitions further accelerated our growth and diversification, creating new streams of revenue, and positioned us as a leading global technology group. We are grateful to our customers and shareholders for their continued support as we continue to pioneer broad-spectrum technologies, build impactful partnerships and contribute to shaping the digital era of the future.

"The Group's recognition as the most valuable portfolio of telecom brands in the MEA region, and etisalat by e&'s retention of its position as the strongest telecom brand across all categories in the region and one of the top three telecom brands in the world, underline the success of our strategic evolution and our commitment to building one of the fastest networks in the world."

Operational Highlights of 2022

e&

Among the most significant operational highlights of e& in 2022 was the acquisition of 11% of Vodafone Group Plc (Vodafone), which, as of February 2023, has increased to 14%.

The Group was ranked as having the most valuable portfolio of telecom

brands in the MEA region by a leading corporate consultancy firm.

In other key partnerships, e& signed a three-year MoU with Ericsson to build more sustainable future networks and entered a new phase of collaboration with Microsoft to drive innovation and digital transformation. Exploring the possibilities of emerging tech, e& partnered with Meta to drive innovation with enhanced Augmented Reality (AR) and Virtual Reality (VR) experiences and conversational commerce in its digital communication projects.

Further, e&, Abu Dhabi Digital Authority (ADDA) and Trend Micro partnered to launch Cyber Eye, an initiative designed to strengthen the Abu Dhabi Government entities' cybersecurity capabilities.

Ranked as one of the best places to work in the MENA region, e& continues to be a talent magnet and recently concluded its fourth cohort of the AI Graduate Programme onboarding the next generation of leaders.

Underscoring its focus on sustainability, e& committed to achieving net zero status for Scope 1 and 2 emissions within its Group's operations in the UAE by 2030, complementing the nation's Net Zero by 2050 Strategy. The Group also became the first UAE private sector entity to join the UAE Independent Climate Change Accelerators and launched the FutureNow Sustainability Challenge, calling on scale-ups from across the world to be part of developing innovative sustainable solutions.

e& International: Cutting Edge Innovation and Achievements

e& international delivered strong performance across its footprint, growing year-over-year revenues by double digits in Egypt and Pakistan in local currency, gaining market and value share and improving its customer experience significantly to achieve the number one NPS position in most of its markets.

It launched the "e& Partner Networks" to open the door to regional and local telecom operators to achieve sustainable growth through bestin-class services and customer experience. As part of the program, the first MOU was signed with Tunisie Telecom to provide a full suite of services across various functions.

Expanding and strengthening new verticals as part of its transformation journey, e& international partnered with AIG, a leading insurer, to create a unique digital insurance offering in selected international markets, as well as with MoneyGram International, a global leader in digital peer-to-peer (P2P) payments in the fintech space.

e& international established a Center of Excellence for Advanced Analytics to provide data-driven, decisionmaking capabilities using state-ofthe-art and cutting-edge Machine Learning and AI solutions across various verticals. etisalat by e& Egypt announced its brand identity as "etisalat by e&," following the celebration of its 15thyear anniversary of operations. In key partnerships, etisalat by e& Egypt also launched a new microfinance company, "Erada," in collaboration with the Sovereign Fund of Egypt, with the goal of providing financial inclusion and expanding the opportunities available to SMEs and youth.

A significant innovation was the launch of Mobily Pay wallet to provide personalized mobile financial services in the Kingdom of Saudi Arabia with a range of services such as international money transfers, prepaid cards and payments (including Sadad bill payments).

PTCL successfully deployed AirPON, an innovative Fiber-to-the-Home solution, in its Fiber Access Network. PTCL also signed a strategic partnership with Vodafone to bring Vodafone's suite of IoT products and services to government entities and large enterprises in Pakistan. Additionally, PTCL has launched a new OTT platform called "SHOQ" in collaboration with evision to establish its leadership in high-quality media and entertainment content.

Ufone 4G, an operating company of PTCL and a subsidiary of e&, was awarded the number one voice and data network by the Pakistan Telecommunication Authority and was also named the leading 4G services provider and a "Global Rising Star" in Pakistan by OpenSignal global awards.

In Morocco, Maroc Telecom was recognized by OpenSignal for offering the best internet experience with the highest network performance speed. Meanwhile, across its African subsidiaries, MT Group has expanded its 4G and FTTH networks to increase data penetration rates and population coverage, thus improving internet access in Africa.

etisalat by e&: Pioneering New Services for Digital-Savvy Customers

etisalat by e& evolved as one of the most innovative and competitive entities in 2022, thanks to several strategic milestones, including the acquisition of elGrocer, which strengthened its Smiles online marketplace. The company was ranked as the strongest telecom brand across all categories in the MEA region, according to the Brand Finance Global 500 report, and also ranked in the top three telecom brands globally.

It launched the UAE's first of its kind, Easy Insurance, an innovative insurance platform offering digital services for auto, health and travel insurance, as well as unveiled GoChat Messenger, an all-in-one free voice and video calling app.

In key partnerships, etisalat by e& joined hands with Amazon to offer eero and Echo devices for the first time in the UAE and expanded collaboration with Amazon Web Services (AWS) to serve key industries and meet the growing demand for digitalization.



e&'s strategy and progressive vision allow to explore future opportunities while fostering strong strategic partnerships with global technology players



Market Cap Closing 31 Jan 2023	Consolidated Revenue		nsolidated Profit	0
224 BN AED	52.4 BN	: 10		
163 Million G Subscrit	ilobal bes	13.8	lillion UAE ubscribes	
	Morocco		Afghanista	1.1.1
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In collaboration with industry leading vendors, it launched the first global live multi-vendor VoNR (Voice over New Radio) ecosystem, and the allnew business proposition, "Business Pro," to meet the digital needs of businesses. Further supporting the business community, etisalat by e& launched upgraded and dedicated internet connectivity services such as "Digital Internet" and "Digital Premium Internet."

etisalat by e& accomplished the firstever private 5G network agreement in the region, marking a significant milestone in their journey towards providing seamless connectivity solutions to their valued customers. This groundbreaking feat also enabled them to deliver the first-ever connected surveillance over 5G.

The company's connected car technology also garnered significant attention within the automotive industry, with new contracts signed with several major players. This achievement underscores the company's commitment to delivering top-of-the-line connectivity solutions to the automotive sector, propelling substantial advancement and broadening its influence on new markets.

Unveiling e& universe, e&'s virtual world, at GITEX Global 2022, the business extended its support to startups by collaborating with Abu Dhabi Global Market to digitally enable such ventures. Placing the wellness of its customers as a top priority, etisalat by e& launched the first rewardsbased, consumer fitness and wellness platform "GoWell" and partnered with Response Plus Holding (RPM) to connect ambulances with 5G, saving patients' lives in real time.

As a model corporate citizen, etisalat by e& launched an exclusive offer for senior citizens holding "Thukher" or "Barakatna" card to avail up to 60% on four "Freedom" postpaid plans, while Smiles partnered with Mohammed Bin Rashid Al Maktoum Global Initiative (MBRGI) to support the global "One Billion Meals" campaign during the holy month of Ramadan.

Another milestone was the partnership with Emirati Talent Competitiveness Council (ETCC) to participate in the NAFIS initiative to hire more than 500 Emirati professionals in its retail, customer service, technology and IT spaces in a span of five years.

e& life: Strategic Acquisitions to Fuel Growth

evision, the entertainment division of e& life, completed the transaction for the acquisition of a 57% majority stake in STARZPLAY Arabia, a subscription video on demand (SVOD) and streaming service provider in the Middle East and North Africa, through the evision-led consortium with ADQ, an Abu Dhabi-based investment and holding company.

Strengthening its portfolio to meet the aspirations of its customers, evision acquired the exclusive broadcast rights of The Italian Serie A, Asian Cup and ICC T20 Cricket for MENA, the DP World Asia Cup and the T20 world Cup on the CricLife MAX channel in the MENA region. evision enriched its content with bingeable boxsets of content such as Anime, Korean, French and Spanish content and launched a new trilingual South Indian movie channel, "Emasala Simply South" in partnership with Simply South, the largest online streaming platform.

eWallet was rebranded as "e& money" to position itself as the Group's fintech arm and financial super app marketplace. As a result of the value of its services and premium customer experience, e& money was awarded the best wallet in the region by the MENA Fintech Association.

e& enterprise: Maximizing Digital Potential

Creating exceptional value for its customers, e& enterprise partnered with G42 to establish UAE's largest data center provider under Khazna Data Centers. It has also formed a joint venture with Bespin Global to build the largest pure play cloud managed and professional services provider in the METAP region while making a minority investment in Bespin Global's holding company to participate in the success story of a leading global cloudmanaged service provider.

It also marked the acquisition of 100% of Smartworld to become its IoT and AI focused vehicle under the brand e& enterprise IoT & AI.

On the AI front, e& enterprise partnered with DataRobot to launch an Enterprise AI as a Service (Alaas) for supporting governments' digital transformation journeys. It has also launched this year the region's first AI Centre of Excellence (AI CoE) with Hub71, which aims to increase partnerships and collaborations between businesses, governments, investors and startups.

To enhance the businesses' ability to offer superior customer experiences, e& enterprise has launched a new business proposition, engageX, as a Communication Platform as a Service (CPaaS) ecosystem, and partnered with NICE to bring the best-of-breed Cloud Communication as a Service platform to the UAE. e& enterprise continued to expand its capabilities in KSA, building its new state-of-the-art Cybersecurity Operations Centre (CSOC) in Riyadh, established by Help AG, the cybersecurity arm of e& enterprise.

The excellent work by e& enterprise was recognized as a Leader in IoT Consulting & Systems Integration Services.

e& capital: Nurturing Startups of the Future

In the significant milestones during 2022, e& capital announced its \$250 million e& capital Venture Capital (VC) fund and made a strategic investment in VUZ, a leading immersive social app, as well as funding Lablabee, a tech startup that will grow the world's first hands-on lab platform for the telco cloud.

The excellent work by e& enterprise was recognized as a Leader in IoT Consulting & Systems Integration Services





Aji Ed, head of technology, mobile networks, Nokia MEA

Nokia anyRAN: Enabling Flexibility and Driving Cloud RAN Solutions

In an exclusive interview with Telecom Review, Aji Ed, head of technology, mobile networks, Nokia MEA, emphasized how they are driving efficiency, innovation, openness and scale by embracing Cloud RAN. He explained how the launch of anyRAN will maximize the baseband options and optimize energy efficiency as well as overall operations. an us No lau an ad an

an you please tell us more about Nokia's recently launched anyRAN and the major advantages that anyRAN will bring

to Nokia's clients?

Nokia launched anyRAN during MWC (Mobile World Congress) this year, which is a new concept to help mobile operators and enterprises extend their options for building and evolving their radio access networks. Nokia's approach supports the evolution of today's purpose-built networks to Cloud RAN and hybrid solutions, ensuring performance consistency across all network environments.

With anyRAN, the software can run on any partner's Cloud and Server infrastructure in addition to Nokia AirScale base stations and Nokia AirFrame servers. This approach removes the complexity from deployments by allowing a mix of purpose-built, hybrid and fully Cloudbased RAN solutions, enabling deep multi-level disaggregation at the Cloud Infrastructure layer and data center (server) hardware layer. Close collaboration with partners also ensures performance consistency of Cloud RAN with Nokia's field-proven, purpose-built RAN. This consistency in performance is also enabled by common software and In-Line acceleration.

anyRAN provides more flexibility for operators and enterprises instead of vendor lock-in. Our Cloud RAN will run on our own Container-asa-Service (CaaS) layer as well as on Cloud infrastructure of AWS, Google, Microsoft and IBM. anyRAN provides more server supply chain choices. Our Cloud RAN will run on our own AirFrame servers and also on servers made by Dell, HPE and AWS — in each case with the performance boost of the In-Line acceleration by Nokia.

Can you share more details about how combining Layer 1 SmartNIC with the "host neutral" Containeras-a-Service (CaaS) layer enables

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anyRAN's flexible approach?

Underpinning the high-performance solutions for Cloud RAN is the Nokia SmartNIC, a Layer 1 (fronthaul) In-Line acceleration card that integrates seamlessly with all leading Cloud or server infrastructures. Today, SmartNICs (Network Interface Cards) are commonly used as accelerators in public and private cloud data centers. L1 acceleration needs specialized silicon with extreme computing capacity, which is beyond the capabilities of general-purpose processors. With the Layer 1 Smart NIC, all or part of the L1 processing is off-loaded from the CPU with a RAN SmartNIC PCIe card. This frees up valuable CPU resources. enabling higher performance for L2 and L3 application processing. Nokia Cloud RAN SmartNIC is more energy efficient and provides higher performance. Nokia and its partners have already successfully performed end-to-end 5G data calls (Layer 3 calls) in multi-vendor setups powered by Nokia's solution.

The In-Line SmartNIC with Cloudnative vDU (virtualized Distributed Unit) and vCU (virtualized Central Unit) software supports the commonly accepted Cloud-native principles, including, among others, data being decoupled from the applications, loosely coupled microservices, elastic and horizontal scaling, automated lifecycle management and continuous software integration and delivery. For example, it supports the scalability and flexible deployment of containerized vDU application functions to various nodes managed by the container orchestration platform, such as Kubernetes.

Cloud efficiency is higher with the In-Line accelerated Cloud RAN architecture as it relaxes the latency requirements on the Containers-asa-Service (CaaS) layer running on the CPU (GPPs). This leads to savings on the real-time features of CaaS.

Customers are improving their network evolution strategy. How will Nokia help them drive efficiency, innovation, openness and scale by



embracing Cloud RAN?

RAN networks are expected to evolve gradually towards Cloud-based RAN solutions. According to Dell'Oro. Cloud RAN solutions have the potential to make up approximately 20 percent of the total RAN market by 2027. Volume deployments are expected to start gradually accelerating in 2024-2025. While the limited number of greenfield operators can build their networks from a clean slate based on Cloud RAN technology, all other operators will choose to adopt a hybrid network approach, so Cloud RAN will have to co-exist with Classic RAN for many years. This hybrid mobile network will evolve over time, with Cloud RAN being introduced for specific use cases and/or geographies. For example, most CSPs will focus their Cloud RAN deployments on highcapacity configurations with high performance and energy efficiency requirements that are best fulfilled with the In-Line architecture option. Further, the high-capacity configurations can best benefit from the geographical centralization of vCUs.

Nokia is working closely with its semiconductor, server-maker, hyperscaler and managed Cloud service partners to optimize the cost and power consumption of server and data center hardware. As a RAN supplier, we will provide our mobile operator and enterprise customers with the flexibility to select their own server platforms and private Clouds or use public service Clouds or their preferred Cloud infrastructure software stacks and centralize or decentralize whatever they prefer. Ultimately, this flexibility means that operators can respond rapidly to their customers' varied requirements when using new applications or services, such as low-latency services or network slicing, in addition to mobile broadband and mobile voice connectivity.

How will anyRAN and L1 inline accelerator deliver more energy efficiency and higher performance, supporting the sustainability ambitions of CSPs?

It is widely recognized that for highly demanding workloads such as L1 processing, purpose-built silicon technology provides higher performance and is also more energy efficient. Typically, In-Line solutions use energy-efficient ARMbased silicon that is also commonly used in Classic RAN networks and increasingly across all networks, including webscalers' Cloud data centers.

Nokia anyRAN (vDU+vCU) configuration, based on technology available in 2023 and included in roadmaps for the future, has been benchmarked for a high-capacity Cloud RAN configuration. The result is a significantly lower power consumption per cell with an In-Line solution compared to a Look-Aside solution. This translates into a lower cost per cell for the In-Line solution, in addition to the aforementioned capacity and efficiency benefits.



Guillaume Boudin, CEO, Sofrecom Group

Digital Players Have Power to Promote Ecological Focus on Economic Development

In an exclusive interview with Telecom Review, Sofrecom Group's CEO, Guillaume Boudin, detailed the company's biggest challenges in the telecom industry and how Sofrecom is helping to meet them head-on. He also shed light on the role of technology in the decarbonization of the telecom sector. hat do you see as the biggest challenges facing the telecoms industry

when it comes to decarbonization? Telcos face growing pressure from customers, investors, and regulators to achieve their net-zero targets and do their part to solve the climate crisis. As telecommunications companies ramp up their decarbonization efforts, many executives are overlooking a key part of the equation: There's a ton of upside for their businesses.

Most telcos are far from decarbonizing their own operations. Most telcos have announced commitments to achieve net-zero emissions, but so far, few have followed through with real planning and execution. Even telcos that have already crafted a decarbonization strategy will likely need to continuously revise it because it will quickly become obsolete.

Decarbonization tools that were previously out of reach or not economically attractive are now increasingly accessible. That's because advanced batteries, solar panels, and other technologies that support renewable energy capture and other decarbonization initiatives are progressing rapidly, and their adoption costs are dropping.

One of the challenges that industry executives would point to is that around 85% of telcos' carbon emissions are Scope 3 emissions attributed to suppliers and partners.

But many telcos have yet to fully evaluate how they can strengthen their businesses through their actions for carbon footprint reduction.

We believe that there are four areas of significant business opportunity for telcos that take full advantage of their decarbonization efforts:

1- Climate change will likely increase the usage of telecom services as companies across industries seek to reduce their own carbon emissions by increasing remote operations, work-from-home and digitization. 2- With high inflation on raw materials and energy costs, most of the time, decarbonization and cost reduction will go hand in hand. This is the case, for instance, when telcos are moving to solar energy or rolling out circular economy projects. 3- With the growth of environmental awareness, more and more consumers are ready to pay a premium for "greener" services. Telcos that can successfully differentiate themselves this way will attract these customers. 4- Lastly, telcos can create additional revenue streams through new

products and services that play a significant role in helping companies across industries decarbonize. Telcos could also use their expertise in bundling offers to promote new "green solutions" alongside their partners.

What role do you see technology playing in the decarbonization of the telecoms sector, and what innovations will be most important to this end?

Even if it's much less compared to other industries, Digital equipment manufacturing, networks and datacenter operations are generating direct carbon emissions.

But more importantly, Digitalization has the potential to fight against climate change. Digitalization has become an indispensable tool for achieving the objectives of a green economy:

• Digital solutions can promote climate protection, clean air, intact soil and the preservation of biodiversity.

• Digital offers solutions to monitor, mitigate and adapt to the impacts of climate change.

• Digital technologies offer the opportunity to help address the world's most pressing climate

concerns and enable the muchneeded shift to a circular economy. • Dematerialization can help reduce emissions and solid waste emanating from non-digital sectors of the economy.

Digital technology is also accelerating education all over the world. Increased awareness and education can have a positive effect on promoting a mindset of environmental responsibility among stakeholders, including the ICT sector, policymakers, citizens and academia. Different ecosystem stakeholders must take responsibility for this very complex issue and take concerted and timely action.

How is Sofrecom helping to meet these challenges?

As telco sector experts, we are working for a more inclusive and sustainable digital world. We help our customers to: • **Make decisions** – assisting them in the definition of their green strategy by learning from the industry best practices and trends.

• Get reliable, objective, and detailed data regarding their activity's impact.

· Convert Green challenges into an

operational action plan: think, build and run approach.

• Build an energy efficiency plan tailored to their context: energy cost assessment, energy savings master plan, design and deployment of an energy consumption measurement solution.

• Launch and conduct a circular economy strategy.

From defining a CSR strategy to implementing it operationally, our approach is all-encompassing, based on interaction and co-construction.

To learn more about decarbonization, we are glad to share our latest white paper. "Digital & Decarbonation, the next winning duo?"





Shaima Al Hamed, chief commercial officer, Bahrain Network (BNET)

BNET Prioritizes Customer Service, Growth Generation and Product Diversification

In an exclusive interview with Telecom Review, Shaima Al Hamed, chief commercial officer, Bahrain Network (BNET), shared details about the company's objectives this year, its collaboration plans, core strategies and contributions to the growth and economic diversification of Bahrain's telecom sector. hat are the targets you are focusing on in 2023, and how will these impact the

company's growth moving forward? BNET always plans ahead and is making the necessary investments today to deliver the speed of broadband and network capacity that residential and business end-users will need to succeed in the digital world of tomorrow.

Accordingly, since BNET's inception, it has established a separate (legal and functional) entity to develop an advanced fiber infrastructure in line with the government's telecommunication policy to grow the Kingdom's business sector and ensure greater connectivity.

BNET has several primary objectives for the fiber infrastructure roll-out. We currently connect 82.6% of residential properties and 100% of business addresses, and we aim to connect 95% of all households and 100% of businesses and public radio communication stations with access to affordable, reliable and secure ultrafast broadband services (defined as downstream data rates of at least 100 Mbit/s to households and symmetric data rates of at least 1 Gbit/s to businesses and radio sites).

In addition, one of our main objectives is to publish the latest BNET reference offer (RO) as we collaborate hand in hand with the telecom industry and regulator to provide products and services at fair and reasonable prices. The new reference offer was designed through a customer-centric process. and we held an industry-wide event entitled RO (Reference Offer) Week, to which operators and the regulator were invited. During the event, BNET representatives provided in-depth information on the products and services offered by the company, as well as its prices and service levels. The feedback acquired from the industry assisted BNET in updating the reference offer.

The impact of these strategies will be reflected on our valued partners

(Licensed Operators) where BNET will provide them with a reliable wholesale network, in addition to products with fair and reasonable prices and enhanced customer experience, with the purpose of contributing to the prosperity and growth of the Kingdom's economy, using cutting-edge ICT and infrastructure technologies for prospective new businesses.

How does BNET collaborate with its partners to achieve better value for customers? Will you be working with any new partners this year?

The simple answer is to be entirely customer-oriented; in other words, everything we do revolves around our customers. Before undertaking any initiatives, we ask ourselves, "How will it benefit our customers? Will it enable them to develop their business? Will they be able to improve the experiences of their customers?" Demonstrably, our customer's success is tied to our own.

Furthermore, we have established a Market Intelligence department, responsible for exploring market needs, analyzing requirements and identifying areas where BNET can assist its customers in connecting the community. An example of this in action is our facilitation of high-rise building solutions, which enables licensed operators to provide broadband services to their customers.

BNET is also establishing relationships with international NBNs to exchange knowledge and expertise. This type of collaboration benefits our licensed operators as the insights collected improve our fiber roll-out, general service operations, and network capabilities.

Finally, BNET is expected to cooperate with new partners, as the company is focused on serving any operator that is granted a telecommunications license by the Telecommunication Regulation Authority (TRA).

What are the core strategies that BNET is using to provide accessible and reliable fiber connectivity at fair and reasonable prices?

BNET has several plans in place to support the company's core strategies, including:

- 1. Providing reliable, resilient and secure products and services over our wholesale network and delivering them in an efficient manner.
- 2. Collaborating as one team with our customers to ensure they feel cared for and have a positive view of BNET.
- Continuously investing in our network and our people in order to increase revenue and meet customer data demand.
- Instituting sustainability while ensuring that products and services are affordable and competitively priced.

In your opinion, how can BNET maximize its expertise in fiber broadband connectivity, coverage and security to meet customer needs?

As the fiber network wholesaler, BNET provides wholesale broadband services and related products to licensed operators on a non-discriminatory basis. This approach helps level the playing field in the telecommunications industry, enhancing competition and innovation while providing greater choice for customers across the Kingdom of Bahrain.

BNET operates in a competitive market; thus, the company must consider how it can ensure customers get the most out of the high-speed network, to which they connect through the licensed operators. It is important that we assist our user base in understanding the distinction in quality and service provision between BNET and other forms of internet, such as mobile broadband or microwave networks.

BNET's network investment plan is to connect fiber into communities and extend its coverage. Fiber is designed and proven to deliver faster speeds with greater capacity, resulting in unparalleled customer experiences. BNET supports both licensed operators and end users to ensure that current and future customers have access to high-quality broadband over a fast, secure, and reliable network at a very competitive price.

How will BNET continue to contribute to the growth and economic diversification of the telecom sector

in the country in a sustainable and profitable manner?

This can be realized through the provision of our products and services over an efficient, well-maintained network designed to meet the needs of the telecom industry.

Because of the constantly evolving digital space, consumer demand for telecommunications continues to rise. Several new types of applications require a considerable amount of network capacity as well; currently, new voice and messaging services are supplementing or replacing traditional telecommunications methods, which is causing a shift in telecoms' business models and licenses.

Countries around the world are responding to these developments by prioritizing investment in highspeed infrastructure. They also are taking steps to ensure that their policies and regulatory frameworks reflect the new reality (and evolving architecture) of an integrated IT ecosystem that is dependent upon the availability of advanced fixed and mobile telecommunications networks. Policymakers are also placing a new emphasis on the training and development of 'local talent' such as skilled IT professionals, app and content developers, as well as internet entrepreneurs.

At BNET, we have already started this journey and are working on a variety of initiatives to assist the growth of the Kingdom's telecom sector. The fiber roll-out program enabled BNET to connect fiber to 37,986 new residences, increasing the total number of fiber-connected addresses to 484,133. Annually, BNET is targeting to provide fiber access to thousands of new addresses.

BNET continues to strive for a higher customer satisfaction rate, which is measured yearly. In 2022, BNET achieved a 94% satisfaction rate, showcasing a significant increase from 82% in 2021. This KPI indicates that we are on the right track, and we continue to prioritize customer service, growth generation and product diversification.

BlueJeans by Verizon Produces Interactive, Production-Grade Virtual Events and Live Streams

In an exclusive interview with Zach Bosin, VP of product & growth marketing, BlueJeans by Verizon, he shared how the platform combines high-quality audio featuring Dolby Voice (R), HD video and web-conferencing capabilities for cloud-based meetings or significant interactive events, making it a perfect fit for partners like Telecom Review Group in catering to webinars and virtual events business.

an you describe BlueJeans and its core services? And how do you ensure the security and privacy of users during video

conferences? BlueJeans by Verizon is a video engagement platform that fuses video and mobility to create a more flexible, inclusive workplace, helping enterprises work smarter, more collaboratively and more efficiently. When combined with Verizon's network and mobile connectivity, BlueJeans provides users with secure and reliable video conferencing and eliminates latency and network errors.

How does BlueJeans by Verizon differ from other video conferencing solutions on the market?

BlueJeans by Verizon provides a unique meeting experience for its users with unparalleled features, including:

 Dolby Voice Audio, a breakthrough in audio for online meetings, elevates the meeting experience by allowing attendees to hear clearly and communicate naturally, regardless of location in high-



definition (HD) sound.

- Enterprise Grade Security that prevents unwanted participants from joining meetings and protects end-user privacy with default security settings enabled. Meeting organizers can lock meetings at any time and expel unwanted participants.
- A powerful, fully featured Mobile App for iOS and Android with crystal-clear audio, intelligent bandwidth management, dynamic screen-sharing, safe driving mode, mobile room controller, town hall and webinar support, and flexible join options.
- A premium desktop experience through the BlueJeans Desktop App 2.0 that allows you to join meetings faster, offers a more intuitive user interface and provides an immersive audio and video experience.
- Improved productivity with Smart Meetings, an intelligent meeting management software that allows users to capture important meeting discussion points, assign action items and catch up with timesaving highlight reels.
- BlueJeans' event platform is able to host up to 150,000 interactive event participants. Within the platform, a new production tool, BlueJeans Studio, allows event organizers to customize live streams to better engage their audience.

Can you discuss any recent updates or improvements that BlueJeans by Verizon has made to its platform? BlueJeans Events empowers organizations to produce interactive,

BlueJeans by Verizon

production-grade virtual events and live streams.

We have recently introduced BlueJeans Studio, an all-in-one event production suite, to our Events platform. Studio allows users to create stunning live streams by adding logos, backgrounds and colors; engage audience members with realtime chat, Q&A and polls; and expand their reach to Facebook Live, YouTube Live and other streaming platforms simultaneously.

BlueJeans Gateway, a Microsoftcertified cloud video interop solution, is the easiest way to bring the power of Teams video meetings into conference rooms and huddle spaces to create intelligent workspaces. BlueJeans' pure SaaS (Software as a Service) solution works in conjunction with thousands of room system configurations, including Cisco, Poly and Lifesize.

BlueJeans' Corporate Learning & Training platform facilitates immersive, engaging, and inclusive meetings, with features like Weather Person Mode, Collab Board, multilanguage, and closed captioning.

How does BlueJeans address common video conferencing issues, such as connectivity problems or

audio/video quality issues?

To limit connectivity problems or audio/video quality issues, video platforms depend on low-latency networks and plenty of bandwidth. Verizon's 5G network enables both of those by computing to the edge of the network, where the application is, to reduce the response times needed. This allows for higher levels of video quality.

Can you discuss any integrations or partnerships that BlueJeans has with other software or platforms?

Most recently, Blue Jeans announced a partnership with Sparq Live Limited to deliver professional-grade hybrid and virtual event experiences. Through this collaboration, enterprises seeking to create and execute exceptional on-brand events that immerse and engage audiences will have a onestop shop for their events produced and streamed at scale with Blue Jeans Events and Studio.

Last year, BlueJeans partnered with Google to equip the Glass Enterprise Edition 2 with BlueJeans Meetings. This collaboration allows workers to stream "point-of-view" video so remote coworkers can observe and troubleshoot in real-time, boosting productivity and collaboration for these businesses, which then improves their quality of work. BlueJeans by Verizon provides a unique meeting experience for its users with unparalleled features



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Ooredoo Committed to Building Sustainable Legacy With Highest ESG Standards



Ahead of issuing its environmental, social and governance (ESG) report for 2022, Ooredoo Group has announced the great strides it has achieved in its Socially Responsible Investing, a key facet of ESG.

The adoption of ESG principles has long been a significant aim for Ooredoo, and the company's growing commitment to achieving in this area is reflected in a wide range of socially responsible initiatives. Within the Social element, the company has particularly focused on the areas of empowering women; promoting gender equality; reducing the gender gap; promoting equal opportunities and pay; and developing talent across the company.

Fatima Sultan Al Kuwari, group chief human resources officer at Ooredoo, said: "Ooredoo is committed to the highest standards of environmental protection, social impact and good governance, looking to build a sustainable legacy for all. One of our top priorities is empowering our workforce. We recognize the importance of harnessing human potential and focus on providing equal opportunities, securing gender equality, investing in our talents and ensuring a healthy and safe work environment for all."

Empowering Women

Women's empowerment is a mainstay of Ooredoo's strategy, with a focus on equal pay and treatment; equal representation on leadership teams and corporate boards; and equal access to training and career-building opportunities.

Investing in Talent

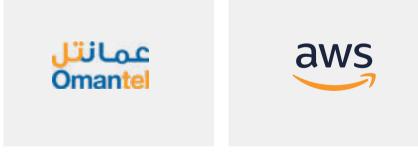
Ooredoo is committed to investing in the development of young national leaders, focusing on training, development, and support opportunities.

Promoting Inclusion, Diversity and Wellbeing

Ooredoo's HR Policy ensures that all applicants and employees, regardless of race, color, marital status, parental status, ancestry, source of income, religion, gender, age, national origin or disability, have equal opportunities in hiring, promotion, transfer, compensation, benefits and all other employment decisions.

Fatima concluded: "Our ongoing initiatives reflect our unwavering commitment to growing our business by growing our people, helping them reach their full potential — which in turn will help us make a real difference in the communities we serve. This approach is embedded in our business model, strategy and operations, enabling us to create a supportive, flexible, agile environment in which our employees can work."

Omantel's Board of Directors Meets With Amazon Web Services to Promote Collaboration



In order to respond to the prospects of modern trade, develop services and improve the customer experience in the Sultanate of Oman, Omantel, a leading provider of communications solutions in Oman, previously announced its collaboration with Amazon Web Services to build an online marketing platform in the country that aims to both support the digital transformation and enhance the digital economy in the Sultanate.

This partnership aims to enhance the potential of SMEs, allowing them to compete in global markets in line with Oman's Vision 2040.

This platform plays a pivotal role in the business sector to maximize the advantages of machine learning capabilities and available data.

In light of this, and to stress the importance of good relationships between partners, Omantel's Board of Directors visited Amazon Web Services in the USA. There they attended multiple meetings to discuss opportunities for collaboration for the next phase to build knowledge and transfer all data science, Al technology and cloud computing services, and to achieve further growth in this area.

Omantel focuses on innovation and new projects and works to provide a package of integrated services and modern technologies throughout the Sultanate in line with the company's aspirations and its users' needs.

TDRA Represents UAE at the WSIS Forum



During a keynote speech at the forum, H.E. Eng. Majed Sultan Al Mesmar, director general of the Telecommunications and Digital Government Regulatory Authority (TDRA) said that the challenges posed by the current situations are too great to deal with in silos. He explained that if the essence of the ICT sector is to build bridges of communication between people, then we should strengthen those bridges to understand the present and shape the future.

The United Arab Emirates participated at the World Summit on the Information Society Forum 2023 in Geneva under the slogan "WSIS Action Lines for building back better and accelerating the achievement of the SDGs." Organized by ITU, UNESCO, UNDP and UNCTAD, the WSIS Forum is the largest annual gathering of the ICT community for sustainable development and aims to promote digital transformation and global partnerships and pursue global efforts to achieve the Sustainable Development Goals (SDGs).

In his speech, Al Mesmar stated, "The world is changing rapidly as new technologies emerge on a daily basis. Therefore, we must keep pace with these technologies using suitable means in order to foresee their impact on our lives, maximize gains and minimize negative impact and develop relevant laws and regulations. During the World Government Summit 2023, we announced the creation of the first ICT Sandbox for this purpose, and we have already started working on it.

"The UAE's keenness to sponsor and support this honorable forum over the past 15 years falls within this understanding. We believe in the global message that we share the world, the challenges and the destiny; and sustainable development requires an interdependent and integrated world." The UAE delegation includes TDRA, Ministry of Interior, Ministry of Finance, Ministry of Health, Emirates Health Services, Abu Dhabi Digital Authority, and the Cyber Security Council.

TDRA highlighted the UAE's accomplishments in telecommunications and digital government, which enabled government entities to provide services based on the advanced infrastructure of the telecommunications and digital government.

The forum's current session focuses on the WSIS action map to better re-plan and achieve SDGs, coordinate activities between countries, create knowledge and exchange best practices. It continues to provide support for partnerships between multiple stakeholders and between the public and private sectors to advance SDGs and to additionally provide structured opportunities to network, learn and participate in multi-stakeholder discussions and consultations on implementing WSIS action lines.

Sheikh Hamdan Reiterates Dubai's Aim to Be Among Top 10 Digital Economies



Dubai is steadily reinforcing its position as a global hub for cuttingedge technologies and a major center for digital business models and transformational initiatives, according to H.H. Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai and Chairman of the Dubai Executive Council.

"Our directives are aimed at accelerating our plans to achieve this goal and make Dubai one of the top 10 digital economies in the world, aligning with the Dubai Economic Agenda D33," Hamdan said in a tweet. Sheikh Hamdan was presiding over the second meeting of the Higher Committee for Future Technology Development and Digital Economy.

H.H. Sheikh Hamdan bin Mohammed said Dubai is proactively developing plans to accelerate digital growth and adopt new technologies through collaborative partnerships between government entities, international corporations and the broader private sector.

Other members at the meeting included the Minister of State for Artificial Intelligence, Digital Economy, and Remote Work Applications, the Chairman of the Dubai Chamber of Digital Economy, and the Vice Chairman of the Committee, as well as other members of the Committee, including Helal Saeed Al Marri, Director General of Dubai's Department of Economy and Tourism; Hamad Obaid Al Mansoori, Director General of the Dubai Digital Authority; Khalfan Belhoul, CEO of the Dubai Future Foundation; Ahmed bin Byat, Vice Chairman of the Dubai Chamber of Digital Economy; Malek Al Malek, Director General of the Dubai Development Authority and Chairman of TECOM Group; Arif Amiri, CEO of the Dubai International Financial Centre (DIFC); and Maha Al Mezaina, Reporter of the Committee.

Members of the Committee took stock of recent advancements in the digital field and explored ways to overcome challenges and take advantage of new opportunities. Such strategies aim to achieve the objectives of the Dubai Metaverse Strategy in line with the goals of the Dubai Economic Development Corporation (DEDC) and the objectives of the Dubai Economic Agenda D33 to double the size of Dubai's economy and strengthen its position as one of the world's top three cities over the next 10 years.

ICT Indicators Forum Reveals Saudi ICT Market as Largest in the MENA Region



Demonstrating the considerable impact of Saudi Arabia's sweeping digital transformation efforts, the Kingdom's ICT market is now the largest and fastest-growing in the Middle East and North Africa, having reached a total market size of SAR 154 billion in 2022.

This impressive growth indicator was among several to emerge from the 9th ICT Indicators Forum, held in Riyadh on March 8, 2023, and hosted by the Communications, Space and Technology Commission (CST) in partnership with market intelligence firm the International Data Corporation (IDC).

Uniting leaders and experts from across Saudi Arabia's ICT landscape and held under the patronage of the Minister of Communications and Information Technology and Chairman of the CST, H.E. Eng. Abdullah Alswaha, the forum investigated topics related to digital regulation, opportunities to scale businesses in the digital economy and the sector's future trends.

Saudi Internet Report Reveals Evolution of Digital Infrastructure

The forum also saw the disclosure of several key findings from the CST's latest Saudi Internet Report, which revealed remarkable progress across digital infrastructure and internet usage on the back of successful government and private sector cooperation.

Total capital investment in digital infrastructure over the last six years exceeds SAR 93 billion, leading to a significant improvement in the quality of digital services on offer.

Addressing the forum, CST Deputy Governor, H.E. Eng. Omar Al-Rejraje, reported that an extension of the national roaming service in villages and remote areas has resulted in the successful deployment of high-speed internet in 21,000 villages across the Kingdom, ensuring the continuity of communication services for more than 5 million residents.

The 5G coverage rate has reached 53%, more than double the global average, with Riyadh becoming a leading global capital in 5G coverage, which now exceeds 94%.

Meanwhile, the delivery of highspeed fixed internet networks to the residential sector has doubled, bringing the total number of homes covered by fiber-optic cables to 3.7 million.

"This expansion in the readiness and robustness of the digital infrastructure, in addition to the allocation of frequency spectrum for communication services, has led to a significant increase in the quality of services provided," Al-Rejraje told delegates.

This has been achieved by multiplying the speeds of mobile and fixed internet several times over. At 181 Mbps, the speed of mobile internet is now twice the global average, positioning the Kingdom among the top 10 countries for mobile internet speeds.

This acceleration in the penetration of digital infrastructure and services is echoed in the behavior of internet users, with the report revealing an increase in mobile cellular communications subscriptions to 172% of the population, exceeding the global average by 36%.

The average per capita consumption of mobile internet data in the Kingdom now exceeds 1,200 megabytes per day, amounting to three times the global daily rate.

Agility Subsidiary and Affiliate Awarded \$1.65 Billion in Korek Arbitration



The International Court of Arbitration of the International Chamber of Commerce (the "ICC") released its findings in the arbitration case between Iraq Telecom Limited, a subsidiary of Agility Public Warehousing Company KSCP, and International Holdings Limited, an affiliate of Agility, as claimants, and Korek Telecom Limited and Sirwan Saber Mustafa Barzani, as respondents. The claims were in relation to allegations of fraud and corruption orchestrated by Korek Telecom Company and its controlling shareholder, Sirwan Saber Mustafa Barzani, with a view to unlawfully causing the expropriation of IT and

IH's \$810 million investment in Korek Telecom.

The ICC holds that Korek and Barzani are jointly and severally liable and, therefore, awards damages to IH and IT of \$1.65 billion. The parties unanimously agreed to resolve their contractual disputes through arbitration before the ICC, which is comprised of preeminent legal experts with experience in high-value commercial litigation. The award is final and binding.

Vodafone Qatar The World's Fastest Mobile Network

A new global benchmark has been set.

WORLD'S FASTEST MOBILE NETWORK

Based on analysis by Ookla® of Speedtest Intelligence® data for Q3-Q4 2022 in Qatar.

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engageX: Empowering Brands to Stand Out

In a world where everything is accessible and governed by fierce competition, providing exceptional customer service is crucial to maintaining a competitive advantage. he concept of customer experience originated in early commerce, where merchants and service providers sought te themselves through

to differentiate themselves through outstanding service. However, in the early 2000s, the term "customer experience" started to gain recognition as a business strategy in its own right. Shown to drive customer loyalty and increase revenue, to this day, customer experience continues to be crucial for brands' success.

While there are many ways businesses can develop this front, the most vital approach is through engagement, defined as reaching the right customers at the right time through the right channels to achieve the most desirable results.

This is where engageX CPaaS steps in. What is engageX?

engageX is a Communications Platform as a Service (CPaaS) from e& enterprise. It enables businesses and enterprises to enhance their digital transformation journeys by equipping them with the right digital channels, guiding the implementation of appropriate processes and providing expert services.

Through strategic partnerships with leaders of the CPaaS industry, engageX provides solutions that consist of the best, most diverse set of integrated components that deliver all communication services customers require, such as communication channels, APIs and end-user interfaces, to use and monitor a platform's services. In addition, it offers the largest collection of simpleto-complex use cases across the customer journey, thereby enabling users to customize their solutions based on their needs.

These solutions extend across 12 different sectors, including e-commerce and retail, banking, healthcare, government, aviation, logistics, education, energy and utility, entertainment, automobile, real estate/ construction and hospitality. Accordingly, engageX is a comprehensive digital engagement model that aims at empowering and helping customers connect with and interact with existing or potential users through various digital channels, while offering a seamless digital customer experience.

Why CPaaS?

The adoption of CPaaS is increasing as businesses require a centralized platform for managing and integrating various communication channels, including SMS, voice, chat, email, WhatsApp Business and others, to improve customer interactions and experiences.

As a result, the global CPaaS market is projected to grow from US\$12.5 billion in 2022 to US\$45.3 billion by 2027, at a Compound Annual Growth Rate (CAGR) of 29.4% during the forecast period.

While this growth can be attributed to the increased adoption of CPaaS solutions during the pandemic, it is predominantly led by a rising demand for improved customer service and client engagement. Indeed, 77% of brands believe customer experience (CX) is a key competitive differentiator. with the global CX Management market reaching US\$8.79 billion in 2021 and being projected to grow 18.1% every year from 2022 to 2030. This is further supported by the fact that 86% of consumers would leave a brand after as few as two poor experiences.

There are a host of further benefits to employing CPaaS, including:

- Enabling brands to effectively address customer pain points through advanced analytics and reporting tools that highlight user behaviors, to increase consumer loyalty and satisfaction
- Allowing agents to efficiently handle higher volumes of customer interactions and reduce response times by automating workflows
- Enhancing engagement by personalizing customer interactions through Artificial Intelligence (AI) technologies, including Natural



Language Processing, Machine Learning, and Predictive Analytics

- Allowing organizations to adapt to changing customer preferences and thereby keep up with market trends via scalable and flexible solutions
- Enabling businesses to reach customers with relevant information and thus enhance consumer satisfaction by supporting proactive communication and personalized marketing
- Improving brands' omnichannel capabilities by providing a seamless experience across communication channels and platforms

On the other hand, not implementing CPaaS can lead to poor customer experiences, lower consumer retention and, ultimately, reduced revenue. Indeed, brands that fail to adopt the solution may struggle to keep up with changing customer preferences and therefore be at a disadvantage.

Thus, it is evident that in order to remain competitive in a crowded marketplace, businesses must differentiate themselves through superior customer service and experience. A feat they are able to achieve through the support and expert services provided by engageX CPaaS. engageX provides solutions that consist of the best, most diverse set of integrated components that deliver all communication services customers require



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Detecon: Our Commitment to Creating Value for Our Customers

In an exclusive interview with Telecom Review, Ralf Pichler, CEO, Detecon, talked about the company's sustainability competencies and strategies. Pichler also detailed how Detecon is achieving digital value creation in today's modern era and noted the industry trends he foresees in the coming year.



etecon's sustainability competencies have been recognized as "Best in Class." What is the

motivation behind accelerating the implementation of digital sustainability strategies?

The recognition was a huge motivation for us to push further on sustainability and the practice we are delivering. And here are four reasons why: First, the sustainability and the issues around it. Companies have a key role to play to overcome those sustainability issues. Second reason: Detecon has put out a pledge to be carbon neutral by 2030, so we want to be part of that to overcome those issues.



TELECOM REVIEW'S Virtual Panels' Series Continues in 2023

Building on previous years' successes, we continue our mission of connecting THE INDUSTRY'S LEADERS.

The 2023 series of virtual panels will address, among others:

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 - * Trends in 5G and digital transformation

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Streamed exclusively by BlueJeans

The third reason is the sustainability consulting market. It's a huge growth market for us, and we get a lot of requests from our clients, to help them pave out the way to overcome the issues and become carbon neutral. Last but not least, digitization as being a technology management consultancy, with a huge focus around digitization — supporting the companies becoming more and more digital, which will be a key lever to overcome that.

How important is digital value creation in today's modern era, and how does Detecon contribute to achieving this?

Nowadays, we all understand it is an important key for the survival of companies. Embracing digital and digital technology is absolutely mandatory for companies in the current environment. That's our core belief. We tend to contribute to that achievement by not only understanding technology, it's also how to implement it. So how does your future operating model change? How do we need to change the processes? What is the impact on the skills of the people you're having? A lot of guestions around that. At Detecon, we are doing digital management consultancy, focusing on digitalization. That is one of our key roles to play. For example, next month, we're going to open our 5G private campus in Cologne to make that happen and show real live use cases for our customers.

From your perspective, with telcos focusing on their paths to becoming digital telcos, what are the core challenges and opportunities that will set their course for a successful future?

First of all, there's probably not one silver bullet — that one plan for telcos to become digital operators. Everybody's understanding and embracing that challenge and are here to help operators and support them in finding their way to becoming operators. One of the challenges is, operators have built up systems in the last decades, with a lot of legacy, and have to bring that now to the new world to digitize. But a majority of them don't have a greenfield possibility. The second challenge is what we see as a vertical disintegration happening in the market. As an operator you don't own the full stack from bottom to top anymore, so we are living physically in an era of competition. It's really about embracing it. And I think, the opportunities part is focusing very much on the customer experience.

With its deep technology expertise, how will Detecon continue to provide relevant strategy and process insights to help your customers with their innovative business models?

Our commitment is to stay in the forefront of new technologies and industry trends, and to create value for our customers. It's important for us to focus on what we want to decide as a company, and to invest in two main topics: first one is sustainability, as a key lever using technology. Becoming more carbon footprint neutral. And that is something we will continue to invest in. The second topic is hyperconnectivity or hyper-connectivity transformation. We truly believe anything that could be connected in the future, will be connected in the future. And that has obviously a huge impact on data security, operating models, new use cases we can think of in a diverse set of industry analytics, AI to be used, etc. All those technologies will play into that game.

In your opinion, what industry trends will continue to dominate in 2023, and how will this influence Detecon's consulting objectives and target industries?

Most of the dominant trends we will see this year have directly related to geopolitics. So, we are living now in a multi-crisis; we are having war in Europe, high inflation in a lot of countries, a peak in energy costs, and we have supply chain disruption. All of that will influence how our customers are being set up and how they need to manage: if it's strengthening the resilience of the supply chain, if it's about managing costs, especially in the energy field, which helps sustainability ESG. All of that will influence how we are supporting and helping our customers.

Additionally, how to make use of the ChatGPT in the business model – for example, in the usage of AI – will be also a key trend, which we will see dominated in short term. Last but not least, next to telecoms, we are targeting industries where connectivity and digitization play a key role. For us, it's automotive, manufacture and logistics, and health care – the public area – [where] we believe we can make a difference.



Embracing digital and digital technology is absolutely mandatory for companies in the current environment





Comviva and Ooredoo Tunisia Partner to Deliver Contextual Digital Experience Across Customer Touchpoints

During MWC 2023, Comviva announced its partnership with Ooredoo Tunisia to strengthen the telecom operator's customers' loyalty and engagement by deploying the flagship MobiLytix[™] Marketing Studio platform.

elecom Review held an exclusive interview with Ooredoo Tunisia CEO Mansoor Rashid Al-Khater and Comviva CEO Manoranjan Mohapatra, where they shared the importance of this collaboration, their vision for improving customer experience and how technologies drive the digital transformation of telcos.

Thank you for joining us. How are data science and AI driving the digital transformation strategies of telcos? What are some of the noteworthy trends?

Manoranjan: I think this is a very obvious question, but not many people have thought through why this is becoming suddenly so important. One of the reasons is that we're using a multitude of devices with a multitude of channels. And, as users. we're generating a ton of data. To meaningfully consume that data deriving intelligence from it - it's become increasingly impossible to do it the old-fashioned way. And that is where AI and ML - machine learning comes in.

Let's say you were to predict the chances that Mansoor would churn out of Ooredoo's network. Manually, we can say that there's a 70% chance that he will. But if that's with AI churning all that data about his usage behavior, I could take it to 85%.

Having said that, it is the machine's capability - powered by data science and AI – to consume data in real-time and at a faster pace that gives it the edge to be implemented in decisionmaking.

Tell us about Ooredoo's vision to improve customer experience.

Mansoor: The customer is at the

heart of our business. And today. at Ooredoo, we need to make sure that we are upgrading customers' experience with us. And everything we do should be centered around them. So if you look at the current behavior that we are seeing, especially after COVID, customer behavior has changed dramatically. We need to make sure that we are understanding their needs and fulfilling their requirements.

How will your MobiLytix[™] Marketing Studio help Ooredoo deliver a contextual digital experience?

Manoranjan: There are three things that I believe ultimately make a difference. One is the domain knowledge and understanding of consumer behavior, which the Ooredoo and Comviva teams already bring to the table. The second one is the platform that helps you model anything that you want to drive as a consumer behavior and empower consumers on their digital journey. And the third one, which is equally important, is how soon you're able to react on the feedback path as you're changing and improving the models on a continuous basis. All three - the domain knowledge, the technology platform and your ability to quickly turn around the use cases - are what deliver the value.

How does this partnership with Comviva empower your consumers on their digital journey?

Mansoor: As a continuation of what I have said earlier, since we have a big change in customer behavior, we need Comviva to be with us because they have a very powerful tool today to understand the customer behavior, their usage and how to use this magnitude of data that the customer is already having or using within our network, as well as how can we do a customized offer that targets those customers or how can we give them

the next best offer that fulfills their requirements and needs. Without the tools and skill set that we're having with this partnership, we will not be able to fulfill the requirements that we're looking into in the future.

Comviva announced its partnership with Ooredoo Tunisia to strengthen customers' lovalty and engagement





Ericsson at MWC 2023: Ready for the Next Wave of 5G

In an exclusive interview with Telecom Review, Ericsson's Head of Product Line 5G, Sibel Tombaz, shared the importance of being a sustainable vendor in the region and why they are focusing on indoor mobile connectivity and 5G RAN to contribute to developing digital infrastructure, among other insights.

y being the first sustainable telecom vendor, how will Ericsson continue to help service providers deploy networks for both

enterprise and consumer markets?

If you look back, this is now the fifth year of deploying 5G globally. This is still a young technology, and we know that it is a technology that has been designed to serve many use cases. It's beyond mobile broadband, both for consumers and for enterprises. So we are extremely proud of our position in the market, deploying more than 60% of the global 5G networks. We have been doing that by enabling the ecosystem —deploying low, mid, and high bandwidths with high

performance - and by deploying SA to enable different use cases to really create the infrastructure. We believe that, as of today, we are in a very strong position where the infrastructure is ready for enterprise and consumer applications to be deployed on top. We're going forward, indeed, to start working on the applications and use cases. because we definitely believe that it's time to scale these deployments going forward. We see a lot of exciting applications that will grow with consumers, especially in the XR domain - different types of devices will appear. In enterprises for industry, it will be both wide-area and localarea applications. And we will support our customers and CSPs, both on the hardware and software applications, to utilize the best 5G networks to ensure different applications. We are definitely quite excited and ready for the next wave of 5G.

So what are the latest Ericsson 5G solutions that are being deployed related to indoor mobile connectivity? What is the feedback of the clients when using those solutions?

Starting from the outdoor [perspective], what we are trying to do is create the infrastructure. And it's important that we continue deploying 5G mid-bands outdoors because it's essential to get the performance needed for all these different use cases. But as we know, 80% of the time we actually spend indoors. Clearly, outdoor/indoor 5G connectivity needs to be improved.

We see that high-performing 5G connectivity is becoming an extremely critical infrastructure, not only for industry but also for consumer applications. And that's the reason we have a lot of different products in our portfolio lately, both in hardware and software. If I just focus on hardware, we have the industry's best indoor product, our Dot portfolio, which makes it easy to deploy in different networks. We are coming with three different solutions that will make it easier than ever to scale for different needs and be able to monetize. In the new portfolio that is coming, we are bringing high-performing, multioperator use, to be available for

big venues. We are coming up with more ... small-factor solutions that are easier for medium- and smallsized enterprises. On top of that, we are [bringing] an industry leading software solution to provide accurate positioning. This is an important asset for enterprises, with sub-one-meter accuracy. It will be available across all of our indoor portfolios, which is quite exciting.

How did Ericsson's 5G RAN create positive impact in 2022? How are you willing to innovate this aspect in 2023 and beyond?

5G is a mobile technology, but we see that it is more than just for making the communication source better. We see that it is an important infrastructure for bringing about a complete paradigm shift in terms of communication and in society in general. If you look at the societal benefits of 5G, we aren't only seeing it as building connectivity to everyone; we also see 5G applications that are going [further], for benefits such as access to healthcare and education in different parts of the world. It's important for digitalization and economic growth, and it's also very important for sustainability.

I'd like to build on "sustainability." Of course, we want 5G to be used to bring more value to the CSPs - to be able to deploy them, handle the traffic and bring high-performance connectivity and opportunities for monetization but we also want to do all these things while consuming less power. And this is our responsibility as a company, not only to our kids and our environment, but also to our CSPs ... Overall, I think we are seeing that we will be bringing value to CSPs; making a paradigm shift on communication; connectivity for everyone; and having the sustainability targets that we all need to achieve.

Can you explain how the 5G is bringing cost advantages and is helping service providers to handle the data growth needed for future revenue?

I believe the second wave of 5G will be all about monetization. It is about using this beautiful and competent infrastructure that we have created, [which] needs to handle growing traffic demand - 30 to 40% year-over-year. To handle that in a sustainable way, we are coming with a strong portfolio. While we are introducing new 5G sites, we will be able to bring 10 times more capacity, [while] at the same time, reducing more than 30% of energy consumption. We are trying to bring something of an innovation platform while aiving more with this. But this platform shouldn't be unused. We need to build features and functionalities on top. We see that the top 20% of 5G customers are already benefiting in terms of revenue growth. In the short term, we see the future of access is extremely hot. It's bringing big revenue growth in some of the 5G markets, which we believe will scale. We see the early indications of slicing technology and its applications for bringing extra revenue for operators. And we see that in initial examples in some of the first SA networks. I'm convinced that we will see quite a big disruption in enterprises - the scale of deployments [as well as] in the consumer space in terms of the device types: from variables to AR glasses to new types of smartphones. It's quite an exciting time, and I think we are ready for the next wave.

As a woman working in the ICT sector, what are the values you have gained over the years and how can you encourage other women to explore this field?

I studied Telecommunication Engineering [for my] Bachelor's. There were 100 people in the class and only six girls. It's not a very popular area for girls, but I believe that is changing. I think overall, our industry needs to motivate women to come to this industry. It's not just a technology that's for a man. It is very cool and interesting because we are touching the lives of others. In my mind, the first step is really motivating the young girls who are trying to find what to do in their careers and to really motivate [them about] the ICT sector. And this is coming from my position at a global company like Ericsson. I'm proud to be leading such an important product area. And I want this to be an example to the vound women out there – that we can have influence and make an impact as women in the ICT sector.



Accessing a Customer-First Approach Through Data

We are at the tipping point where artificial intelligence (AI) is not just an add-on but is poised to be a technology that underpins how business is done more broadly moving forward. The implementation of AI is helping businesses become more customer-centric, in both local and international markets, resulting in efficiency, productivity and competence.

ccording to Bain's Technology Report 2022, venture capital invested more than \$170 billion in AI hardware and software platforms, as well as algorithms, over the past five years. Moreover, worldwide spending on artificial intelligence is expected to hit half a billion dollars this year.

More than 80% of tech providers say Al is important for gaining market share and building customer loyalty, and a growing wave of investment is accelerating the path to taking customer-centricity to the next level and building intelligent experience engines.

In the customer journey of the digital era, personalized customer experiences have become the basis for competitive advantage, and personalization moves us forward by having complete data at the ready when someone calls



More than 80% of tech providers say AI is important for gaining market share and building customer loyalty

customer service or accesses a web landing page with customer-relevant offers.

Increasingly powered by AI, it is now an essential part of the design for every physical and virtual customer touchpoint.

Managed Services

Deploying a well-performing AI model is a complicated, resourceintensive task, especially if it is crafted creatively and insightfully, using the best possible data and expertise. As a result, companies are turning to managed services for assistance.

A company can partner with a managed service provider (MSP) for all or part of a given operation, and this concept is now being frequently applied to AI. As this technology moves to be a core component of modern business, particularly in improving customer experience, we expect to see more diversified managed service offerings across the entire AI value chain.

There are two typical types: narrow AI and general AI. Narrow AI. seen within computers and smartphones like speech and voice recognition

systems, powers intelligent systems that perform specific tasks without necessarily being programmed. General AI, on the other hand, is the kind of AI that can learn on its own to do whatever tasks humans can do.

With MSPs, they assist in designing end-to-end solutions that can proactively lead customers toward achieving their goals. This is made possible by combining data and technology for rapid self-learning and optimization.

AI in Customer Service

It is pretty obvious that the way we interact with customers today is very different from years ago. The manual processes are being kept to a minimum, with AI transforming customer service to be much faster. simpler, and more efficient.

Customers expect a seamless experience when it comes to their needs, which can be satisfied through AI. Tools such as chatbots and NLP solutions can reduce waiting times, answer common inquiries and guestions in real time, recommend relevant products and handle complaints.

The potential for AI in customer service success is promising, but every company needs an explicit strategy for building an intelligent experience engine. This should be aligned with the organization's core business and enhanced using AI, personalization and agile processes to build deeper, more enduring brand loyalty.

In the most successful digital transformations of the past decade, we have observed the 70/20/10 rule: 70% of the effort of changing an organization involves people; 20% entails getting the data right; and the remaining 10% is about the technology foundation.

With AI, the 70% could be reduced significantly, with human oversight only needed to ensure the technology is orchestrated properly and that the many customer touchpoints are met. Analytics can be maximized with

customer data to prevent inconsistent, stagnant experiences across channels.

Chatbot Innovation

At present, the most commonly used Al tool for customer service is a chatbot. This computer software mimics human conversations over chats to facilitate customer support, is intended to be available 24/7 and can speak numerous languages.

The rise of ChatGPT has given chatbots the spotlight for many use cases, and in its latest GPT-4 base model, the training process involves using publicly available data (such as internet data) as well as licensed data. To align it with the user's intent, the developers of OpenAI have finetuned the model's behavior using reinforcement learning with human feedback (RLHF).

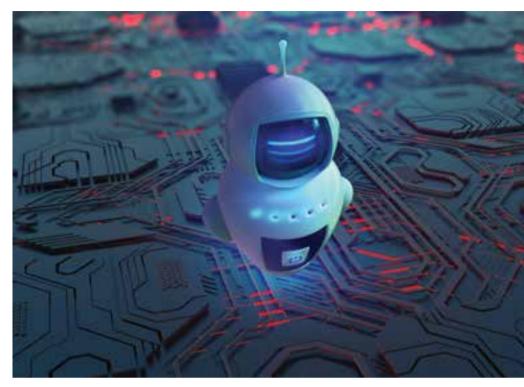
A similar model could be proven to be beneficial in the customer service arena, especially if it considers the historical data of an existing customer or addresses a new customer's query based on the previously stored and filtered data.

AI for Telcos

Zooming in on the ICT landscape, for telcos, AI could greatly enhance customer service. With a complete view of the customer journey — from first onboarding, ongoing service and monitoring, to replacement and renewal — AI systems can provide sharp insights and specific recommendations to build closer relationships with customers and introduce value-added services.

Al can improve and automate functions such as determining customer segmentation, reducing churn, upselling, tailoring features, suggesting the next-best actions and targeting services. In the next two to four years, CIOs and CTOs will consider the use of Al for customer success among their top priorities.

On the enterprise side, AI use cases become related to improving endto-end operations and network automation, including the launch of various network operations centers (NOCs).



One example of this is a suite of digital engagement capabilities integrated within the Verizon Virtual Contact Center (VCC), which aims to improve the digital customer journey. Through a smart knowledge management tool, Al-generated insights are based on customer service conversations. The smart conversational AI tool fixes customer and employee issues "in a more natural way." Omantel has also launched an advanced International Network Operations Centre (INOC), a state-of-the-art 24/7 facility that is specifically tailored to meet the needs of the cloud and contentcentric market, while Huawei's cloud-based NOC solution supports global network O&M and offers various complementary digital solutions to support carrier business development.

The idea of using the data produced to best predict what is going to happen is crucial for both the front-end and back-end of telcos. On the front side, AI will result in better understanding the customer and forecasting the business properly, while on the back side, it will mean understanding where the point of failure is attributable to specific elements of processes and trying to act preemptively in order to gain efficiency.



In the next two to four years, CIOs and CTOs will consider the use of AI for customer success among their top priorities



TELECOM Review

etisalat by e& Deploys First 5G SatComs in UAE



etisalat by e& announced the implementation of the EUTELSAT QUANTUM satellite solution, becoming the first telco in the country to expand 5G network capabilities over a softwaredefined satellite giving customers access to high speeds, enhanced coverage and scalability to meet future demands for high bandwidth applications.

EUTELSAT QUANTUM is the first commercial Ku-band satellite to have a fully flexible payload that can be remotely configured by software from a user's premises. As a software-defined steerable beam, it can be controlled in real-time to deliver maximum throughput on down/uplink and optimized for various operational scenarios. Khalid Murshed, chief technology and information officer, etisalat by e&, UAE, said, "With the demand for 'always-on' connectivity as technologies like IoT, AI and blockchain make a bigger impact on consumer lives, satellite connectivity can empower communities and business in this rapidly evolving digital landscape. With the deployment of this satellite solution and technology, our customers will be able to access their data at 5G speeds even when terrestrial connectivity is unavailable, marking another important step towards the regions' 5G adoption and bridging the digital divide."

This deployment was a result of rigorous testing with customers for over a year to rapidly scale up the 5G mobile network deployment. etisalat by e& implemented Eutelsat's latest technology Quantum satellite with the recently installed state-of-the-art Newtech Dialog Hub enhancing the mobile network capability.

Meanwhile, Oscar Garcia, business marketing and product innovation,

etisalat by e&, said, "The need for connectivity has grown beyond traditional communications with customers wanting to access the highest speeds in the network to meet their requirements and demands for bandwidth-intensive applications such as GSM services. Remote IT. Unified communications, OTT, and media streaming among others. The testing and implementation of this satellite solution greatly enhances the mobile network capability to address the futuristic development of new age applications while being able to build and deploy 5G use cases for various industry verticals and business."

"Eutelsat are proud to partner with etisalat by e& to deploy this 5G use case on the world's first Software Defined satellite network. Our fully steerable beams are capable of meeting the most rigorous demands of Next Generation mobile and satellite networks," said Ghassan Murat, head of the connectivity business unit for Middle East, Africa and Asia Pacific, Eutelsat.

stc Kuwait Accomplishes Crucial Milestone Toward 5.5G

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Kuwait Telecommunications Company (stc), a world-class digital leader providing innovative services and platforms to customers and enabling the digital transformation in Kuwait, announced that it has successfully tested advanced 5.5G technologies that include 5.5G threecarrier aggregation (3CC CA) and 5.5G Passive IOT.

5.5G technology is designed to revolutionize the capacity, speed, and reliability of communication networks. The technology targets building an advanced 10 Gbps connected smart network with features that provide higher data speed, increasing system capacity, boosted coverage, lower latency and massive device connectivity at a reasonable cost to meet local market demands.

stc has done a 5.5G three-Carrier Components Carrier Aggregation (5.5G 3CC CA) trial by utilizing three Sub-6GHz frequency bands to achieve an extensive broadband speed of 3.6 Gbps on commercial devices. stc's 5G 2.1GHz Sub-3GHz lower spectrum band has been combined with other large blocks of two middle band spectrums to achieve boosted 5.5G coverage, which is useful for driving continuous service access to more 5G devices from a single tower and to areas that don't have coverage, such as basements, deep indoor areas, and high building floors.

stc has also trialed an advanced 5.5G Passive IOT connectivity that could successfully obtain its tag remotely at a very wide distance of 200 m. The latest technology is projected to lead in shifting industries' business models by opening new revenue opportunities and opening the possibilities for verticals to accelerate their competitive digitalization plans. stc's future 5.5G Passive IOT network will be capable of supporting the capacity of millions of passive sensors' connectivity from many industries, such as retail, medical, logistics, manufacturing, and others.

stc's Chief Technology Officer, Eng. Fahad Abdulrahman Al Ali, said, "We aim to maintain the highest 5G guality of services standards and to enable robust Network as a Service (NaaS) business model by constructing advanced 5G Standalone continuous coverage infrastructure. At stc, we explore new ways to support industry digitalization processes by improved solutions that make it possible to passive sensors to become more intelligent by communicating data on a wide coverage network without humans' involvement. 5.5G Passive IOT will make businesses smarter and responsive by merging their physical and digital universes."

Zain KSA Posts Record SR 9.1 Billion in Revenues for FY2022



Zain Saudi Arabia announced its financial results for the year 2022, achieving the highest revenues in the company's history, amounting to SR 9.1 billion (\$2.42 billion), compared to SR 7.9 billion in 2021, an increase of 15%. The company also scored its highest net profit of SR 550 million (\$146.7 million), with a record growth of 157% compared to its 2021 profits. The company's board of directors has recommended the distribution of cash dividends to shareholders for the year 2022 at 5% of the nominal share value. Commenting on the results, His Highness Prince Nayef bin Sultan bin Muhammad bin Saud Al-Kabeer, Chairman of the Board of Directors of Zain Saudi Arabia, said, "The financial results for 2022 reflect the qualitative shift in the company's financial. operational and development performance and the qualitative and continuous impact of the company's strategy, which was represented by enhancing the experience of customers, expanding into future technologies, as well as investing in parallel markets, while continuing to strengthen governance to ensure sustainable growth and profits."

Meanwhile, Engineer Sultan bin Abdulaziz Al-Deghaither, CEO of KSA, said, "We were able to achieve the goals of our commitment to implement our strategy that we launched 5 years ago, which made 2022 the year of qualitative transformation in our operational and profitability journey together. We have worked to provide the best experiences." Commenting on the company's efforts in sustainable development, Engineer Al-Deghaither commented, "We at Zain Saudi Arabia were keen to confirm our commitment to the principles of sustainability through our approach to harnessing technology to serve sustainable development, and we launched a number of initiatives to confront climate change, in line with the goals of the Saudi Green Initiative and in line with the objectives of The United Nations for Sustainable Development (SDGs), and we have continued to apply the path of inclusiveness in our social practices and within the work environment of Zain Saudi Arabia."

Zain Saudi Arabia was one of the major national companies participating in the Center for the Enhancement of Partnership with the Private Sector Program (Sharik) in the ceremony announcing the first package of the program's projects, held under the patronage and presence of His Royal Highness Prince Muhammad bin Salman bin Abdulaziz.

Vodafone Oman, Digital Virgo to Bring Customers World-Class Digital Content



Making waves at this year's MWC Barcelona, Vodafone Oman signed a strategic partnership with Digital Virgo that will revolutionize the company's digital services, paving the way for Vodafone Oman to offer even more exclusive content tailored for today's young customer needs and lifestyles.

Capitalizing on Digital Virgo's global expertise, Vodafone will unlock a myriad of instant, trendy, premium value-added content, including video streaming, gaming, entertainment and more, all available through its awardwinning My Vodafone App.

At the signing ceremony in Barcelona, Bader Al Zidi, CEO, Vodafone Oman, said: "We have gained valuable insight from our customers during our first year of operations. Most importantly is that the value-add of yesterday is the basic of today, and we need to bring a new dimension to the table. Catering to a digital-savvy young population, our agreement with Digital Virgo is key to allowing us to offer enhanced, cutting-edge digital services, beyond voice and data, and we look forward to seeing the fruit of this agreement come to life in the next few months."

Guillaume Briche, CEO, Digital Virgo, said: "We are very excited to be partnering with Vodafone, which is one of the most innovative telco operators in the Middle East. Through this agreement, we are keen to deploy our expertise in supporting the company further enhance its digital services in Oman, giving customers fast, easy and secure access to quality content."

At MWC Barcelona, Vodafone's delegation will also be attending key sessions and meetings, exploring new technologies and partnerships with industry leaders. Since its launch, Vodafone has been committed to building a digital business model, from its fully digital onboarding and eStores to highly customized digital solutions, fully integrated IT and networks, and subscription-based services. Today, Vodafone in Oman is 100% digital, with a network that was constructed as one of the only fully cloud-based networks in the region.

Bassam Yousef Al Ibrahim Appointed as Ooredoo Oman CEO



Ooredoo Group announced the appointment of Bassam Yousef Al Ibrahim as the new Chief Executive Officer of Ooredoo Oman, succeeding Noor Al-Sulaiti.

Bassam moves to Ooredoo Oman from his most recent role as Chief Executive Officer of Ooredoo Algeria, bringing to his new position over 20 years of experience in the telecoms industry and in several leadership roles within the Group. He is a member of the board of Ooredoo Tunisia.

Bassam succeeds former Ooredoo Oman CEO, Noor Al-Sulaiti, who successfully drove the company's strategy and growth since 2021, laying solid groundwork for future success.

Aziz Aluthman Fakhroo, managing director and group CEO at Ooredoo Group, said: "Since joining Ooredoo in 2013. Bassam has been responsible for several notable achievements in his many senior roles. His stellar career experience stands him in good stead to lead Ooredoo Oman's future achievements. and I wish him the best in his new role. I also extend my heartfelt thanks to Noor for her unwavering dedication, hard work and commitment for excellence, which have been instrumental in driving Ooredoo Oman's success over the past two vears."

During his tenure as Ooredoo Algeria's CEO, Bassam successfully steered the company through the challenges of the pandemic and realized great successes, including conducting a major network modernization project across the country, which led to a significant increase in customer base and a substantial improvement in revenues year on year. Under his leadership, Ooredoo Algeria has also bagged a number of awards, including the 'Best Exemplary Employer' accolade for its human resources strategy during the COVID-19 pandemic, the Global Carrier Award in the "Best ESG Initiative" category and many more.

Ooredoo also announced the appointment of Roni Tohme, Ooredoo Algeria's chief financial officer, as the company's acting CEO, succeeding Bassam Al Ibrahim until the appointment of a new CEO.

With more than 20 years of experience in telecoms and finance, Roni joined Ooredoo in 2020 as Ooredoo Algeria's CFO, helping shape an agile and lean finance department and highly contributing to the company's digital transformation.

The Release of Oman Emirates Gateway Telecom Project



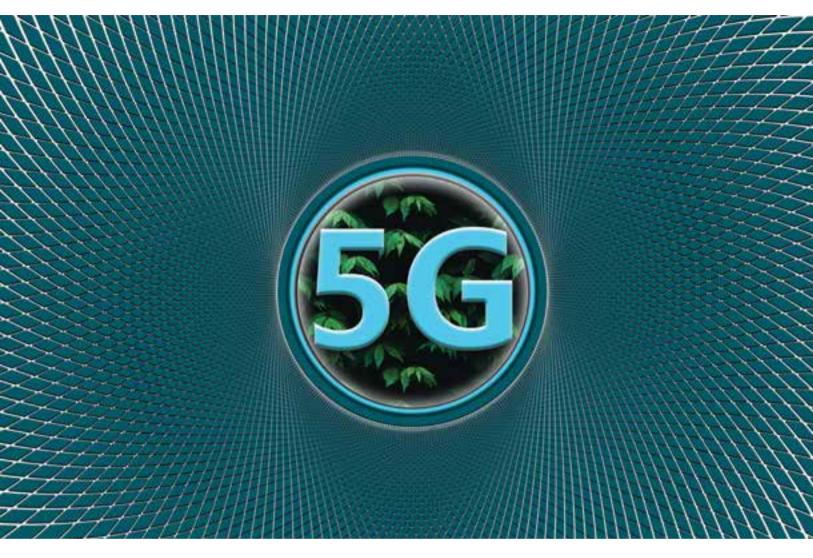
Omantel and UAE's du, from Emirates Integrated Telecommunications Company (EITC), have come together to link the Sultanate of Oman and UAE through a newly activated 275 km international fiber optic submarine cable named the Oman Emirates Gateway (OEG) that will meet the evolving market demands, scale up speed, expand connectivity, deliver enhanced customer experience and provide wider commercial offerings.

Oman and UAE currently connect through terrestrial and submarine routes. The new cable system of OEG will serve as an express connection between both countries, and the partnership will reiterate Omantel's and du's position as leading wholesale players supporting the region to evolve into a promising new global communication hub.

Talal Al Mamari, CEO of Omantel, said, "I am glad to announce this partnership with du. This direct and dedicated corridor will synergise the goals of Omantel as the global wholesale hub and of du as the regional data hub, bringing huge benefits to our Wholesale and Enterprise customers. Both companies will also be able to further expand their networks with higher efficiency and improved connectivity which will result in a significant positive impact in terms of services quality and product variety.

"The importance of this partnership is reflected by the fact that it is the first of its kind regional fibre optic submarine cable which connects two international data centres — Equinix MC1 in Barka, Oman and datamena DX1 in Dubai, UAE. This link will act as a major facilitator for hyperscalers, content providers and international carriers that are currently hosted in these datacentres to avail improved connectivity services and higher capacities and will be able to directly link their Point of Presence (POPs) in the region. Increased connectivity between the two data centres will also attract more global players to the region, improve the quality of connectivity, which will in turn, boost customer experience," Al Mamari added.

Fahad Al Hassawi, CEO of du, said, "We are excited to enter into this partnership with Omantel. The agreement comes from a common vision for a new strategic direction that will help both companies optimise their assets and positions in the local, regional and global markets. OEG will trigger more investments to the region and boost the performance of our wholesale and enterprise customers, which will be passed further down the line to the society by bringing large-scale transformation. We share the same vision with Omantel of transforming the region to a global telecom hub and have always strived to introduce cutting-edge solutions to our customers.



Sustainability Fulfillment in 5G Networks

The effects of the COVID-19 pandemic have prompted many organizations to create environmental sustainability plans and operate environmentally friendly businesses. he future of a sustainable business encompasses both present and future generations. In addition, it creates cutting-edge

business plans that boost productivity and have a positive impact on the environment and society. Organizations can start moving towards the sustainability of the company and the environment with 5G and other databased technologies.

This digital transformation includes a number of key elements, including the fifth generation of cellular technology, or 5G. It has won praise for its speed, which is up to ten times faster than current networks (depending on location).

It is claimed to reduce latency, meaning it will help load your web resources faster, thus improving the overall page load time for your visitors, and increasing the adaptability of wireless services.

In comparison to 4G, 5G is more energy-efficient per unit of mobile traffic because the 5G networks themselves support energy-saving features like smart sleep mode.

How Will 5G Benefit the Environment?

First and foremost, our carbon footprint is reduced globally. It has been shown that the adoption of sustainable practices, better management of our forests and other natural resources, and the shift to solar and other renewable energy sources all have significant positive effects. However, change can be difficult, especially when it comes to balancing environmentally friendly practices with economic development.

After China, the United States is currently the world's second-largest consumer of electricity. And other areas that want to evolve with the times are catching up. The use of fossil fuels and natural resources will increase as demand for transportation, utilities and cooling processes also increases.

The world, as we know it, would be preserved for many generations to come if people and businesses voluntarily reduced their energy needs and adopted better practices. But we recognize the sporadic nature of voluntary compliance. Through automation and artificial intelligence, we can use technology to consume less energy and create a more sustainable planet. This reduces our reliance on volunteer efforts.

In some ways, 5G has the potential to pave the way for new industrial practices and technological advances that will result in a greener, more environmentally friendly future.

Network Efficiency and CO2 Reduction

Switching from 3G and 4G LTE to 5G

will likely have an interesting effect on transmission efficiency. This transition will take place over the next ten years, and by 2030, according to researchers, the 5G network is expected to create about 85% fewer emissions per unit of data transported than the current mobile network.

Reduction of Energy Consumption

With the advent of 5G, which offers wider reach. much faster networks. more bandwidth and lower latency. the use of electronic devices is expected to increase globally. This will undoubtedly increase energy demand. At the same time, global efforts are underway to improve energy efficiency and reduce energy consumption on the grid, using a variety of measures, including solar, wind and hydro, and the efficiency of how appliances and buildings use energy to reduce our carbon footprint. Since 5G networks can transfer data almost instantly, Al automation will become a reality. With better designs, such as more efficient engines and software that uses sophisticated algorithms to optimize resource use, smart cities and buildings will move closer to netzero emissions.

Autonomous and Electric Vehicles

Despite the fact that autonomous cars currently use cameras and radars to navigate, 5G is actually crucial to the development of this technology. The next connected vehicle technology will be a key element. This system allows autonomous vehicles to communicate with each other and with intersections to prevent accidents. When you drive in the crowded streets of the city - a circumstance where it can be difficult for cars to avoid each other - this will be especially helpful. 5G communication will be one of the key technologies that will make selfdriving cars a reality, as AI will be able to make crucial split-second decisions on roads and at intersections.

The use of 5G for autonomous vehicles in the future is likely to benefit the environment in several ways.

With fewer people expected to own a personal vehicle in the future, autonomous vehicles will usher in a paradigm shift. A study predicts that autonomous driving will remove up to 80% of vehicles from the road. The use of carpooling services will grow. There will therefore be fewer and smaller car parks, as well as fewer cars produced. The amount of resources needed to restore infrastructure, such as repairing and widening roads, will be reduced due to reduced road wear.

The majority of autonomous vehicles will be electric, significantly reducing the need for fossil fuels. Autonomous car software will be configured to aim for maximum mileage. With no driver, these cars will also have smaller engines, as acceleration will be less important.

Environmentally Friendly Technologies for Cities and Smart Businesses

The IoT revolution will be based on 5G, which will fuel green technologies that support automation and efficiency in smart cities and smart agriculture, as well as efficiencies in manufacturing, oil and gas, mining, etc.

A smart city has many different components, including autonomous and electric vehicles. As cities improve their infrastructure, a variety of new green, Internet-enabled technological innovations will emerge in the coming years.

5G: A More Efficient Network Than 4G

One of the many benefits of the new mobile network will be its energy efficiency, which will lessen harm or threats to the environment. When 5G is introduced, it will use half as much energy as 4G, and by 2025 and 2030, it will consume 10 times less.

Lastly, unlike 4G antennas, 5G antennas emit a focused signal and turn on when needed. The sleepmode option, used when there is no traffic, was created to save energy. The biggest consumers of mobile energy, the antennas, were always on in previous generations of mobile telephony, even in the absence of users. As smart coils for 5G continuously scan their environment, the technology wins on energy efficiency yet again.

Cisco Appoints New Regional Director for Partner Organization in MEA



Cisco announced the appointment of Ossama Eldeeb as its new regional

director for Partner Organization in the Middle East and Africa. Ossama is taking over from his predecessor, Abdelilah Nejjari, who was recently appointed as Cisco's managing director for the Gulf region.

Based in Dubai, Ossama will be responsible for nurturing and strengthening Cisco's relationship with its growing partner ecosystem throughout the region while working closely with cross-functional teams to build on Cisco's partner-led strategy. In his role, Ossama will oversee the planning and execution of Cisco's go-to-market strategies and innovative models for business growth with the company's partners. Ossama brings more than 24 years of leadership experience in the technology industry, having held a variety of roles across partner, commercial and sales at companies including VMware, Microsoft and AMD. Most recently, he served as Senior Director of VMware's South EMEA Partner Organization.

Reem Asaad, vice president, Cisco Middle East and Africa, said: "Partners remain central to Cisco's growth strategy in the region. Ossama will have a tremendous opportunity to lead, innovate and grow our mutual business with our partner ecosystem. With his vast experience, I am confident that he will bring great value to our teams, partners and customers."

Benya Group and SAP Partner to Support Digital Transformation in Egypt, Saudi Arabia and UAE



Benya Group, an integrated digital solutions and ICT infrastructure provider in Egypt, the Middle East and Africa, has signed a partnership agreement with SAP International, a leader in software production for business operations management, to support digital transformation in Egypt, Saudi Arabia and the UAE.

Under this agreement, Benya Group will be a strategic and regional partner that will provide SAP Signavio smart digital transformation services in these countries. The partnership was signed at the headquarters of Benya Group in the presence of Eng. Ahmed Mekky, chairman and CEO of Benya Group, and Engineer Hoda Mansour, senior vice president and general manager of Smart Digital Transformation, SAP, South Europe, Middle East and Africa.

With this agreement, the Benya Group will be able to provide SAP Signavio smart digital transformation services in the Egyptian, UAE and Saudi markets. The Benya Group also aims to provide the latest technology solutions from SAP Signavio to customers in many sectors, most notably banking, petroleum, health and industry, based on the expertise of Benya in the Egyptian and Arab market, and in line with its expansion plans in the region's additional markets.

Commenting on this partnership, Eng. Ahmed Mekky said: "We are pleased to continue collaborating with SAP International, expanding our partnership through which we seek to provide cutting-edge services and solutions to our customers, following the successful completion of the digital transformation project for many business companies, which included more than 30 subsidiaries of the Metallurgical Industries Holding in addition to the drinking water and sanitation sector."

Mekky added: "We cherish the selection of SAP Global Group to provide 'SAP Signavio' services in Egypt, Saudi Arabia and the UAE, reflecting SAP's confidence in the capabilities of a structured group to achieve the desired goals to strengthen the enterprise plans towards digital transformation. We hope that this partnership will contribute strongly to strategic projects that stimulate and support Egypt, Saudi Arabia and the Emirates digital transformation plan."

Hoda Mansour of SAP stated: "We are pleased to sign an agreement with Benya Group as our business transformation partner to support digital transformation efforts in Egypt, Saudi Arabia and the Emirates. We are confident that the leadership role and expertise of Benya Group will bring great benefits to our customers."

Nokia Recognized as One of the World's Most Ethical Companies



Nokia announced it has been chosen as one of the "World's Most Ethical Companies®" by Ethisphere. In 2023, 135 honorees were recognized spanning 19 countries and 46 industries. Nokia is one of two winners in the telecommunications industry and the only Finnish company to be honored.

This award distinguishes Nokia for its strong business ethics, governance and sustainability practices.

Esa Niinimäki, Chief Legal Officer of Nokia, said: "As part of our renewed company strategy, we want to be the trusted provider of choice in our industry and draw on our ESG approach as a competitive advantage for Nokia. This award recognizes the commitment of our leaders, employees and partners to operating with the highest standards of business ethics."

In 2022, Nokia announced an enhanced ESG strategy that has been designed to maximize Nokia's impact where its technology, solutions and capabilities combine to address some of the biggest global challenges and create value. Among the five key pillars of the ESG strategy is Nokia's commitment to continue to take a proactive and values-driven approach in driving responsible business practices internally and in its value chain, working closely with customers and suppliers to engage on systemic issues related to environment, mitigating the misuse of technology (for example, in responsible use of AI), ethics, human rights and working conditions.

Erica Salmon Byrne, CEO of Ethisphere, said: "Ethics matters. Organizations that

commit to business integrity through robust programs and practices not only elevate standards and expectations for all, but also have better long-term performance. We continue to be inspired by the World's Most Ethical Companies honorees and their dedication to making real impact for their stakeholders and displaying exemplary values-based leadership. Congratulations to Nokia for earning a place in the World's Most Ethical Companies community."

Grounded in Ethisphere's proprietary Ethics Quotient®, the World's Most Ethical Companies assessment process includes more than 200 questions on culture, environmental and social practices, ethics and compliance activities, governance, diversity and initiatives that support a strong value chain. The process serves as an operating framework to capture and codify the leading practices of organizations across industries and around the globe.

Tata Technologies to Accelerate Jaguar Land Rover's Industrial Strategy



Jaguar Land Rover is partnering with Tata Technologies, the global engineering, product development and digital services company, to accelerate the digital transformation of Jaguar Land Rover's industrial strategy. The first phase will include UK core production facilities, with solutions subsequently deployed to other global locations.

Tata Technologies will deliver end-toend integrated Enterprise Resource Planning (ERP) to transform Jaguar Land Rover's manufacturing, logistics, supply chain, finance and purchasing modules by bringing data and knowledge from multiple departments into one single source. The intuitive new user interface of Tata Technologies award-winning software will drive stability in operations, improving visibility both between teams and for suppliers. The net result for the company will be a more agile, faster-tomarket capability for new vehicles.

ERP is key to streamlining and consolidating information across core business areas. Creating a dedicated home for data and management processes across departments is fundamental to the transformation of how a business functions. ERP systems are also capable of aggregating, storing and interpreting data to provide insights instantly, helping companies respond to issues, challenges and opportunities in an agile and timely manner.

The agreement furthers Jaguar Land Rover's alignment with the Tata Group of companies as part of its Reimagine strategy. Tata Technologies brings more than 30 years of experience in product and digital engineering, with a global network of 11,000 innovators and clients in 27 countries.

Speaking on the collaboration, Barbara Bergmeier, executive director of industrial operations, Jaguar Land Rover, commented: "The partnership with Tata Technologies will allow us to accelerate the transformation of our core ERP infrastructure to deliver the efficiency and usability we require for the future and our transformation objectives. It also demonstrates the power of being part of the Tata Group to help us to achieve targets for our supply chain and wider industrial operations."

Warren Harris, MD and CEO, Tata Technologies, commented: "The ERP transformation collaboration with Jaguar Land Rover is another milestone in a nearly two-decade relationship with Tata Technologies. The trust awarded by Jaguar Land Rover reaffirms our long-standing expertise in automotive engineering and digital solution offerings.

Ericsson Named 5G Network Infrastructure Leader for CSPs for Third Time



Ericsson has been named a Leader in the 2023 "Magic Quadrant™ for 5G Network Infrastructure for Communications Service Providers" report for the third year in a row.

In the report published by Gartner in February 2023, Ericsson is recognized in the Leaders' quadrant and positioned highest for "Ability to Execute."

Vendors offering 5G solutions for communications service providers (CSPs) were comprehensively and independently assessed and evaluated by Gartner experts on their Completeness of Vision and Ability to Execute to provide a market snapshot on 5G infrastructure capabilities.

Around 50% of 5G traffic outside of China runs on Ericsson networks. R&D investments over the past four years have led to Ericsson increasing its market share outside of China to 39% in 2022, from around 33% in 2017.

There are currently 235 live 5G networks in commercial service, and Ericsson is powering 143 of them. In addition, Ericsson has been driving the introduction of cloud-native and dual-mode technology for core networks. Fredrik Jejdling, executive vice president and head of networks, Ericsson, says: "Being recognized once more as a Leader by Gartner feels truly rewarding. We believe it shows that investing in technology for performance and cost leadership continues to pay off and make an impact."

Ericsson's commercial 5G leadership and technology evolution leadership are independently known industrywide. Ericsson had been recognized in Gartner's 5G Magic Quadrant 2022 and Frost Radar™ Global 5G Infrastructure 2021. The company also ranked highest among telecom vendors in the latest ABI Research sustainability assessment.

Ericsson continuously evolves its end-to-end 5G offerings, which include 5G RAN with the energyefficient Ericsson Radio System, Cloud RAN, Ericsson Silicon, 5G Core, Orchestration and 5G Transport, as well as professional services. The company has launched innovative software solutions such as Ericsson Spectrum Sharing, 5G Carrier Aggregation and Uplink Booster, which significantly improve coverage, user throughput and spectral efficiency.

SES Confirms Merger Discussion With Intelsat



European satellite telecommunications provider SES is exploring a possible merger with Intelsat, another tie-up in the sector as the race for space-based internet service heats up. In response to rumors in the market, SES confirms that the "company has engaged in discussions regarding a possible combination with Intelsat."

The firm added that there is no certainty that a transaction "would materialize."

The satcom sector has been seeking to consolidate in the wake of the arrival on the scene of billionaire players Elon Musk (SpaceX's Starlink satellites) and Jeff Bezos (Amazon's Project Kuiper).

Several other mergers have already been announced in the satellite scene, including

the merger of France's Eutelsat with UK counterpart OneWeb as well as that of US provider Viasat and Britain's Inmarsat.

According to Bloomberg, a tie-up between SES and Intelsat would lead to the creation of a \$10 billion-plus group and require approval from the Luxembourg government, SES's top shareholder.

Intelsat has bounced back strongly after being placed in Chapter 11 bankruptcy in May 2020, after which it embarked on a massive restructuring. On the other hand, SES generated over €1.9 billion in revenue by the end of 2022.



IoT and Telecom ESG Goals

As a key industry in an increasingly digitized and sustainability-conscious economy, it becomes imperative for the ICT sector, the telecom sector in particular, to be compliant with the regulations and policies driving the decision-making in the industry and the overall global market.



becoming crucial for telcos to attract investments as well as retain loyal customers and employees. Investors, customers and employees are increasingly assessing the company's level of sustainability mainly through the three criteria listed below:

• Environmental: Company's direct impact on the natural environment

and how energy-efficient they are.

- Social: Company's interaction with customers, stakeholders and communities at large.
- Governance: Company's approach to leadership, demographics and internal controls.

Furthermore, market intelligence predicts that the value of ESG exchange-traded funds will increase from \$35 trillion in 2020 to \$50 trillion by 2025, representing a third of the projected total global assets under management. In a survey of 200 asset owners conducted by Morgan Stanley Capital Investments (MSCI), 62% cited climate change or ESG measurement as a top 3 impactful trend in the next 3–5 years, and 73% planned to increase ESG investment either significantly or moderately.

How Will IoT Play a Role in This?

By now, most of us are familiar with the term "IoT," or "Internet of Things." It is perhaps one of the most interesting innovations in the technological advancements taking place today. IoT incorporates physical objects with sensors, processing abilities, software and other technologies that connect and exchange data with other devices and systems over the Internet or other communications networks. For instance, paying for your groceries through the debit card embedded in your mobile phone or calling a friend using your wristwatch instead of your phone are some of the top-of-mind examples of IoT at play.

Thanks to the convergence of multiple technologies, IoT has evolved to encompass ubiquitous computing, commodity sensors and powerful embedded systems, as well as machine learning and artificial intelligence that complement various industry operations. These may include sectors such as utility, transportation, healthcare, heavy industries and so on. IoT technology has been instrumental in the concept of smart homes, smart cities and smart factories. The technology is rapidly being adopted for applications in automobiles as well as aviation.

Some of the latest IoT deployments for energy-efficient operations include the following:

Industrial IoT (IIOT): An extension of IoT, IIoT applications facilitate connectivity between machines and devices in such industries as oil and gas, utilities and manufacturing, health, etc. Downtimes and system failures in such industries are a matter of grave concern for their productivity and reputation. IIoT applications are deployed to improve operational efficiency and equipment maintenance, as well as for health and safety purposes.

Enterprise Networks: The network is the pillar of any modern enterprise business operations. The absence of efficient connectivity would simply mean disruptions in the flow of information for companies operating globally. IoT applications in enterprise networks can provide marked efficiency in connectivity, device management, security and services.

Residential Broadband: A massive amount of online activity takes place from the residential customer's end. IoT helps deliver sustainable networks that continually adapt to the varied needs of home users, resulting in lower energy consumption and value-added, customized services.

Smart Metering: IoT has enabled smart metering that facilitates efficient management of utility services such as water and electricity, allowing both utility companies and their consumers to benefit from the many advantages. Some of the advantages of smart metering include efficient energy use, timely servicing and repairing of utility infrastructure, and improved compliance with regulations.

Opportunities to Tap

IoT deployment can open up a vast array of opportunities for telecom operators to channel their ESG initiative by enabling other sectors to minimize energy consumption. They must find ways to increase their role within the IoT ecosystem and capture a larger proportion of the revenue potential linked with IoT deployments beyond the connectivity and network management layers of an IoT value chain by offering solutions such as Platforms as a Service (PaaS) for developers, as well as cloud and analytics solutions geared towards IoT projects. For instance. Ooredoo Qatar launched an IoT platform that enabled application development and connected device management for enterprises, along with real-time analytics and device security. Additionally, in the UAE, Etisalat and Orange have established an IPX peering point at Etisalat's SmartHub PoP to improve its international wholesale arm's range across partners in the region and meet capacity demand for 4G and 5G connectivity. The Etisalat SmartHub/IPX peering platform addresses both roaming customers and IoT roaming businesses that require low latency.

Challenges Remain

The IoT has the potential to transform business models by changing how organizations gather data and information by bringing together the major technical and business trends of mobility, automation and data analytics.

Despite the benefits, IoT will need adequate and affordable wireless

connectivity, interoperability and common standards to be successful. IoT ecosystem design will need to focus on security, reliability, scalability, latency and the level of individual control of connectivity parameters. Since IoT is the storehouse of sensitive personal information, privacy and security of confidential data will remain a key area of concern. Another area of concern is the integration of IoT with existing technologies. All devices will need to tweak their architecture to connect to cloud services and other gadgets, resulting in increased complexity to connect to everyday objects. Last but not least, internet connectivity to access and use IoT applications is not equal in all parts of the world. Without collaborative and concerted efforts to bring the unconnected into the fold, the implementation of IoT will sadly remain an exclusive technology for the few.



loT deployment can open up a vast array of opportunities for telecom operators to channel their ESG initiative by enabling other sectors to minimize energy consumption



TELECOM Review

FAA Awards \$2.4 Billion Contract to Verizon Business Network Services

The Federal Aviation Administration (FAA) has awarded the FAA Enterprise Network Services (FENS) contract to Verizon Business Network Services. The length of the contract is up to fifteen years, with a value of \$2.4 billion.

As a result, Verizon will act as the lead integrator and operator for the FAA's main telecommunications and IT network.

The FENS program will work to establish a more modern network infrastructure – a migration from Time Division Multiplexing (TDM) technology to services based on Internet Protocol (IP)-compatible technologies.

Thus, Verizon will provide the FAA with telecommunications, information management services, and other capabilities to support its continuing mission of providing the safest, most efficient aerospace system in the world.

In addition, the new FENS contractor will provide the network connectivity needed to support the FAA's administrative information systems and functions of the National Airspace System (NAS).

In context, the FENS Program is the successor to the FAA Telecommunications Infrastructure (FTI) program awarded in 2002.

As one of Verizon's responsibilities, they must support the reliability, availability and maintainability (RMA) of the NAS. In line with this, the FAA will require to identify and advise potential improvements to the telecom operating environment such as in the mitigation of vulnerabilities and costeffective ways of delivering services.

ITU Secretary-General Doreen Bogdan-Martin Receives IEEE President's Award

ITU Secretary-General Doreen Bogdan-Martin has been awarded the 2023 IEEE President's Award for her "distinguished leadership and contributions to the public."

IEEE, the world's largest technical professional organization, presented the award to Ms. Bogdan-Martin during a ceremony at ITU headquarters in Geneva.

"I'm deeply humbled by this recognition," said Bogdan-Martin. "Our two institutions stand for the same thing, which is trying to bring the benefits of technology and derive those benefits for all of humanity. I look forward to closely collaborating, cooperating, and strengthening the partnership between our institutions."

IEEE is dedicated to advancing technology for humanity. Through the IEEE Awards Program, the organization recognizes major contributions in relevant fields for the benefit of society.

Past winners of the IEEE President's Award include Microsoft co-founder Bill Gates (2000), former Intel CEO Andrew Grove (2000) and NASA researcher Katherine Johnson (2019).

IEEE President and CEO Dr. Saifur Rahman said, "It is my honor to recognize you as a transformational leader and an IEEE member for the commitment you made to bridge the digital divide globally." The 2023 IEEE President's Award will be presented publicly at the IEEE Vision, Innovation and Challenges Summit & Honors Ceremony on May 5 in Atlanta, Georgia, USA.

Bogdan-Martin was elected Secretary-General of ITU in September 2022 and took office on January 1, 2023, becoming the first woman to head the 157-year-old organization.

Tech is Not Alone: Companies Slash Staff by Nearly Half a Million Globally

The rush of layoffs that began last year has yet to diminish, with executives across sectors having let go close to half a million employees worldwide.

The recent Silicon Valley Bank failure further opens the possibility of upcoming job losses and sharpens the risk of recession. And according to a comprehensive review of layoffs by Bloomberg News, these dismissals extend far beyond technology.

The tech industry has cut more than 200,000 employees since last year, while other industries like finance, consumer retail, communications/media, healthcare and pharmaceuticals have also been impacted.

The largest cumulative layoffs were initiated by these notable companies: Amazon, Meta, Alphabet, FedEx, Microsoft, Ikea, Philips, Royal Mail, Credit Suisse and Salesforce.

So far, more than 1,600 tech employees have been laid off on average per day in 2023, with tech companies thus contributing a large chunk to the overall reduced workforce. Despite this, other sectors are also cutting roughly 10% of their staffs as well.

In the past four months, hundreds of thousands who considered themselves secure in their positions have been put out of work. The downsizing phenomenon, which doesn't seem likely to abate any time soon, can lead to stronger job insecurity and encourage behaviors like quiet quitting – doing the bare minimum required to stay in a job – and reduced motivation, creativity and innovation. Additionally, research shows that employees who have suffered a layoff are much more likely to voluntarily quit jobs in the future.

Netflix on Top: Controls Global Data Traffic Across Platforms

Netflix dominates online streaming platforms despite the varying number of subscribers it has faced since the outbreak of the COVID-19 pandemic to the present. With so many similar platforms, Netflix has nonetheless stayed ahead of the game on a global level.

According to recent information, Netflix has been an important source of the nearly 15% increase in data traffic in the past year, a number equivalent to data shared on both TikTok and YouTube platforms which together comprise 11.4% of global internet traffic. The giant streaming services company invested billions of dollars in unique video content as it continued to succeed in amassing new subscribers, reaching roughly 10 million in the second half of 2022

While the platform attracts the largest percentage of subscribers compared to competing platforms, Internet browsing generally accounts for 17% of Internet usage globally, while gaming accounts for another 7.8% and social media platforms about 5.1%.

COVID-19 has prompted an increase in the use of online streaming services. Despite market fluctuations and changes in trading hours, the company announced that it will strive for lasting growth by offering more diversified services to enhance customer experience around the world. One of Netflix's latest initiatives, launched at the beginning of 2023, is the offering of its less expensive, ad-supported option.

Netflix considers this move to be one of its key strategies to attract more customers through more affordable monthly subscriptions. Taking into account the region's difficult situation on a number of levels, particularly regarding customers' economic hesitations, the platform has reduced subscription fees in more than 12 Arab countries, including Yemen, Egypt, Iraq, Tunisia, Jordan, Palestine, Libya, Algeria, Lebanon, Sudan and Morocco.

HGC to Start a New Internet Exchange in Manila

HGC Global Communications Limited (HGC), a fully-fledged ICT service provider and network operator with extensive global coverage, and AMS-IX (Amsterdam Internet Exchange), the world leading Internet Exchange (IX), today announced the launch of a new Internet Exchange in Manila. the Philippines. The new Internet Exchange was officially announced and celebrated during the 10th anniversary festivities of AMS-IX Hong Kong, in the presence of the Consul General of the Kingdom of the Netherlands in Hong Kong and Macao and representative from the Office of the Communications Authority. Since then, the partners have fueled their global IX footprint proving strong ties and commitment to the community through a close business relationship.

The strategic partnership between HGC and AMS-IX aims to enhance the quality of internet all over the world. AMS-IX is one of the world's largest peering hubs. Their peering expertise complements HGC's extensive global network and digital infrastructure, which results in a partnership that is able to bridge the West and the East. Over the years, HGC and AMS-IX have successfully launched and fostered four IX's in Hong Kong, Singapore, Chicago and Bay Area, with AMS-IX Bangkok to go live later this year.

AMS-IX along with HGC as the telco partner are committed to maintain Hong Kong as the digital gateway for Asia. With this strong partnership, HGC and AMS-IX will further eye on more emerging markets to contribute to the internet community.

EXA Infrastructure to Build Italian Network

EXA Infrastructure announced that FibreConnect has chosen EXA to build its backbone across Italy to connect key industrial locations and data centers.

FibreConnect is an independent operator that provides "Wholesale Only" services to ISPs operating in the Industrial and Artisanal Areas (AIAs) spread across the Italian territory, with the aim of driving innovation via ultrabroadband connections.

"We recognized the gap in the market for this important fiber optic connectivity and EXA Infrastructure was the leading partner of choice to ensure we could build a strategic and robust backbone that connects Rome to Milan," Renzo Ravaglia, Chief Executive of FibreConnect said. "We have successfully built network branches to provide our ISP partners with dedicated ultra-broadband connection services in industrial areas that are not covered by traditional operators."

FibreConnect launched in 2022, investing in EXA's fiber infrastructure to deliver transmissions speeds up to 10 Tbps. "The strategic partnership aims to deliver on FibreConnect's ambition to reach 1000 AIA and 250,000 companies," Ravaglia added.

"EXA Infrastructure is committed to supporting the needs and growth plans of our customers, not only for today but to create opportunities that enable innovation for the future," said Nicholas Collins, Chief Commercial Officer at EXA Infrastructure. "Our role in supporting FibreConnect to serve its customers across Italy is something we are incredibly proud of, and we will continue to build on this through our future network investments."

Nigerian Government Waves Goodbye to 5% Tax on Telecom Services

Isa Ali Ibrahim Pantami, minister of communications and digital economy, has announced that the Nigerian federal government has exempted the telecommunications sector from paying a 5% excise duty, which it had planned to introduce on telecom services, following the recommendations of a committee set up to review its applicability.

According to Pantami, this decision is based on three main arguments presented by the committee: the over-taxation of the telecom subsector, whose players pay up to 41 different categories of taxes, fees and charges; the major and growing contribution of the sub-sector to the Nigerian economy; and the maintenance of tariffs, despite rising operating costs. He added that this decision will be maintained by the incoming administration.

The introduction of a 5% excise duty on telecom services is planned for the 2020 Finance Act, which the Nigerian government intended to implement in July 2022 as part of its attempts to raise revenue. The initiative was immediately met with opposition from telecom industry players, including the Minister of Communications and Digital Economy.

Faced with mounting pressure, the government suspended the initiative in September 2022, but the idea was not abandoned. It was included in the provisions of the 2022 Finance Bill, revised by the National Assembly to support the 2023 Budget. In addition, the National Association of Telecom Subscribers (NATCOMS) has filed a lawsuit against the government over the matter.

Another Tech Industry Blow: The Collapse of Silicon Valley Bank

Tech startups have received a big setback, with the biggest US bank failure since the 2008 financial crisis. The Silicon Valley Bank collapse triggered a crisis for tech startups, sounding alarm bells about a potential doomsday of mass layoffs again and the demise of hundreds of startups.

Silicon Valley Bank, a nearly four-decadeold financial institution, was founded to focus on the needs of startup companies. Its main strategy was collecting deposits from businesses financed through venture capital, and the wave of computer tech startups during the dot-com bubble provided an influx of business for the bank.

Following its bankruptcy, SVB had over \$200 billion in total assets, with more than \$175 billion in total deposits. Some 2,500 venture capital firms had accounts at this bank, while angel investors and operators – mostly solo and smaller businesses – also banked extensively at SVB.

In early March of 2023, a combination of factors, including poor risk management

and a bank run driven by tech industry investors, caused the bank to collapse, and the use of social media, particularly Twitter, was reported to be a factor in both the initial bank run and its aftermath.

Over 5,000 CEOs and founders representing over 400,000 workers had signed a petition started by Y Combinator, an American tech startup accelerator used to launch successful billion-dollar companies, appealing to the US Treasury to backstop depositors, advocate for "stronger regulatory oversight and capital requirements for regional banks" and investigate "any malfeasance or mismanagement on the part of SVB executives leading to this failure."

Days after, the US government announced that all of Silicon Valley Bank's customers — whether they were insured or not — will have full access to their deposits. This is a proactive response reflecting widespread fears that SVB's collapse could lead to a domino effect.

Security Spending in Asia Pacific to Reach \$36 Billion in 2023

The rise in cyber-attacks, digital transformation initiatives and remote working trends are pushing spending on security hardware, services and software in Asia/Pacific, excluding Japan as per new IDC findings. IDC expects the spending to reach \$36 billion in 2023, an increase of 16.7% over the previous year. It further states that security investments will remain resilient in 2023 and the forecasted years (2021-2026) on the back of uncertain global economic conditions. IDC expects spending on securityrelated products and services to grow at a five-year CAGR of 15.4% over the forecast period to reach \$55 billion by 2026.

As expected, security services will dominate the security markets,

accounting for nearly half of the security spending throughout the forecast period, growing at a 14.7% five-year CAGR. Managed services will continue to be the largest category in the security services market, delivering around 40% of the spending throughout the forecast, followed by consulting services and integration services.

China continues to be at the forefront of security investments in the region, accounting for more than 40% of total Asia/Pacific security spending in 2023, with a five-year CAGR of 18.8% during the forecast period. The next two countries that follow China in terms of security spending are Australia and India. Together, these countries will account for 25% of the overall Asia/ Pacific security spending in 2023.

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