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...and much more

Editor's Note



Dear Reader,

Welcome to the latest edition of Teletimes International.

As we head towards the end of first quarter, everyone's eyes are set at the much anticipated annual flagship event of the GSMA - i.e. MWC Barcelona 2024.

MWC Barcelona 2024, recognized as the world's largest and most influential event in the connectivity sector, promises an impressive lineup of keynote speakers, cutting-edge technology, and opportunities for industry leaders to explore and share insights. This year's event emphasizes on various pivotal themes, including "5G & Beyond," "Connecting Everything," "Humanising AI," "Manufacturing DX," "Game Changers," and "Our Digital DNA," showcasing the latest advancements and future directions in telecommunications and digital technology.

Teletimes will be actively participating in the event with its editorial team as a media partner. If you have a major announcement or subject matter you would like us to include in our publication, feel free to contact us for a meeting at the show on khalidathar @ teletimesinternational DOT com

This edition features an exclusive editorial about e&'s evolutionary journey in the ICT industry and its leadership in digital innovation. With immersive technologies, 5G and taking center stage along with technologies that make a sustainable impact, it is changing the way we live, work and consume information. e& is at the heart of this evolution by taking great strides in enabling innovations in the physical, digital and virtual worlds.

As always, you will also find the latest news and updates from all key players across the industry in this edition of Teletimes.

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Khalid Athar
Chief Editor

Future First

Experience the Power of Connection at MWC Barcelona 2024

Hosted by the GSMA, MWC Barcelona 2024 is once again shaping up to be the place to connect with the world's most influential leaders and thinkers, catch up on the latest digital trends, discover the game-changing power of mobile technology and access world-class content.

This year's MWC have diverse line-up of keynote speakers which includes industry giants, technology pioneers and thought leaders.

Speakers include Peng Li, President, ICT Sales & Service, Huawei, who will talk on powering the future; Alef Aeronautics

CEO, Jim Dukhovny, who will share his experience designing and developing flying cars; Dell Technologies Founder, Chairman and CEO, Michael Dell, who will talk about the importance of Dell being a valued partner for telcos; Ethiopia Telecom's CEO Frehiwot Tamiru will share her technology vision for telcos across Africa; Oxford

Keynote Speakers



Peng Li, President, ICT Sales & Service, Huawei



Masood M. Sharif Mahmood, CEO, e&UAE



Jie Yang, Chairman, China Mobile



Michael Dell, CEO, Dell Technologies



Vicki Brady, CEO, Telstra Group



Antonio Neri, President & CEO, HPE



Christel Heydemann, CEO, Orange



Aamir Ibrahim, CEO, Jazz



Aayush Bhatnagar, SVP, Jio Platforms



Erik Ekudden, CTO, Ericsson



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Ilana Wisby, CEO, Oxford Quantum Circuits



Tayma Abdalradi, Generation Connect-Arab Youth Envoy, ITU



Hasan Alshemeili, Head of Technology Planning, du



Mohamed Kande, Global Chairman-Elect, PwC

Quantum Circuit's CEO, Ilana Wisby who will discuss all things Quantum-as-a-Service; Microsoft's Vice President and Chairman, Brad Smith; Xtend's Co-Founder & CEO, Aviv Shapira, showcasing how 5G mobile technology is the catalyst for robotics.

All discussions at MWC Barcelona will be centred around our event theme, Future First, which speaks to the urgency of bringing industries, continents, technologies and communities together to realise the future's potential. Our agenda will be shaped by six sub-themes reflecting the latest trends and technologies. These themes will feature across the 17 different stages we have across the nine halls of MWC and 4YFN, providing a platform for over 1,100 speakers. The themes are 5G and Beyond, Connecting Everything, Humanising AI, Manufacturing DX, Game Changers, Our Digital DNA.

Celebrating 10 years of 4YFN

While GSMA MWC Barcelona has long welcomed the biggest and most established names in the connectivity ecosystem, MWC is also home to one of Europe's leading startup events – 4YFN.

Over the years, 4YFN has convened thousands of founders, startups and investors from around the world. And this year 4YFN celebrates a special milestone - its 10th anniversary edition!

4YFN has driven a decade of impact for the digital startup ecosystem during this period, connecting over 9,200 founders with 5,400 investors and welcoming over 4,500 exhibitors and 180,000 attendees.

For the first time, 4YFN will take place across two halls – Halls 8.0 and 8.1 – featuring four networking spaces and seven stages that will host the founders and investors disrupting the global startup scene for four days of keynotes, fireside chats, roundtables and pitching competitions.

We cannot wait to welcome over 800 exhibitors and 350 speakers for this year's event, which returns bigger and better



than ever before in celebration of 10 years of 4YFN. 4YFN features a packed agenda focused around our six event themes including the Age of AI, Growth, Startup Funding, Corporate Innovation, Art of Innovation, Decentralisation & beyond.

As you might expect at our event dedicated to startups, we will have a programme that helps investors to meet the next big thing as well as one focused on founders and empowering business mavericks. We have also got programmes focused on Digital Health, Green Tech, FinTech, impact for positive change and one that celebrates academic innovation with a university and spin-off programme.

Each programme will host its own on-stage pitching competition, welcoming five early-stage companies from the field to pitch their proposition to a live audience and panel of judges consisting of specialised investors.

Showcasing startups tackling societal issues

Exhibitors at 4YFN represent the companies disrupting traditional industries with groundbreaking new solutions.

Sara Bisbe, Co-founder and Chief AI Tech Officer at Aily Labs, joined a 4YFN preview

session hosted by Mobile World Live ahead of her fireside chat on February 27. Commenting on recent AI developments, Bisbe said, "AI stands to have just as much an impact as electricity did 100 years ago, and the democratisation of the technology – facilitated by recent developments in GenAI – has turned it into a commodity from which startups in every industry are benefitting. Aily Labs is pushing the boundaries further with the first iOS AI Decision Intelligence platform for business. By leveraging both specific corporate knowledge along with broader industry insights, the Aily app acts like a seasoned business expert, providing real-time personalised AI recommendations that help organisations drive business growth."

Among the participants will also be hundreds of investors – with collective funds totalling €50 billion – looking to fund the innovators that will help us tackle society's most pressing challenges.

Looking into the future 10 years from now, Sebastian Lefebvre, Partner at venture capital firm Elaia, pointed to developments in AI and quantum computing as particularly interesting areas to watch, "As technologies like AI, large language models and quantum computing continue to develop over the next decade, we will see new possibilities unlocked such as

large-scale climate simulations and the discovery of new drugs and enzymes. The intersection of AI and life sciences is something we should all be excited about, with the potential for these emerging technologies – and their subsequent adoption by biotech companies – touching everybody on the planet."

An agenda of trailblazing talks and dynamite debates

Speakers taking to the 4YFN stages include Sir Martin Sorrel, Founder and Executive Chairman of S4 Capital plc; Nigel Toon, a leading figure in AI and CEO & Co-Founder of Graphcore; and Pau Gasol, President of the Gasol Foundation and Gasol16 Ventures, and a member of the Athletes' Commission of the International Olympic Committee. Also joining the 4YFN stage are the founders of Spanish unicorns Jordi Romero, CEO of Factorial, and Avi Meir, CEO at TravelPerk.

The University & Spin-off Hub, which debuts at 4YFN24, will pay tribute to the central role that universities and research institutes play in propelling new thinking and inventions. Speakers at the new space include representatives of New York University's Stern School of Business, Northeastern University's Institute for Experiential AI, the European Innovation Council and the French Atomic Energy Commission.

Finding the world's best digital startups

One of the highlights of 4YFN is the annual 4YFN Awards which aim to find the best digital startups on the planet.

The competition culminates in the 4YFN Awards ceremony, with this year's event taking place at 5:00pm CET on February 28 at the Banco Sabadell Stage in Hall 8.1.

During the event, five finalists will take part in an on-stage pitch battle in front of a live audience of investors, business executives, entrepreneurs, government officials and the general public, before one is crowned winner.

This year's finalists are:

- Bitsensing – a leading imaging radar company that designs solutions for autonomous vehicles, smart infrastructure and wellness
- Mica AI Medical – an AI decision support system that helps radiologists perform precise and effective mammography analysis
- Qilimanjaro Quantum Tech – a full-stack quantum computing company that aims to address complex computing problems in shorter timeframes
- Ocean Estructures – developers of marine life regenerative technologies designed to offset human impact on the world's oceans
- Whispp – an assistive voice technology app that converts whispered and vocal cord-impaired speech into a person's natural voice in real-time

4YFN provides a platform for startups and founders to propel new ways of thinking and increase exposure to an audience of



investors looking to fund the startups that will change our world.

Unleashing digital transformation across industry and society

MWC Barcelona has long provided a forum to showcase how connected technologies are transforming the mobile industry, but the event's reach now stretches far beyond, reflecting the impact of mobile on vertical business sectors. MWC celebrates the broader ecosystem of players across adjacent industries who are central to digital transformation. Over half of attendees to MWC are from businesses beyond the mobile industry, and every year the event is more vertically diverse. Building on this, we are enhancing focused areas to convene the decision-makers and thought leaders who are accelerating the next wave of digital transformation across the entire connectivity ecosystem.

Journey to the Future at MWC Barcelona 2024

MWC Barcelona is the place where global industry leaders, technology evangelists,



the start-up community and others gather to witness the latest innovations in mobile connectivity.

And so, it's only fitting that attendees have the opportunity to see, touch and interact with the technologies that are changing the face of diverse sectors – and that's where the GSMA's Journey to the Future exhibition comes in.

Located in Hall 6, Journey to the Future is where we pay homage to technology's transformational impact on tomorrow's industries, communities and citizens. The networking and innovation zone will feature a number of hands-on and immersive demos in areas including AI, AR, and autonomous vehicles.

The space is open to every attendee at MWC Barcelona and invites visitors to discover some of the many connected innovations unfolding across five spotlight areas.

Sustainability

As the drive to limit our impact on the planet continues, we've seen countless new solutions brought to markets including energy, transport and waste management – all made possible by innovations in connectivity.

The Sustainability track aims to celebrate these achievements, and we cannot wait to welcome the Emirates Team New Zealand, winners of the 36th America's Cup, to the show floor!

Visitors to the team's stand will see the hydrogen-powered chase boat and view how innovations in hydrofoil technology are unlocking new possibilities in marine mobility and clean technology.

Also on show will be Agerpix's precision agriculture quad. Integrated with intelligent sensors capable of detecting the amount of fruit on a tree with a 95% accuracy rate, the quad is helping to achieve smarter and more sustainable harvests in the fresh fruit industry.

Meanwhile, Hovering Solutions will demonstrate its autonomous flying drones which are being used to create 3D models of GPS-denied infrastructure and leading to safer, faster and more accurate maintenance of difficult-to-reach areas.

Health

The Next Healthcare space hosts exhibitors who are revolutionising the way medical practitioners diagnose and treat patients, as well as those disrupting the HealthTech space with new and emerging technologies.

ISDIN will showcase its latest UV camera solution, which provides a real-time demonstration of the protective barrier sunscreen creates against UV light – paving the way for more effective detection of skin diseases.

Attendees will also be able to discover Cortical Labs' biological intelligence solutions developed by fusing living brain cells onto computing devices, and which are now capable of playing Pong and improving their skill with continuous learning.

In amongst the exhibitors, we also welcome renowned YouTuber and entrepreneur, Silvia Rivela, who will conduct interviews with female entrepreneurs disrupting digital healthcare.

Artificial Intelligence

As MWC Barcelona's high-tech feature space, Journey to the Future welcomes exhibitors making strides in AI – and the zone's dedicated AI track will include an exhibition from the Catalanian Police Force, the Mossos d'Esquadra.

The Mossos use AI-enabled solutions to support operations in a number of areas, and its stand will spotlight some of the technology's many applications in law enforcement – featuring a fixed-wing drone integrated with AI systems that enable automated data capture, allowing the service to detect, classify and track moving targets.

Mobility

Pop culture has led many of us to picture hoverboards and flying cars when we think of the future and, as part of its attendance at Journey to the Future, Alef Aeronautics will bring part of this vision to life – hosting the first real flying car at its booth for all visitors to see.

The Model A is a two-seat, all-electric vehicle designed to both drive on the street and take off vertically when needed and fly above traffic – with a flight range of 110 miles. The vehicle uses proprietary

technology that elevates the vehicle without the need for runways thanks to eight propellers housed within its body, providing attendees with a glimpse into the faster and easier commutes of the future.

Retail

Whether it's smart mirrors, streamlined inventory management systems or drone delivery services, connected technologies can be applied to every area of retail. The common thread across each solution, however, is the ultimate aim to provide customers with more seamless and convenient experiences.

Testament to this, the Retail track will feature a self-driving Coffee Vehicle from Rhea. Powered by renewable energy sources, the barista vehicle allows users to order their coffee through an app which will then be delivered by the unmanned vehicle – transforming the traditional go-to-shop model and giving an insight into the industry's convenience-led and sustainable future.

Discover the life-changing power of mobile connectivity

Journey to the Future is shaping up to be a hotspot of inspiration and one of many must-see spaces showing how companies are using cutting-edge technology in inspiring new ways.

At last year's show, for example, Catalonia-based start-up ABLE Human Motion demonstrated its lightweight exoskeleton developed to help people with physical impairments walk again, highlighting how innovations in mobile connectivity are helping to create a more accessible and inclusive world.

Connected Industries

Elsewhere, Hall 4 will feature the Connected Industries space which invites attendees to discover how mobile technologies are changing the face of four spotlight industries – Manufacturing, Smart Mobility, FinTech & Mobile Commerce and Sports



& Entertainment. Global industry experts will take to the Connected Industries stage across each of the four days at MWC Barcelona, exploring topics such as the commercialisation of drones, the emergence of robots in smart factories, the future fraud landscape and the role of technology in creating world-class fan experiences.

Sports Tomorrow

MWC Barcelona will also once again be co-located with Sports Tomorrow Congress, presented by the Barça Innovation Hub (BIHUB). Sports Tomorrow Congress is a showcase of the decades of knowledge that FC Barcelona has accumulated on topics such as health, nutrition, high athletic performance, the digital sphere, and all topics related to sports industry and their impact on society.

Talent Arena: a new space where talent meets at MWC

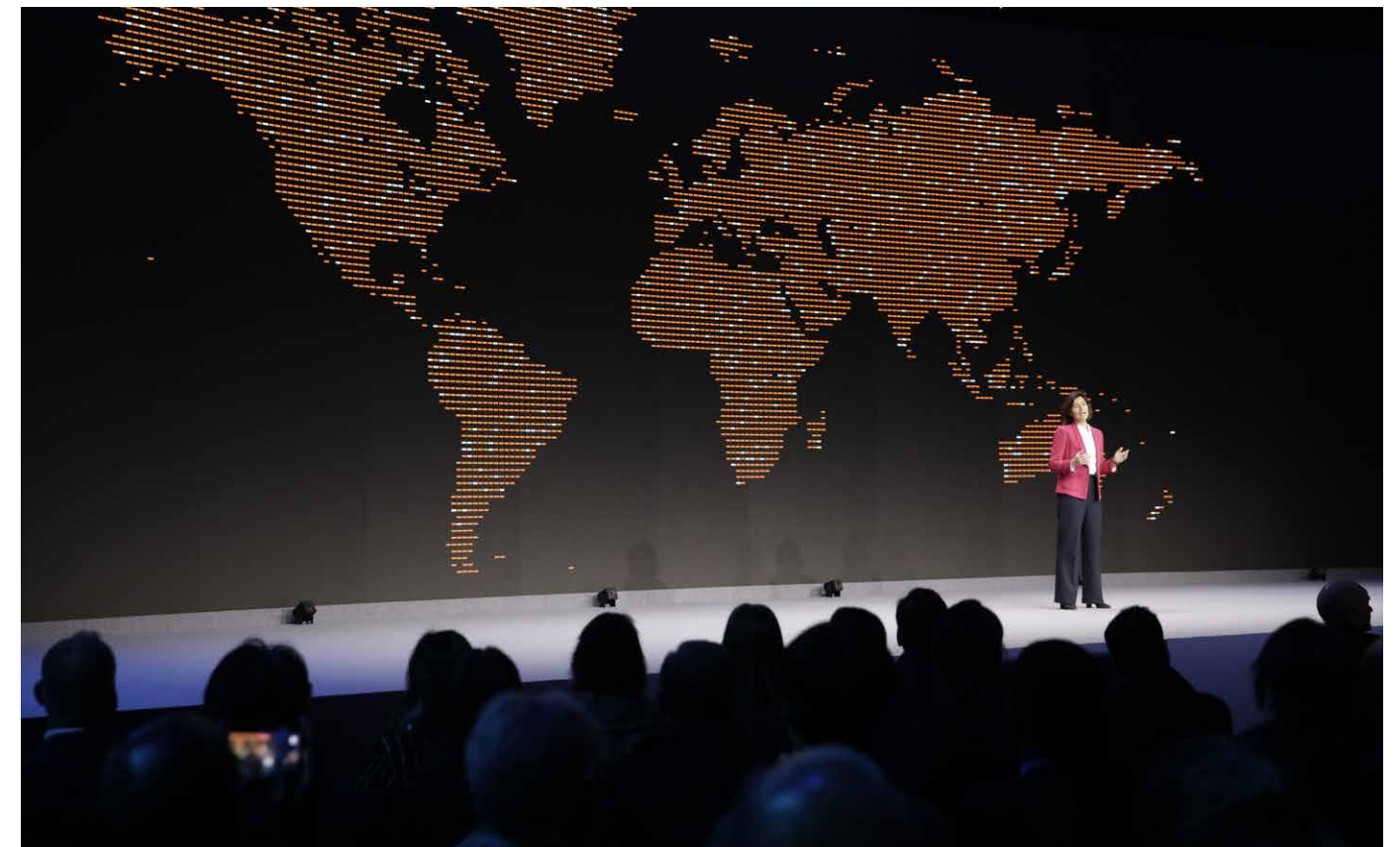
Mobile World Capital Barcelona presents its biggest novelty this year: Talent Arena, a premier digital talent event within GSMA MWC Barcelona 2024, in collaboration with

GSMA, Barcelona City Council, Generalitat de Catalunya and CaixaBank as main partners, poised to shape the future of digital expertise. This initiative aims to foster networking within the professional technological sector, nurture talent, showcase cutting-edge technologies and shape the future of the digital experience.

"Igniting Futures, Transforming Tech" is the essence of Talent Arena and a clear commitment to create a learning-centric environment for sector professionals, enriching networking, professional recognition, and continuous growth. Talent Arena reflects this mission and serves as an ideal platform at MWC to cultivate synergies, stay connected with emerging roles and collaborate with a select group of professionals.

What to expect in Talent Arena?

Talent Arena, a flagship event powered by Mobile World Capital Barcelona at Hall 3, is a showcase for digital talent, pioneering use of technology and collaboration. The event will feature presentations from ICT professionals, leading technology companies, a corporate technology



exhibition, interactive workshops and a 48-hour hackathon.

Spanning diverse technology fields such as machine learning, software engineering, data science, cybersecurity, microchips, artificial intelligence and telecommunications, Talent Arena stands out as the hub for digital talent within MWC. It not only shapes the future of the industry, but also addresses the gap between skilled professionals and the ever-evolving digital landscape.

What not to miss at Talent Arena

Talent Arena delivers an immersive experience that transcends traditional industry events. The event features compelling presentations by over 30 speakers, including leading ICT professionals such as David Cuartielles, Co-founder of Arduino; Xavier Amatryan, VP of Engineering at LinkedIn; Carlos Villavieja, Staff Software Engineer at Google, and many others.

Attendees can participate in 13 workshop sessions covering diverse topics like AI, microchips, and cybersecurity, among others. These sessions not only provide insights but also offer practical learning through live demonstrations. Moreover, the event boasts more than 18 technology exhibition stands, transforming technology into a captivating tool for talent engagement.

The centrepiece of the event is the 48-hour GSMA Open Gateway Hackathon, where 12 teams will be forged with diverse profiles such as application developers, content creators, telecom industry or software developers, among others. It allows participants to explore various use cases facilitated by the GSMA Open Gateway's innovative common network API framework and transform communication networks into interoperable, intuitive, and programmable platforms.

Adding a unique visual element, Talent Arena introduces a real-life boxing ring

where a variety of activities will take place. From face-to-face interviews to engaging pitches, this dynamic space promises surprises and adds an exciting dimension to the event. Talent Arena goes beyond the ordinary, offering an extraordinary blend of learning, innovation, and engagement.

GSMA Ministerial Programme

Across Halls 5, 6 and 7, Pavilions from around the world offer delegates the chance to network with country trade bodies, policymakers and digital hubs. MWC Barcelona is the place to network, make new connections and catch up on the latest digital trends, with the largest gathering of policymakers who enable the digital economy, brought together by the GSMA Ministerial Programme. Ministers, heads of regulatory authorities and policymakers come to MWC every year to meet with mobile industry CEOs and senior representatives of international organisations, share knowledge, and evolve priority policy and regulatory issues. ■

Totogi to unveil groundbreaking AI-powered technology for telcos at MWC24

Totogi, the leading innovator in public cloud-native, SaaS-based telecommunications monetization software, is proud to announce its attendance at MWC 2024 in Barcelona, Spain, February 26 – 29, 2024. As part of its participation, Totogi will return as a Platinum sponsor of GSMA's MVNO Summit. The Summit will take place on February 28 from 4:00 pm to 6:30 pm CET and will assemble the key players and visionaries in the MVNO landscape to engage in deep-dive discussions on driving profitability, enhancing customer experience, and how to leverage cutting-edge technologies such as AI and the public cloud in the telecommunications industry.

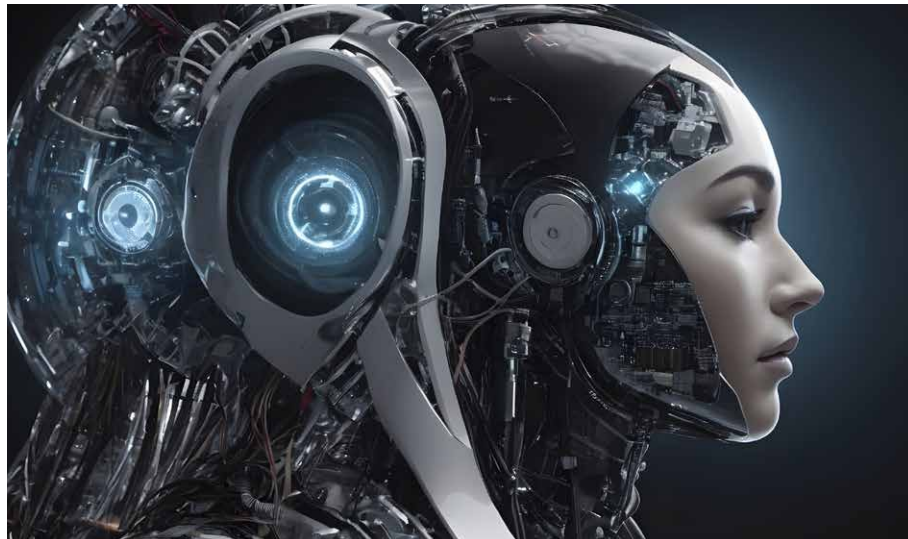
Attendees will learn first-hand how Totogi's world-class, AI-powered technology can drive new revenue opportunities for CSPs, including:

- **A not-to-be-missed keynote:** Join Totogi's acting CEO, Danielle Rios Royston, for an unmissable talk on the future of AI in telecommunications with a preview of Totogi's new 100% AI-powered BSS platform.

- **Product showcase:** Explore Totogi's suite of AI-powered products during MWC24 in Hall 2, Booth 2B72, which will feature Totogi's SaaS monetization platform. See riveting demonstrations of the Charging-as-a-Service product suite, now integrated with advanced generative AI capabilities for plan generation, and experience the cutting-edge CPaaS A2P API suite, Whoosh!, in action.

- **Exclusive hospitality:** MWC attendees are invited to schedule meetings with the Totogi team, experience live product demonstrations, enjoy high-end hospitality at our stand, and attend Totogi's exclusive party at La Llotja de Mar immediately following the MVNO Summit (transportation provided).

Commenting on the standing-room-only attendance at last year's MVNO Summit, Totogi's Acting CEO, Danielle Rios Royston, said: "We were ecstatic with the exceptional



turnout and interest. MVNOs are in dire need of innovative solutions that offer agility, growth in ARPU, and an increased market share. We're here to demonstrate how our AI-powered BSS platform, with its fast time-to-market and pay-as-you-grow model, is uniquely positioned to help MVNOs seize the immense opportunities presented by the capabilities of Generative AI. We are excited about MWC24 and the MVNO Summit, now in a larger venue, and we are ready to engage with even more telcos."

In addition to the MVNO Summit platinum sponsorship, Totogi will host an exclusive after-party at the historical La Llotja de Mar venue, offering attendees a unique opportunity to network and celebrate in one of Barcelona's

most prestigious locations.

Totogi launched at MWC 2021, taking prime presence in CLOUD CITY by TelcoDR, the infamous 6000 sqm Ericsson booth taken over by the public cloud evangelist in her bid to catalyze the industry with the power of the public cloud. Since then, Totogi has expanded its technological offerings, focusing on scalable, AI-powered, public cloud-native SaaS solutions for telecommunications service providers, including the new patent-pending features for plan optimization and customer engagement. Discover the next generation of AI-powered software for modern telcos at MWC24. Visit Totogi in Hall 2, Booth 2B72 from February 26, and join the MVNO Summit, on February 28. 📍

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Interview: Khalid Athar



MWC is a unifying force that emphasises how mobile technology transcends political, geographical, and cultural boundaries

Mats Granryd, Director General of the GSMA speaks with Teletimes International in an exclusive interview

Khalid Athar: How has the mobile industry evolved over the past two years, and what are the key trends and challenges it faces today?

Mats Granryd: Across the world, the big news is that 5G is taking off. Almost 300 operators in 100 markets have launched commercial 5G services and by 2030 we expect around 5.4 billion 5G connections. Of course, the GCC states are among the global leaders, with 5G networks covering 75% or more of the population in the region. That transition has taken place in just four years; a rate of progress

I find incredible and is testament to the huge drive for innovation and connectivity in the region, which we saw at our M360 MENA event in Riyadh.

5G has so much to offer for consumers with lower latency and faster streaming, but even more in the B2B space. From automotive to aviation, manufacturing to financial services, the possibilities are endless.

In 2030, 5G will add about \$60 billion to the GDP across the Middle East and North Africa, and globally it will add almost \$1 trillion to the

economy, as well as supporting and powering new technologies that can help solve some of the biggest global challenges, such as AI.

To take that as an example, already organisations are using AI to improve predictions, optimise operations, and personalise digital solutions. But across the world it is also becoming a vital tool for addressing natural disasters, tackling climate change and improving the quality of life for citizens.

In the next 5 years, over 150 million people,



The GCC states are among the global leaders, with 5G networks covering 75% or more of the population in the region



3% of the global population, could be positively impacted by mobile Big Data and AI solutions. So there is much opportunity, and with that comes a big responsibility to ethically develop and use the technology for the benefit of people and the planet – indeed, the GSMA has been working with our members to develop an AI Ethics Playbook for the industry to address these crucial issues head-on as the technology develops.

As connectivity becomes even more embedded in our lives, new services and innovations like 5G Standalone, 5G new calling and 5G messaging will bring people and businesses closer together and unlock even more potential. And as an industry our next phase of growth will come from working across industries, including with hyperscalers and developers, creating a digital ecosystem that will benefit operators, industries and consumers everywhere.

At MWC Barcelona last year we launched GSMA Open Gateway to do just this. Open Gateway is a framework of common APIs that will bring universal access to operator networks allowing developers and cloud service providers to improve and build new digital services and accelerate the development of immersive technologies.

39 operator groups representing over 220 network operators have already joined Open Gateway... including Du, e&, Omantel and STC from the region, so momentum is growing quickly, and this is just the beginning. Open Gateway is a complete paradigm shift in the way we have been doing things; one which I believe is going to have at least the same impact as GSM roaming standards when we introduced them 35 years ago, as long as

we work together to bring the benefits of connectivity to all.

KA: Can you tell us a little bit about the theme for MWC 2024? What do you expect from the event in terms of attendance and the overall MWC experience?

MG: This year's edition of MWC Barcelona will mark 18 years that we've been bringing our flagship event to the city of Barcelona. MWC 2024 is focused on the "Future First" vision, aiming to unite industries, continents, technologies, and communities to realise their future potential. The six main themes of the event include 5G and Beyond, Connecting Everything, Humanising AI, Manufacturing DX, Game Changers and Our Digital DNA.



The global roll-out of 5G has been faster than that of any previous mobile generation, and the world is on track to reach 5bn 5G connections by the end of the decade



Last year we had nearly 90,000 attendees and more than 2,400 exhibitors, and we're on track to welcome similar numbers at this year's MWC, ranging from industry giants to the dynamic startups at 4YFN.

We've made several exciting changes and additions to enhance the overall experience.

These include a huge access tent on the South Access to ensure attendees can get into the venue as quickly as possible, a larger Keynote Stage with a capacity of 1,500 attendees, a double-deck DG Suite featuring the GSMA Booth and MWL Broadcast Stage, a Media Village in the East Access atrium area, a new feature area called MWC Hub in Hall 6, and multiple stages and theatres across the venue for conferences and partner activities.

MWC is a unifying force that emphasises how mobile technology transcends political, geographical, and cultural boundaries, and we cannot wait to kick off this gathering of the world's most innovative and entrepreneurial minds.

KA: GSMA has been instrumental in promoting mobile connectivity in underserved areas. Can you share some successful initiatives or projects in this regard?

MG: Over 3 billion people are not using mobile internet despite living in areas with mobile broadband coverage. These people are in what we term the 'usage gap' and are held back from critical access to potentially life-changing education, health services, employment and economic opportunities, due to barriers such

as device affordability, security concerns, a lack of relevant content in their own languages, and a lack of digital literacy and skills.

The GSMA is working with operators and policymakers to highlight these issues and close the usage gap through a number of initiatives, including our own 'Breaking

Barriers' campaign, and our Connected Society and Connected Women programmes. Our member operators are also leading on advancing digital inclusion by further expanding mobile broadband networks and accelerating their adoption.

To date, there have been many examples of public and private sector collaborations on digital inclusion that have had a real impact on countless lives. For example:

- Connect Rwanda is a joint initiative between Rwanda's Ministry of ICT and MTN Rwanda and was launched in December 2019 to boost smartphone penetration in the country, which is currently less than 20 per cent. The campaign aims to collect 1 million smartphones through donations and redistribute them to poor families, particularly in rural areas.

- In Sub-Saharan Africa, Orange is helping young people to build skills that employers demand via a range of initiatives, such as the Orange Digital Centers (ODCs), which bring together three complementary programs aimed at providing free and inclusive resources to support young people who lack the skills that employers demand.

Initiatives such as these can utterly transform communities and allow individuals to maximise their potential in an increasingly digital world.

KA: Mobile technology has a significant impact on various sectors, including healthcare and education. Can you discuss some of the ways GSMA is working to leverage mobile for social development?

MG: The GSMA's Mobile for Development (M4D) programme is aligned with the United Nations' Sustainable Development Goals (SDGs) and focuses on leveraging mobile technology for social development, particularly in areas such as healthcare and education.

One key objective of this work is to reduce inequalities by enhancing the accessibility of mobile technology for underserved populations. This includes efforts to provide affordable and reliable mobile services in remote or economically disadvantaged regions - crucial for enabling access to educational

resources and healthcare services. M4D also addresses gender disparities in mobile technology access by promoting digital inclusion among women, ensuring they have equal access to educational and healthcare information and services.

KA: What is the role of GSMA in advocating for policies and regulations that promote innovation and growth in the mobile industry?

MG: The GSMA plays a vital role in advocating for policies that promote the advancement of mobile technology and growth of the industry worldwide, and we are continuously engaging governments, policymakers and regulatory



The future is uncertain, but we do know that the telecoms industry faces a range of challenges and opportunities – driven by technology advancement, changing consumer behaviours, and an evolving regulatory landscape



authorities in support of our members.

We do this through direct engagement with policymakers around the globe, alongside our operator members, but also by using our convening power to bring these audiences together, to share best practice and collaborate on solutions to global challenges via our Ministerial Programme at MWC Barcelona and other GSMA events.

For example, at MWC Barcelona in 2023, the topic of the Investment Gap was top of the agenda, and we've been playing a significant role in advocating on this issue globally throughout the year. This topic became a major focus in Europe, where the European Union estimates that at least €174 billion in new investment will be required by 2030 to achieve connectivity targets. The telecoms

sector is currently not strong enough to meet that demand, with many operators barely earning their cost of capital. To combat this, the industry requires a broader reset of the policy framework governing the digital communications ecosystem. This topic is now growing in prominence in other geographies too, such as in India, LATAM and Africa, where we recently supported the G6 mobile operators in issuing a joint communique calling for greater collaboration on reforms to taxation, spectrum policies and infrastructure funding mechanisms, ensuring that all beneficiaries from the digital ecosystem contribute to the cost of infrastructure investment.

KA: The mobile industry is continuously evolving, with technologies like 5G and IoT becoming increasingly important. How is GSMA involved in shaping the future of mobile technology, specially in relation to 5G and IoT?

MG: The global roll-out of 5G has been faster than that of any previous mobile generation, and the world is on track to reach 5bn 5G connections by the end of the decade.

5G adoption has been largely driven by relatively mature markets, such as China, the US and developed APAC, but this trend is now changing – the launch of the technology in India in late 2022 heralded the second wave of 5G, and we saw over 30 markets across APAC and LATAM launch 5G networks in 2023.



Despite this, operators' ability to launch the technology is hindered in certain markets by regulatory constraints and the usage gap. To this end, the GSMA actively advocates for governments to implement legislation aimed at reducing regulatory burdens for operators, creating favourable conditions that encourage investment in mobile infrastructure, and raising awareness of the benefits mobile internet presents to society. Our Open Gateway initiative, as I mentioned earlier, is also at the cutting edge of creating a new ecosystem which powers the development of digital services, enabled by 5G.

KA: How does GSMA foster collaboration and partnerships among mobile operators, manufacturers, and other stakeholders in the industry?

MG: We bring the whole industry together through various initiatives and platforms aimed at addressing shared challenges, promoting innovation, and driving sustainable development for all.

The GSMA is probably best known for its calendar of annual events – the MWC and M360 series – which convene global leaders in mobile and adjacent industries, as well as senior policymakers and regulatory authorities, aimed at advancing mobile technology and policy to tackle today's biggest societal challenges.

For example, the GSMA Ministerial

Programme – which will next take place at MWC Barcelona 2024 – is the world's largest gathering of policymakers and industry leaders that enable the digital economy. The Programme provides a forum where ministers, heads of regulatory authorities and policymakers, and mobile industry CEOs and representatives of international organisations, can share knowledge and evolve policy and regulatory issues.

We are also proud to be working with industry players to help address some of the planet's biggest issues. Through initiatives like the GSMA Innovation Fund for Humanitarian Challenges, aligned with the UN SDGS, we work with stakeholders to unlock investment for scalable technology innovations that can help address humanitarian challenges.

KA: Can you discuss GSMA's efforts to promote sustainability and reduce the environmental impact of the mobile industry? Especially in relation to the growing energy consumption in data centers?

MG: The GSMA plays an important role in guiding the industry towards a more sustainable future, and we have been measuring progress in our annual SDG impact and Mobile Net Zero reports for many years. Climate Action remains a critical area of focus, with a dedicated team inside the GSMA, working alongside similar teams across our operator members to build concerted action and drive the industry

towards Net Zero.

The mobile industry is taking collaborative action to be fully transparent about the industry's own climate emissions and has developed an industry-wide climate action roadmap, to achieve net zero greenhouse gas emissions by 2050, in line with the Paris Agreement.

More than 50 operators – which together account for more than two-thirds of mobile connections globally – are now disclosing their climate impacts, energy, and greenhouse gas emissions via the internationally recognized CDP global disclosure system.

In addition, 29 operator groups – representing 30% of global mobile connections – have committed to setting science-based targets as a part of sector-specific decarbonization pathway that allows ICT companies to set targets in line with the latest climate science.

KA: As the Director General of GSMA, what do you see as the most significant challenges and opportunities for the mobile industry in the coming years, and how does GSMA plan to address them?

MG: The future is uncertain, but we do know that the telecoms industry faces a range of challenges and opportunities – driven by technology advancement, changing consumer behaviours, and an evolving regulatory landscape.

We are living in an age of new innovations. Technologies like AI, IoT, and edge computing are just some of the opportunities that I see opening new services and revenue streams. But they also pose challenges related to interoperability, standards development, and ethical considerations. We expect that in the coming years, as these emerging technologies become more sophisticated, we will have need to examine how they are integrated into services and solutions. At the GSMA, we will continue to engage with global stakeholder and regulators, and work to foster collaboration and knowledge sharing so that we can harness their transformational potential for the benefit of all. 📱



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e& leads on innovation and digital transformation

When e& began its journey as a technology company to truly embrace the new paradigm, the newly formed Group with nearly 50 years of legacy had set out on a vision to build on this foundation.

This year the theme at Mobile World Congress is 'Future First', focusing the need to unite industries, continents, technologies and communities to unlock the potential of the future.

The power of collaboration is integral in today's interconnected world, as it fosters innovation, accelerates progress, and drives meaningful change. By working together, we can leverage our collective expertise and resources to address complex challenges, unlock new opportunities, and ultimately shape a brighter future for all.

"In 2023, e&'s Q3 financial results reflect our resilience in the face of macro-economic challenges. We reported AED 7.7 billion net profit; the highest in the history of the Group in a nine-month period and a 4.6 per cent jump in reported currency year-over-year," said Hatem Dowidar, Group CEO, e&.

At MWC this year, e& will join its global counterparts in this global conversation sharing its experiences from its transformation journey as well as join with peers and technology leaders to gain insights on innovation that has driven every industry with the use of advanced technologies in manufacturing, retail and healthcare, to automotive, utilities and entertainment.

With immersive technologies, 5G taking center stage along with technologies that make a sustainable impact, it is changing



Hatem Dowidar - Group CEO, e&

the way we live, work and consume information.

e& is at the heart of this evolution by taking great strides in enabling innovations in the physical, digital and virtual worlds. This will also be a great platform to explore how we can completely transform customer experience and unlock immense possibilities by bringing people closer together.

Global expansion and the pursuit for innovation

"Our relentless focus on excellence and innovation has allowed us to thrive in the dynamic landscape of the telecommunications and technology sectors. We continued to focus on the power of our technology prowess to form new paths, disrupt industries and transform



the way we do business on a global scale. Our expansions through the year were a combination of our innovative, customer-centric strategies and investments into technologies and new markets," explained Dowidar.

e& broadened its horizons with investments in Vodafone followed by the binding agreement to acquire a majority stake in PPF Telecom expanding into Central and Eastern Europe, mainly Bulgaria, Hungary, Serbia and Slovakia.

Most recently, it expanded our operations in Pakistan with 100 percent acquisition of Telenor Pakistan, bringing together the strengths and expertise of both PTCL and Telenor Pakistan, creating synergies that will drive innovation, bolster the market, and enable them to reach a broader customer base, accelerating their digital transformation journey.

The \$400 million investment in Careem was another strategic move that was in line with its ambitious strategy, expanding its

range of services and digital offerings for consumers while propelling transformation into a global technology group.

Through strategic acquisitions like elGrocer, Smartworld, and a merger with Khazna, e& is expanding beyond telecom into diverse sectors. STARZPLAY's

and shaping the future of personalised digital experiences worldwide.

Leading the digital transformation journey across the business sector, e& enterprise made considerable achievements with acquisitions and strategic partnerships to deliver the best technologies that empower

Through strategic acquisitions like elGrocer, Smartworld, and a merger with Khazna, e& is expanding beyond telecom into diverse sectors.

acquisition demonstrating its commitment to international expansion in the entertainment and financial technology domains.

Beyond telecoms, e& is strengthening its presence in fintech, entertainment, and SuperApps, simplifying digital interactions

businesses across the region.

e& enterprise acquired a majority stake in Beehive, MENA's leading peer-to-peer digital platform, to tap into opportunities in the Small and Medium Enterprise (SME) lending market. This also marked the next step in e& enterprise's expansion, as the

move demonstrates its commitment to opening new avenues of growth across the UAE and in the region, while enabling Beehive to scale its business and expand its offerings.

Venture capital arm e& capital led the investment round for companies varying from video learning production companies like almentor making a mark in the Middle East with Arabic content to Ikigai Labs, who are on a mission to democratise AI and make it more accessible.

Navigating the transition from telecom to technology

The transformation of e& from a giant telco to a trusted global technology and investment group has been a journey of breaking boundaries, envisioning futuristic ideas that will change the world, and deploying next-generation technologies

business pillars,” said Dowidar.

At e& it has always done things differently since its foundation 48 years ago. The focus has always remained how can it enrich the lives of customers in the markets where it operates. Through its specialist business pillars, it’s able to make a difference in progressing from multimedia to health tech, sustainability, and more.

Looking back at the ever-evolving landscape of business and technology, it has become imperative to embrace the transformative power of AI and autonomous technologies. In this era of innovation, e&’s success hinges not only on our ability to adapt but also our willingness to adopt the limitless possibilities of these advancements. At e&, it has seamlessly integrated AI into its strategy and business, paving the way for the future for intelligent automation.

This is a significant milestone in e&’s journey of becoming a digital telco, and a testimony to our constant endeavour to implement innovative digital solutions. With the launch of the 'EASE' store, e& proudly became the world's first telecom company to offer such a distinctive customer experience.

“Today we stand at the intersection of innovation and sustainability, and it is only fitting that we take this moment to reflect on the profound impact of technological advancement on our world. Technology plays a pivotal role in shaping the way we live, work and interact,” said Dowidar. “We are committed to embracing this responsibility wholeheartedly and taken a major step to support electric mobility in UAE with the launch of 'Charge&Go’.

With Charge&Go, e& isn't just part of the conversation; we're leading it. It signifies our commitment to shaping a sustainable future and cements e&’s position at the helm of the electric mobility metamorphosis.”

The momentum behind Electric Vehicles (EVs) is expected to grow exponentially, with global sales soaring, and the UAE is making significant strides.

e& expects annual EV demand growth of 30 percent from 2022 to 2028. Charge&Go is more than just a charging station network. It's a commitment to a greener future and part of its commitments to reach Net Zero in its UAE operations by 2030. These stations will be strategically placed nationwide to offer users a dependable, affordable, and easily accessible charging solution. The initiative aligns us with transformative goals such as the Emirates Net Zero 2050² and Dubai Integrated Energy Strategy (DIES) 2030.

This ecosystem results from collaborative ventures with key energy stakeholders aiming to provide a reliable, user-focused charging journey. e& is aiming to establish one of the largest electric vehicle charging ecosystem, collaborating with both government and private sectors to achieve this vision.

e&’s most momentous AI-driven initiative was the launch of 'EASE'. The innovative project showcased e&’s commitment to anticipating and exceeding customer needs through machine learning.

that will impact every industry. This year alone, e& has taken massive strides in entering strategic partnerships and made several acquisitions for future business growth, driven by its relentless commitment to providing innovative solutions for the benefit of its customers and offering long-term sustainable investment opportunities for its investors.

“One of the main aspects of our ambitious strategy is to enhance customer experiences across all segments by ideating, designing, and delivering a range of innovative and breakthrough technologies, driven by its track record of success. This strategy is aimed at accelerating growth through the creation of a resilient business model that is representing the Group’s main

The major step in this direction was the launch of the world’s first AI powered autonomous telecom store 'EASE', the self-service store in Dubai, a first in the country.

EASE stores leverages on e&’s expertise and technological capabilities to align with future customer needs to offer a unique shopping experience. With access to all consumer products and services including mobile devices and accessories at their fingertips, the fully automated store incorporates cutting-edge technologies such as AI, machine learning, sensors, smart gates, digital touch points, and autonomous device and trade-in machines. These technologies work together to provide its customers with a seamless shopping journey.



“At e&, we don't just envision a greener tomorrow; we're actively enabling it. We're working collaboratively to realise the UAE's vision of its most expansive EV charging network. Through Charge& Go, we're promoting electric mobility and building a holistic, end-to-end EV charging solution that's both reliable and accessible,” highlighted Dowidar.

e& – leading on innovation

In line with its ambitions, e& maintains a strong focus on AI and 5G, recognising them as the two most pivotal innovations of our time. The powerful synergy created by AI and 5G is rapidly reshaping our world. e& is deeply immersed on both fronts, delivering high-speed, low-latency 5G data – the lifeblood of AI algorithms – and deploying AI technologies to drive automation, efficiencies, and sustainability

in their operations and as a service to other businesses.

Dowidar acknowledges the enduring significance of telcos but believes the rapidly evolving landscape, coupled with potential disruption from next-gen communication technologies, requires constant adaptation and a departure from traditional business practices.

In an industry, it is essential to avoid complacency, and instead, be prepared and agile enough to evolve your objectives and strategies,” he explains. “While the telecommunications industry has traditionally thrived on established business models, staying ahead in today’s dynamic environment requires agility and adaptation. Embracing this mindset, we’ve diversified revenue sources, enhanced stakeholder value, and embarked on a

journey of organisational transformation and meaningful service creation.”

As e& shifts its focus from being a telco-first company to a technology company, it is making many investments in AI and offering it as a service to its enterprise customers. e& enterprise provides comprehensive consultancy services that specialises in tailoring holistic end-to-end digital transformation solutions, from design to implementation and operation. These innovations cover various capabilities, such as cloud computing, data and AI, cybersecurity, and the Internet of Things (IoT). With a strong belief in the ability of AI to enhance efficiencies, the Group has recently appointed its first Chief AI & Data Officer to execute the master strategy.

“AI is at the core of our operations and has transformed the way we operate and

address customer needs. Through our experience, AI has enhanced the quality of our services, network efficiency, and cost efficiency simultaneously," says Dowidar.

e& has consistently been a frontrunner in adopting new technologies. The company rapidly implements advanced tools and solutions to address resource gaps encountered by enterprises. AI and robotics have empowered e& customers to take control of their experience. "Our AI-powered chatbot agents and self-service portals swiftly resolve issues and access information round the clock. This allows our customer service agents to focus on providing personalised support for complex inquiries, leading to faster resolutions, improved customer satisfaction, and a more convenient experience for all," says Dowidar.

e&'s most momentous AI-driven initiative was the launch of 'EASE'. The innovative project showcased e&'s commitment to anticipating and exceeding customer needs through machine learning and represents

computing to efficiently process and store data. As more devices and systems connect to the network, robust cybersecurity measures will be essential to safeguard against cyberattacks and privacy breaches.

Acknowledging AI's potential as a "super brain" is undeniable, Dowidar says its integration into society requires a more cautious approach. "True progress involves establishing a healthy relationship with AI, where its capabilities augment, complement, and amplify human strengths while mitigating potential risks."

While e&'s GCEO asserts the significant role of strong governance and effective regulation in ensuring AI is a force for good, he also recognises that effective implementation begins at home.

"The rapid adoption of AI presents both challenges and opportunities. As industry leaders, it is our responsibility to ensure that safety and ethics keep pace with the urgency to roll out new technologies. Establishing a clear ethics framework can mitigate risks and facilitate responsible AI

complex challenges, drive sustainable development, and create a more equitable world by moving beyond simplistic notions of AI dominance and embracing human-centred design principles.

Achieving positive and tangible change for climate action

"Our business today is committed to contributing towards climate challenges and actively participating in the global climate action agenda. Sustainability is a key factor in our overall mission towards maintaining Environmental, Social, and Governance (ESG) standards," said Dowidar.

e&'s commitments to achieving zero carbon emissions across its own operations (Scope 1 and 2) in all markets by 2040 were about embarking on a decisive journey towards environmental sustainability, building on the company's previous commitment to be net zero across e&'s own operations in the UAE by 2030.

e& also remains committed to net zero emissions across its entire value chain (Scope 1, 2 and 3 emissions) by 2050, reducing the Group's total emissions in absolute terms and mitigating the remaining emissions through high quality carbon offsetting.

"Our strategy is multi-faceted: improving energy efficiency, investing in renewable energy, minimising grid waste and promoting responsible procurement. In addition, our Sustainability as a Service initiative enables businesses to minimise their environmental impact, underlining our role as a catalyst in the global sustainability efforts," highlights Dowidar.

COP28 was an exceptional event for e& to unite efforts and work with partners to achieve positive and tangible change. e& also showcased a range of sustainable initiatives, from green connectivity solutions to innovative IoT applications for climate resilience. These initiatives underscore e&'s role in driving sustainable digital transformation, and its commitment to a greener future.

While e&'s GCEO asserts the significant role of strong governance and effective regulation in ensuring AI is a force for good, he also recognises that effective implementation begins at home.

a paradigm shift in the telecom industry, offering a differentiated and entirely AI-driven customer experience.

The deployment of cloud-based services and virtual networks as e&'s backend infrastructure has ensured the company can scale its AI activities securely while enabling it to pursue cutting-edge projects that hold the potential for generating future revenue streams. The proliferation of connected devices and data generation due to 5G will require advancements in cloud and edge

use cases. Pilot programmes play a crucial role in understanding and addressing weaknesses before the widespread implementation of AI-driven services. Cybersecurity is paramount, particularly in interconnected data systems, and we're prioritising the integration of security considerations into all our AI-driven initiatives."

e& prioritises ethical considerations at every stage of AI development and deployment. It aims to unlock its true potential to solve



In fact, the venue of the global event was a complete net zero 5G Massive MIMO site deployment, a first in the MENA region. This was powered entirely by renewable energy, this 5G site represents the convergence of sustainability and cutting-edge wireless technology. The collaboration ushers in a new era of green network infrastructure, with the region's most energy-efficient 100 percent off-grid 5G site to date, powered by an innovative AI-based energy management system, expected to reduce CO2 emissions by around 26 tonnes per year. In UAE, e& also integrated a zero footprint RAN site within its network, focusing on eliminating carbon emissions, improving energy efficiency, and conserving resources, in alignment with the UAE Net Zero by 2050 Strategic Initiative.

Another major initiative to reduce carbon emissions, was the stride towards replacing light vehicles with electric vehicles with

Charge&Go, as part of a pilot plan to be implemented in phases by 2030, with the first phase starting with the replacement of 100 vehicles. As a run up to the event, there were over half a million Green SIM cards made available to visitors and attendees in the UAE for the COP28 event.

In its efforts to spearhead the decarbonisation of the telecom industry and significantly reducing its carbon footprint, e& in collaboration with the Gulf Cooperation Council (GCC) Sustainability Alliance unveiled the Innovation Hub for Power Solutions, created in partnership with regional and international partners like stc, Zain, BEYON, Ooredoo, Omantel, du, Huawei, Ericsson, Nokia and Intel. As a central platform and collaborative ecosystem for sharing expertise and green solutions, it will play a vital role in aligning with e&'s long-term strategy of incorporating sustainable energy sources

and achieving net-zero emissions.

In a move aimed at supporting sustainable solutions and efforts towards climate action, e& also joined the Green Digital Action Initiative, convened by the International Telecommunication Union (ITU) with over 40 partners, marking another step towards e&'s strategy to achieve net-zero targets and support efforts aimed at a sustainable future.

The signing of the sustainable loan of AED 366 million was another landmark moment during COP28, keeping in line with our ambitious climate action commitments at the event. This is an important step towards financing sustainable projects that have a positive, real-time impact on communities. **1**

¹ <https://u.ae/en/information-and-services/environment-and-energy/climate-change/theuaeresponsetoclimatechange/uae-net-zero-2050>

LEAP 2024

A spectacular showcase of cutting-edge innovation to dominate 15 key tracks at the world's most attended tech event



Living up to its mission of becoming a global gamechanger in the realm of technology, LEAP 2024 will feature 15 key tracks across its 13 stages and feature expert insights into the future of everything from the economy to EduTech, retail to 4IR, smart cities to HealthTech.

Running at the Riyadh Exhibition and Convention Centre in the Saudi capital's Malham district from March 4-7, LEAP 2024 will have a keen focus on artificial intelligence (AI), with its myriad applications explored and explained during the on-stage presentations. To support this, DeepFest, co-located with LEAP and held in partnership with the Saudi Data & Artificial

Intelligence Authority (SDAIA), is back and bigger than ever, with over 120 companies already confirmed to participate.

"Digital transformation is infusing every aspect of our lives, and the increasing use of AI means we will all experience digital innovation and transition at an unprecedented pace," said Michael Champion, CEO of Tahaluf, the Informa PLC and Saudi Federation for Cybersecurity, Programming, and Drones (SAFCSP) joint venture, and organisers of the four-day event. "By increasing our key tracks from seven to 15 this year, we are fostering an environment to raise stronger awareness and facilitate conversations about the

opportunities and challenges that will emerge in the digital and data-driven world in the near future."

Titans of the tech and business worlds will take to the LEAP Main Stage to share perspectives, visions, and hopes for a digitally enabled future. Each conference day will focus on a different pillar of innovation as the visionaries developing life-shaping technologies address societal issues.

The Fourth Industrial Revolution Stage, or 4IR, will accelerate digital transformation, productivity, and profitability with thought leaders, change-makers, big tech,

data scientists, innovators, enterprises, academia, start-ups, and entrepreneurs exploring the impact of technological advancements across businesses and world affairs. Headlining the 4IR discussions will be Hakan Cervell, Vice President and Head of Ericsson Saudi Arabia and Egypt.

"Ericsson's participation at LEAP 2024 reaffirms our commitment to Saudi Arabia's digital future. As a pivotal event for the Kingdom's digitalisation, LEAP provides a dynamic platform to showcase collaborative efforts with the public and private sectors. Beyond showcasing technologies, our focus includes transformative messaging pillars—transforming enterprises, reimagining consumer experiences, innovating for a sustainable future, and enabling limitless connectivity.

"Through LEAP, we aim to foster collaboration, contributing to Saudi Arabia's technological progress aligned with Vision 2030. Our continued partnerships and collaborations in the region contribute to advancing the next generation of 5G and 6G. As we look ahead to the next edition of LEAP, we remain dedicated to pushing the boundaries of innovation and contributing to the Kingdom's digital evolution in the coming years," added Champion.

Another prominent name participating in the DeepFest line-up is IBM, the leading provider of global hybrid cloud, AI, and consulting expertise. AI-powered solutions are being leveraged to enable businesses and entities to problem-solve and overcome their challenges. More so than ever, AI is being utilised to put data to work with greater speed, accuracy, and efficiency.

Fahad Alanazi, Vice President, and General Manager of IBM Saudi Arabia, said: "What we are seeing in the Kingdom and across the wider region is a growing recognition of the transformative power of advanced technologies such as AI and automation."

"Generative AI holds tremendous potential to help improve operations and customer engagement. Specifically, generative AI can unlock businesses and organisations'



potential, as they open doors to new and previously untapped areas of opportunity. At IBM, we are unwavering in our belief that AI can enable entities to problem-solve more effectively than ever, with these solutions being leveraged to put data to work with unparalleled levels of efficiency," added Alanazi.

The Creative Economy track is where marketers, artists, producers, videographers, content creators, hosts, and gaming professionals or enthusiasts gaze into new worlds and examine the ways technological advances in immersive and digital entertainment – as well as fashion, architecture, and design –

are shaping lifestyles.

The rapid transformation of learning and teaching will come under the spotlight in the EduTech track, which will explore universal access to education and technology learning. The full gamut of the education eco-system will be up for inspection, including capacity development from early-years to executive learning.

The giants of retailing, local, regional, and international, will envision the future of how and where to shop as they unpick the sector's future on the LEAP Retail Stage. E-commerce leaders, retail technologists, merchandisers, supply chain chiefs,



marketers, and retailing C-suites will dive deep into the industry's future through interactive discussions, keynotes, and fire-side conversations.

The Fourth Industrial Revolution – the digital transformation accelerator for productivity, and profitability – will measure advancements and predict the gamechangers that will drive multi-sector production on the 4IR Stage. Change managers, technologists, data and cloud specialists, innovators, and C-suite executives will scrutinise the tools, technologies, and methodologies that will transform manufacturing, with a focus on reshaping the industry into sustainable assets.

The Future Energy Stage will bring together scientists, policymakers, business leaders, tech experts, and representatives of local and international institutes to discuss topics under this year's theme of sustainable energy. They will each investigate how to power the future and transition to energy sustainability and security.

Technologists, city planners, government representatives, and private sector

stakeholders will gather at the Smart Cities track to probe the development of urban landscapes, which will house nearly 70 percent of the world's population by 2050, according to the World Bank. On the agenda will be strategies for digital structure implementation and the development of resilient, human-centric, and digitally enabled cities.

The fintech track will dissect the cutting-edge developments and innovations shaping the entire finance sector and its evolving defences against the advancements in cyber fraud, while global medical experts, scientists, health practitioners, physicians, and technologists will guide attendees on a journey of discovery in the HealthTech track. Together, this eminent gathering will demonstrate how science and technology are helping people live longer, better lives and identify the latest trends, technological advances, and digital transformation shaping the future of healthcare systems and the connected patient experience.

The LEAP Investor Stage will be an empowerment engine as some of the world's top investors guide disruptors,

startups, and entrepreneurs into securing the funding that turns ideas into profit and social change machines. The stage will host expert investor-led workshop classes and the popular Rocket Fuel Pitch Competition, where competitors pitch their innovative tech-focused ideas to a panel of judges with the hope of winning a share of the prize pool, which over the past two editions has seen US\$2 million shared between the winners.

DeepFest

Four-day DeepFest will uncover fascinating world of innovation, journeying through the past, present, and future of Generative Artificial Intelligence with help of 150 leading experts

DeepFest, the premier meeting place for the global artificial intelligence (AI) ecosystem, is expected to attract upwards of 20,000 attendees this year. DeepFest will attract global thought leaders, changemakers, data scientists, innovators, enterprises, academia, start-ups, and entrepreneurs across four days of live demos, innovation sessions, sector-dedicated tracks, trainings, start-up pitches, and an exhibition that

features the world's top tech companies.

Powered by the Saudi Data and Artificial Intelligence Authority (SDAIA), the event will run from March 4-7 at the Riyadh Exhibition and Convention Centre in Malham, Riyadh, and is set to showcase more than 150 leading AI experts and 120-plus global AI companies.

"The constant evolution of the tech landscape, particularly AI, is paving the way for breakthroughs unlike anything we have seen before," said Michael Champion, Co-Founder of LEAP and CEO of Tahaluf, the strategic joint venture between Informa PLC, Event Investment Fund (EIF), and the Saudi Federation for Cybersecurity, Programming, and Drones (SAFCSP), which organises LEAP alongside the Ministry of Information, Communication, and Technology (MCIT). "As an event co-located with LEAP, DeepFest will take on increased significance this year, given the high-calibre talent we are hosting that is currently revolutionising the industry."

DeepFest's conference attendees will uncover the world of innovation through a themed programme journeying through the past, present, and future of Generative AI (GAI), where they will gain a comprehensive outlook on topics such as the evolution of AI and robots, creating value through data and AI, the impact of AI on society, and the future of work.

Featuring key advancements that have led to the current landscape of the industry, the opening day of DeepFest will set the stage for understanding AI's limitless potential, looking at the development from Turing to GPT-4, AI's foundational concepts, machine and deep learning, and key breakthroughs, including robotics. The session will feature presentations, demos, and fireside chats from esteemed speakers, including Dr. Ramses Alcaide, President and CEO of Neurable; Alvin Wang Graylin, China President and Global VP of Corporate Development at Taiwan's HTC; Gary Sorrentino, Global CIO at Zoom; Aku Srikanth, Director/Principal at Workday; and David Siegel, CEO at



Meetup, among others.

Day Two of the conference will probe the hot topic of generative AI, challenges and ethical considerations of bias and privacy, defence, and the future of social AI systems. Included in the star-studded list of speakers is Sanjeevan Bala, Group Chief Data and AI Officer at ITV, who will present 'The Enterprise AI Playbook' and explore how to create value from data and AI. Adding to the day's agenda will be Scott Penberthy, Managing Director of Applied AI at Google's CTO Office, who will join David Penberthy, President of the Association of Community Cancer Centres, to investigate the technology's impact on healthcare, including diagnostics, drug discovery, and personalised patient care.

The much-anticipated topic of GAI and its societal impact will fall to Thomas Oxley, CEO of Synchron and a neurointerventionist at Mount Sinai Hospital in New York. Oxley is helping build next-gen brain-computer interface solutions and has released the first clinical data on the Stentrode – a neural stent/electrode that can navigate blood vessels.

The conference's third day will investigate

the cutting-edge research and innovations shaping AI's future, including AI-powered robotics, quantum computing, natural language understanding, and much more. Meanwhile, the final day of the conference will focus on collaborations, ethics, and sustainability.

Day Four will also look at the societal implications of AI and how its potential can be harnessed responsibly towards a future that benefits all of humanity. Some of the confirmed speakers include Elizabeth Adams, Affiliate Fellow, Stanford Institute for Human-Centred AI, who will look at embedding ethics and human-centricity in AI systems, and Ivana Bartoletti, Chief Privacy and AI Governance Officer at Wipro, who will deliver a presentation on how responsible AI meets Generative AI Other discussions will focus on trending topics such as navigating the venture capital landscape for AI startups and investigating a safer path for an AI-driven future.

Empowered by the Saudi Ministry for Communications and Information Technology (MCIT), LEAP organisers anticipate a record-breaking turnout of more than 172,000 visitors in March. ■



e& and Batelco to land Al Khaleej subsea cable in UAE

e& and Batelco have signed a Memorandum of Understanding (MoU) for the landing of the 1,400km Al Khaleej subsea cable system in the UAE.

The Al Khaleej Cable, which will branch off from the 21,700km long SEA-ME-WE 6 cable, will connect Bahrain with its neighboring countries. This development will enhance data exchange and communication capabilities within the region.

The historic partnership between e& and Batelco was ratified at the Capacity Middle East event, where Nabil Baccouche, Group Chief Carrier & Wholesale Officer at e&, and Hani Askar, Chief Global Business Officer of Batelco, signed the MoU. This signing marks a symbolic step as e& commits to building the necessary infrastructure to land the cable in UAE and provide extensive operations and maintenance (O&M) throughout the lifecycle of the cable.

Nabil Baccouche, Group Chief Carrier & Wholesale Officer, e&, said: "We are extremely delighted to cooperate with Batelco as the exclusive landing party

for the Al Khaleej cable in the UAE. Our expertise over the past decades in landing over 20 submarine cables will certainly provide timely deployment of world-class infrastructure as part of this strategic partnership."

"The integration of the new submarine cable Al Khaleej into the UAE, extending its reach to Bahrain and the GCC, marks a ground-breaking milestone in the region's telecommunications infrastructure. This new development enhances much-needed subsea diversification of routes, paving the way for unparalleled international connectivity into the heart of the Middle East," Baccouche added.

Batelco Chief Global Business Officer Hani Askar commented on the occasion: "We are proud to announce signing with e& to land the Al Khaleej Cable in the UAE, marking a significant milestone in enhancing connectivity across the GCC region. As the exclusive owner of this state-of-the-art Al Khaleej cable system, we are committed to provide unparalleled connectivity and a digital superhighway that will transform communication within the region. With

Bahrain now directly connected to other GCC countries through this advanced infrastructure, we are ushering in a new era of seamless and efficient data exchange. This achievement reinforces our dedication to deliver cutting-edge connectivity solutions and strengthens our position as a leader in the telecommunications industry."

"Through our active participation in the SEA-ME-WE 6 and Al Khaleej Cable systems, alongside our existing international infrastructure and strategic partnerships with industry leaders like e&, we are revolutionising the diversity, resilience, and latency of our network systems. This positions us at the forefront of connectivity innovation, empowering businesses and individuals with unparalleled speed, reliability, and seamless communication capabilities," Askar added.

The Al Khaleej Cable is expected to diversify routes and augment international connectivity for the region. It will significantly strengthen regional connectivity and propel the GCC region as the major global hub for ICT investment & growth. ■

Connecting the Future: 5G-Advanced, a commercial reality in 2024



By: Gulraiz Khalid

The 5G industry is advancing at an unprecedented speed, with 5G connections surpassing 640 million in 2023 and expected to soar to 10 billion by 2025. However, 5G-Advanced (5G-A) or 5.5G is bound to reshape our digital economies in 2024. The 3GPP Release 18 standard will be frozen in March 2024, and telcos around the globe are actively engaged in testing and innovating this advanced technology as the commercial deployment of 5G-Advanced seems imminent.

Under the theme 'Future First', MWC Barcelona 2024 will bring industries, continents, technologies, and communities together to realize the future's potential and experience the power of connections. 5G-Advanced is expected to be a key discussion point as many industry players will likely show off their capabilities and influential views.

Progress in mobile communications technology often takes a generational cycle of ten years, and technology watersheds occur around the fifth-year mark. The 5G race is about halfway through, and 6G will not be put into commercial use until 2030. 5G-Advanced is urgently needed to enhance capabilities for a more immersive experience, to explore the way for the next generation of technologies and cultivated industry-related elements, and to generate new business opportunities. The recent report by Juniper Research states that 5G-Advanced is crucial for operators to capitalize \$400 billion 5G in service revenue from 5G networks in 2024 – an annual growth of 32% from 2023.

The path is clearing for telcos around the world to evolve to 5G-Advanced.

Spectrum is one of the key elements for the mobile communication industry

to evolve sustainably. The World Radiocommunication Conference 2023 (WRC-23) recently concluded with groundbreaking spectrum decisions that identified upper 6GHz (6425-7125MHz) as the International Mobile Telecommunications (IMT) spectrum. With this new spectrum, the mobile sector can plan the next wave of communications development through 5G-Advanced and beyond, according to the GSMA.

Numerous major players in the telecom ecosystem have been testing this spectrum, and the results are remarkable. Deutsche Telekom, for example, achieved a downlink speed of 12Gbps using 6GHz when bundled with 3.6GHz spectrum last September. One month later, Vodafone also successfully tested the 6GHz spectrum and demonstrated that the technology has the potential to achieve comparable coverage levels to today's 5G networks.

On the other hand, mmWave spectrum (24GHz–300GHz), with the ability of ultra-large bandwidth and low latency, has been allocated to nearly 100 operators in more than 20 countries and has been put into commercial use in markets such as Italy and Hong Kong. Hong Kong Telecom (HKT) successfully displayed a live-broadcasting firework show above Hong Kong's Victoria Harbour using 8 drones and 400MHz mmWave standalone (SA) networks last October and announced to officially commercialize the 5G-Advanced network in 2024 by the end of last year.

In terms of ecosystem and products, Qualcomm and Huawei have already separately announced their achievements in 5G-Advanced. Qualcomm launched the first 5G-Advanced ready chip in February 2023 and a module, Snapdragon 8 Gen 3, which supports 5G-Advanced hardware last October. In the same month, Huawei released the world's first full series of 5G-Advanced products and solutions, aiming to help operators build optimal, efficient, and green 5G-Advanced networks.

With the growing expectations of 5G-Advanced from the whole industry, more and more operators, regulators, and organizations from the Middle East, China to the Asia-Pacific region, and Europe have made efforts to promote the commercial use of 5G-Advanced technologies.

At MWC Barcelona 2023, 19 industry leaders joined the '5G Future Community' led by GSMA. By October, 13 operators jointly launched Global 5.5G Network Pioneers, showcasing industry consensus and enthusiasm to deploy 5G-Advanced.

Region-wise, in the Middle East, multiple operators have conducted a series of layouts and tests to promote the commercialization of 5G-Advanced. In December 2023, industry experts from organizations such as ITU, du, etisalat by e&, Qatar Ooredoo, Oman Vodafone, Huawei, Ericsson, and Nokia jointly announced 2024 as the first year of 5G-Advanced era in the Middle East. In Europe, Finland DNA showcased 5.5G technology on a live network, reaching a speed of more than 10 Gbps and demonstrating Passive

IoT technology, a new generation of IoT introduced by 5G-Advanced. In China, various 5G-Advanced pilot projects have launched across the country. Just a couple of days ago, China Unicom piloted a large-scale 5.5G network in Beijing. By coordinating between high- and low-band and flexible deployment of outdoor and indoor 5G-Advanced equipment, the network achieved a 10 Gbps downlink peak rate and over 5 Gbps continuous experience, supporting multiple new applications including naked-eye 3D, ultra-high-definition (UHD) shallow compression real-time production system, and emerging XR applications.

With all elements ready and a strong willingness to deploy 5G-Advanced networks from the industry, 5G-Advanced is poised to become a commercial reality in 2024. A large number of operators, vendors, hardware and software services providers, and other industry leaders are expected to announce their latest 5G-Advanced capabilities and commercial plans at the MWC Barcelona 2024. Let's stay tuned! 📺

MTN South Africa and Huawei complete Africa's first scale deployment of 800G optical network

MTN South Africa and Huawei have completed Africa's first scale deployment of an 800G optical network, marking a significant step towards green and reliable networks that boost digital and sustainable development of Africa.

The 800G links were set up, with single fiber capacity of 48Tbps, to connect data centers in Johannesburg, Durban and Cape Town. This domestic backbone will meet MTN's growing capacity requirements for its cloud-based business services, enhanced home broadband, and wireless networks. It also delivers optimal cost per bit and improved energy efficiency. As a result, MTN SA becomes the leading company with this innovative transport technology. This achievement is another important milestone to fulfill its promise to

deliver best-in-class, energy-efficient and robust networks in Africa.

MTN SA has utilized Huawei's leading optical transport solutions, including 400G/800G per channel, Optical Cross-Connect (OXC), and Automatically Switched Optical Network (ASON). The OXC solution has been deployed in the backbone nodes, not only to meet long-term capacity and degree-expansion requirements, but also improve the network energy efficiency by reducing power consumption by 60% compared to conventional ROADMs technology. ASON solution delivers the reliability, the flexibility, and robustness that next generation optical transport requires, while enabling service differentiation and reducing operations and

maintenance costs.

Takalani Ligudu, Senior Specialist in Core Fibre and Transmission at MTN SA, said: "The 800G, OXC and ASON scale deployment with Huawei is a result of MTN's clear vision to lead the delivery of a bold new digital world to customers. MTN is proud on having one of the world's advanced networks and using industry leading technologies to deliver superior network services for our customers across South Africa."

Victor Zhou, President of Optical Transmission Domain at Huawei, pointed out: "It is a great honor to work with MTN SA to bring the leading and green optical technologies into South Africa, building advanced optical network for digital development." 📺

World's largest bug bounty

Positive Technologies offers bug hunters over \$650,000 for stealing money or injecting backdoors into the code of its own products

Positive Technologies is constantly refining its approach to result-driven cybersecurity as part of the bug bounty program Positive Dream Hunting, security researchers from around the world can attempt to trigger two non-tolerable events. The first person who can inject malicious code into the company's products or steal money from its accounts will be rewarded with more than \$650,000.

Over the past two years, Russian companies have been hit by a record number of cyberattacks. Many companies started implementing result-driven cybersecurity by identifying and verifying non-tolerable events, monitoring key and target systems, conducting regular cyber exercises, and participating in bug bounty programs. Middle Eastern countries where companies and critical infrastructure are increasingly being hit by cyberattacks, 83% of which are targeted, can also put Positive Technologies experience to use.

Alexey Novikov, Head of the PT Expert Security Center at Positive Technologies, said: "Launching a bug bounty program focused on non-tolerable events is the only way for a company's CISO and senior management to test the effectiveness of its security systems."

Positive Technologies was the first in the industry to dare to change the rules and goals of bug bounty programs by starting to engage independent security researchers to analyze how non-tolerable events can be triggered. In November 2022, the Standoff 365 platform hosted a bug bounty program in which participants were challenged to steal money from corporate accounts—a true non-tolerable event for Positive



Alexey Novikov

Technologies. With the help of payment agents, Standoff 365 can pay rewards to researchers in different currencies in Russia and abroad.

Positive Technologies expects other organizations, especially those with mature cybersecurity processes, to follow suit in 2024. Companies have started to take a keen interest in analyzing scenarios of non-tolerable events; the number of bug bounty programs has also increased.

At the Standoff 12 cyber exercises in November 2023, Positive Technologies re-created part of its real infrastructure, including software development, build, and delivery processes, in order to test whether it was possible to introduce malicious code into its products. Participants of the cyberbattle tried and failed to introduce a backdoor into the source code of one of the company's products.

Three months after conducting the exercises on the cyberrange, Positive Technologies is launching an open program on the bug bounty platform with a \$650,000 reward. The reward will be granted to a bug hunter (or a team of bug hunters) who will be able, in accordance with the program rules, to place a malicious build with malicious code on the gus.ptsecurity.com internal update server or on the update.ptsecurity.com public servers. This participant must also prove that the build can be downloaded, by providing a screenshot with the necessary permissions. Researchers are prohibited from using a modified build. In addition, Positive Technologies internal security mechanisms prevent any malicious update from spreading to products used by the company's customers.

White hat hackers who manage to come close to causing a non-tolerable event (those who get within several steps of being able to do it) will also receive a reward. Participants can get \$3,300–5,500 for penetrating the network perimeter and getting a foothold on a host, while injecting code into a public product release at the storage or test stage will be worth \$33,000–55,000.

To ensure result-driven cybersecurity, Positive Technologies uses its own products, with the latest features. MaxPatrol SIEM security information and event management system collects logs from all corporate assets, PT Sandbox inspects email attachments and files from traffic, and PT Application Firewall protects web resources. In addition to the Positive Technologies SOC, MaxPatrol O2, an autopilot product anchored on result-driven cybersecurity, operates in test mode. 📺

e& expands SmartHub data centre network to Abu Dhabi, enhancing digital infrastructure and connectivity

e& Carrier & Wholesale announced the expansion of its Tier III SmartHub data centre to the UAE’s capital Abu Dhabi, providing state-of-the-art infrastructure and connectivity to support the entire region’s digital ecosystem.

The strategic expansion further solidifies e&’s global network enhancing its ability to serve businesses across various industry verticals. The upcoming data centre in Abu Dhabi will be the fifth Tier III data centre alongside the existing ones in Fujairah 1 and 2, Dubai, and Kalba.

With the new SmartHub location in Abu Dhabi, it accelerates digital adoption in the country, offering geo-redundancy and added value for customers with low latency



and high-speed internet.

Nabil Baccouche, e& Group Chief Carrier & Wholesale Officer commenting on the launch, said: “Our footprint expansion is aligned with e&’s long-term vision of creating a digitally empowered world through innovation and digitisation.

With the United Arab Emirates today playing a key role in the global economy, we are committed to delivering world-class connectivity solutions, facilitating global trade and investment. The hi-tech infrastructure and strategic location of Abu Dhabi will be a valuable asset to our customers and the wider business community.”

The new Abu Dhabi facility is Uptime Institute Tier III Certified, complying with the highest industry standards of data centre performance and availability with an ESTIDAMA Pearl rating of 4 for sustainable design, construction, and operation, as well as a USGBC LEED Gold certification, adhering to strict environmental standards. ■

e& to land world's largest subsea cable in UAE powering next-gen connectivity

e& Carrier & Wholesale is set to anchor the 2Africa subsea cable, marking the most extensive subsea cable system landing in the UAE to date.

The chosen gateway for this significant development is Kalba, a serene city in the North-eastern part the United Arab Emirates. This strategic choice complements e&’s existing Fujairah cable landing station, fortifying diversity and resilience in the UAE’s connectivity landscape.

The 2Africa consortium of Bayobab, centre3, China Mobile International, Meta, Orange, Telecom Egypt, Vodafone Group and WIOCC, is developing an impressive 45,000 km submarine cable system, which is the world’s largest subsea cable project, fostering interconnection between Europe, Asia, and Africa. Alcatel Submarine Networks is responsible for



the manufacture and installation of the 2Africa cable. The cable is set to deliver essential Internet capacity and reliability across substantial parts of Africa, while also addressing the growing capacity demand in the Middle East.

As the designated landing partner for 2Africa in the UAE, e& will lead the development of the necessary infrastructure

for the landing station and will be responsible for maintenance in the coming decades.

Nabil Baccouche, e& Group Chief Carrier & Wholesale Officer, said: “The 2Africa project promises to elevate the overall digital landscape in the region, solidifying the country’s position as one of the region’s premier ICT hubs. e&’s involvement in this transformative project will significantly enhance the Internet user experience in the UAE, enabling the world’s largest content providers and global carriers to deliver cutting-edge technology in e& carrier-neutral data centre ecosystem, SmartHub.”

Around 20 subsea cable systems land in the UAE and the majority of these are managed by e&, which boast unique technical expertise, a robust operating structure, a neutral access Data Centre, diverse landing stations, and adherence to global standards. ■

ICE IV Project propels Intra Asia to India, Middle East, and beyond

e&, Telecom Egypt, Telin and a major Indian operator have signed a new Memorandum of Understanding (MoU) to form a consortium with the aim to develop the ICE IV Project. This new Data Center (DC) to DC system shall seamlessly connect the Intra Asia region to India and the Middle East on a unique route that demonstrates the true spirit of collaboration between these regions.

Spanning approximately 11,000km, this new system plans to deploy the latest open cable technologies and subsea ROADMs to interconnect Indonesia and Singapore to India, Oman, Egypt, and the United Arab Emirates. The ICE IV Project will adopt an entirely new route through the Sunda Strait and become the first international cable to land in Kochi, India in decades; offering an alternate resilient route and a new international gateway. Terrestrial extensions that are being considered also include links between the Middle East and Egypt and between Kochi and Chennai, together making this ICE IV Project unique. The target ready for service date is Q4, 2027.

In recent years, the surge in demand, coupled with inventory scarcity has moved the global bandwidth market to thrive and become the main driver for the construction of new subsea cable systems. As subsea connectivity evolves, the PoP to PoP design sets the new standard, where this architecture serves the requirements of content providers and large data consumers much better. The ICE IV Project shall adopt these principles providing seamless connectivity, extraordinary bandwidth, and network security through diversity.

This very significant milestone for the project took place during the prestigious Capacity Middle East event where the MoU was signed by top officials from the four market-leading companies: Nabil Baccouche – Group Chief Carrier & Wholesale Officer at e&; Seif Mounib Vice President of International and Wholesale at Telecom Egypt; Budi Satria Dharma Purba, Chief Executive Officer (CEO) at Telin; and the Indian operator. The signing event demonstrates all parties’ commitment to invest and grow the global bandwidth market to better serve their customers.

Nabil Baccouche, Group Chief Carrier and Wholesale Officer at e&, said: “With ICE IV Project, we’re redefining the connectivity map, bringing continents closer than ever before, and unlocking bandwidth access for billions of people. With our commitment to making SmartHub a location of choice as one of the largest neutral carrier hub, the ICE IV Project will further accelerate connectivity. The new DC to DC system will enable us to increase capabilities and global capacity further to meet the evolving requirements of customers across Europe, the Middle East, Africa, Asia, and the Americas.”



Mohamed Nasr, Managing Director and Chief Executive Officer at Telecom Egypt, commented: “Since the start of subsea fiber optic evolutions more than 30 years ago, Telecom Egypt has been instrumental in enabling and supporting the formation of subsea projects, particularly those connecting Southeast Asia to Europe. This particular route is considered the core infrastructure connecting the largest continents, and one of the major and continuously expanding subsea routes. Telecom Egypt is honored to collaborate with ICE partners on the construction of this remarkable project. Being a founding member of ‘ICE IV’ is a testament of our profound belief in the importance of this critical infrastructure. We are providing open-access to more than 20 subsea cables landing in Egypt with unique, diverse landing and state-of-the-art transit international infrastructure that will be part of the planned design. Furthermore, ICE IV Project will enable us to extend our footprint and further diversify our subsea infrastructure portfolio to promptly address the ever-growing demand for global connectivity.”

Budi Satria Dharma Purba, CEO at Telin, stated: “Customer nowadays demand the utmost best user experience, pushing providers to innovate and build low-latency networks on diverse and unique routes. This compels Telin to envision Indonesia as the future hub in this Indo-Pacific region. We can create new opportunities for all ICE cable systems by integrating it with relevant countries and systems. Indonesian Cable Express will be the bridge. The Telin ICE initiative ensures an efficient cost structure and faster deployment. The ICE program involves seven separate cable systems connecting Indonesia to all potential markets. During the next 5 years, the system deployment will start, each adhering to 4 fundamental principles: DC to DC Access, Ultra Low Latency, Different Landings and Unique Routes.” ■

Vodafone and e& join forces to support other operators with comprehensive cross-border managed voice solutions

Vodafone and e& have joined forces to provide other operators with comprehensive, fully managed voice solutions to support their international voice traffic requirements and growth plans, as well as help meet the growing demand for voice over 4G/5G (VoLTE) services.

According to the GSMA, VoLTE adoption is forecast to increase to over 70% of global mobile connections by 2030. This trend is fuelled by operators switching off legacy networks in favour of 5G and the need to provide end users with consistently reliable trans-border managed voice services.

By harnessing their collective technical expertise, partnerships and complementary geographical footprint, Vodafone and e& will provide operators with robust, scalable, and consistent managed voice service worldwide. Operators sourcing combined services from Vodafone and e& can be assured of predictable costs (no matter the region), optimised inbound revenues, streamlined regulatory compliance, enhanced fraud protection, and seamless integration of innovative services through a leading cloud-based architecture.

Ninian Wilson, CEO of Vodafone Procurement and Connectivity, said: "Managing cross-border voice is increasingly complex due to new regulations, providing protection against international scams, and the need to migrate to 5G services. Operators are seeking trusted partners to navigate these changes, while growing their businesses. Vodafone's strategic partnership with e& offers them a single point of contact and a dependable service globally during this transition to support them in managing changing business complexities."

Nabil Baccouche, Group Chief Carrier & Wholesale Officer, e&, said: "This collaboration between Vodafone and e&



sets a new industry benchmark, extending beyond predictable cost and improved security. It focuses on empowering operators to confidently adapt to the evolving voice landscape."

"By leveraging our established capabilities, state of the art platforms, and extensive industry knowledge, we provide operators with a definite way to achieve operational excellence. Working together, e& and Vodafone grant operators' easy access to our combined skills and worldwide presence, enabling them to provide cutting-edge voice services, thereby seamlessly transforming their businesses for the future," Baccouche added.

This collaboration also offers operators enhanced fraud protection based on industry-leading processes and the latest advanced artificial intelligence and machine learning (AI/ML) functionalities. As active members of the Global Leaders Forum (GLF), both companies play a pivotal role in shaping the industry's fraud mitigation strategies, leveraging their extensive expertise. This announcement builds on an agreement Vodafone and e& unveiled in October last year detailing how the two companies will jointly market, sell and service businesses and public sector organisations in support of their digital transformations. ■

Ericsson's second round of climate targets toward Net Zero approved by SBTi

Having met and surpassed its first science-based 1.5°C-aligned Paris Agreement greenhouse gas emission reduction targets, Ericsson's second round of climate action targets toward Net Zero have been approved by the Science Based Targets initiative (SBTi).

Ericsson has committed to reducing emissions across the company value chain by 90 percent by the end of 2040 – from 2020 levels. The company is also committed to neutralizing the remaining 10 percent with approved carbon removals.

SBTi, a UN-backed global body that independently assesses companies' emission reduction commitments and targets in line with the latest climate science, conducted a rigorous assessment of Ericsson's targets against company initiatives, actions and emission data.

Ericsson was among the first large companies in the world to embrace and set climate action targets in line with stringent criteria set by organizations such as the SBTi. Ericsson's second round targets have now been approved by the SBTi, including the company's 2040 Net Zero target announced in 2021.

Heather Johnson, Head of Sustainability and Corporate Responsibility, Ericsson, says: "As a technology leader with a strong foundation in research and development, we understand our climate impacts and the importance of limiting global warming to 1.5°C. The SBTi approvals are a testament to Ericsson's science-based approach to climate action that will ultimately benefit the company, our stakeholders and society."

Treating climate action as an urgent strategic issue, Ericsson has prioritized achieving related targets through actions within the company, the product portfolio and across the wider business value chain.



Terminology

These strategic priorities are also 1.5°C-aligned – the ambition that average global temperature increases should not exceed preindustrial averages by more than 1.5°C to limit potentially irreversible climate change consequences.

Emissions are categorized into three scopes under the Greenhouse Gas Protocol. In Ericsson terms, Scope 1 comprises direct emissions from sources owned or controlled directly by Ericsson. Scope 2 covers indirect emissions where Ericsson has bought energy, such as the emissions related to the electricity used in Ericsson premises. Scope 3 emissions are indirect emissions from sources not owned or controlled by Ericsson but within the Ericsson value chain – including customers and the supply chain.

Ericsson's new targets follow the company's achievements of SBTi-approved targets in a previous round covering 2016 to 2022. These targets were to reduce scope 1, 2 and scope 3 categories Business Travel and Downstream Transportation emissions by 35 percent as well as to achieve 35 percent energy savings in Ericsson Radio Systems compared to the legacy portfolio. Ericsson met and surpassed

these goals within the target timeframe, reducing them by 60 percent and 39 percent respectively.

Approved in December 2023, and announced today, the Science Based Targets initiative (SBTi) worded the approval of Ericsson's new targets as:

Overall Net Zero Target

Ericsson commits to reach net zero greenhouse gas emissions across the value chain by FY2040 (end of 2040).

Near-Term Targets

Ericsson commits to reduce absolute scope 1, 2 and 3 GHG (greenhouse gas) emissions 50 percent by FY2030 (end of 2030) from a FY2020 (end of 2020) base year. Within this target, Ericsson commits to reduce absolute scope 1 and 2 GHG emissions 90.0 percent and absolute scope 3 GHG emissions 50.0 percent within the same timeframe.

Long-Term Targets

Ericsson commits to reduce absolute scope 1, 2 and 3 GHG (greenhouse gas) emissions 90 percent by FY2040 (end of 2040) from a FY2020 (end of 2020) base year. ■

IBM's US patent filings plummet by nearly 60% in just 2 years amidst shift towards open innovation

By Edith Muthoni

As tech companies embrace the rising tide of artificial intelligence, cloud computing, and other emerging technologies, IBM is failing to meet expectations, with several other companies surpassing it in patent acquisition.

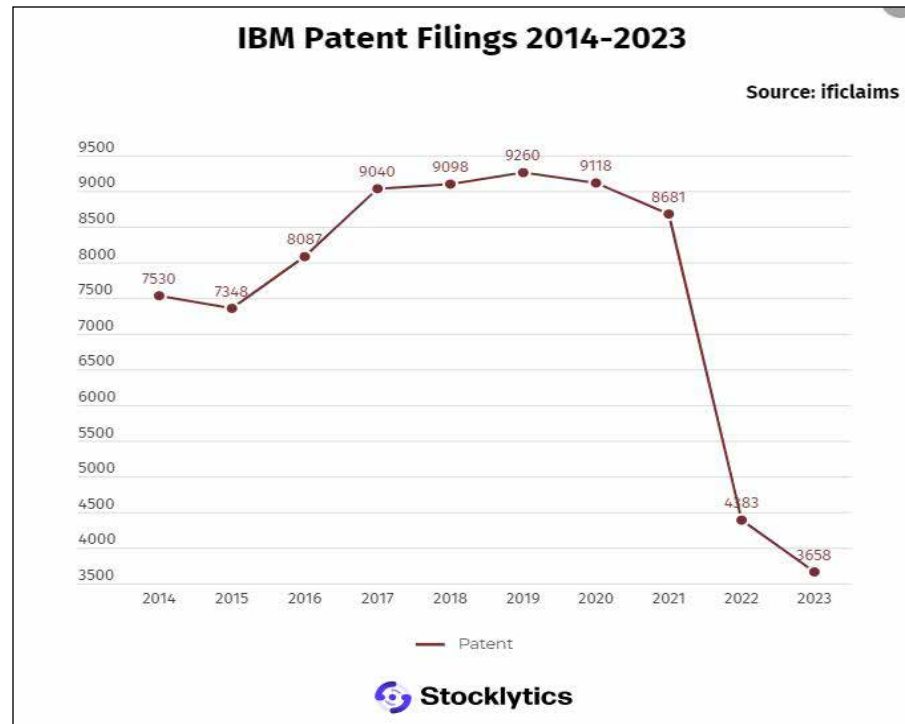
According to Stocklytics.com, IBM's US patent filings dwindled by nearly 60% in the last 2 years. The Big Blue's patent count declined from 8681 patents in 2021 to 3658 in 2023

Stocklytics Financial Analyst, Edith Reads, comments: "Cultivating a new culture of open innovation is undeniably important in today's changing world of technology. IBM's watsonx platform is built on both patented and open source technologies, showcasing the company's dedication to innovation while embracing collaborative efforts. However, IBM's embrace of open innovation has led to the reduction in its patents. This approach should be handled with care to avoid undermining the competitive advantage that the company has worked hard to establish over time. Collaborating with others promotes creativity and speeds up the pace of innovation. However, it is crucial for IBM to find a delicate equilibrium to protect its long-term growth path and preserve value for its shareholders."

The Overall US Patent Statistics

Since the 2019 pandemic, the number of US patent applications has soared significantly, with over 418,000 patents filed in 2023. The notable rise in patent applications hints at the renewed drive among tech corporations to push for new technologies and developments.

However, the grant trend has been on a slump since then, with the all-time high being in 2019, when over 354,000 patents were granted, leaving about 40,000 applications out of the



grant equation.

In 2023, only about 312,095 patents were granted. This was a 3.4% decline from 2022's 322,096, where IBM was pushed off its pedestal for the first time by Samsung, the South Korean electronics giant.

IBM secured about 4,383 patents, while Samsung received 6,248 patents in 2022. In 2023, IBM was significantly displaced and ranked fourth. Once again, Samsung claimed the top spot with 6,165 patents. Joining Samsung in the top three were Qualcomm, with 3854 patents, and TSMC, with 3687 patents. IBM followed closely behind with a marginal gap of 29 patents.

Tech giants, see significant patents approval

Apple got a considerable number of patents in 2023, about 2536 from 2285 patents in 2022.

Google followed with about 1837 patents, a notable improvement from last year's 1549 patents.

Microsoft and Amazon followed with 1820 and 1591 patents, respectively. The rise of these patents for these tech giants highlights the growing emphasis on generative AI and machine learning. Nvidia acquired about 354 patents in 2023, most of which contributed to the massive demand for its AI chips.

IBM is prioritizing safe and responsible AI. Thus, it formed an AI alliance with Meta at the end of 2023 to bring open-source innovations. Meta and IBM want to bring together leading scientists, universities, developers, and businesses to address real AI concerns. The firms aim to build a platform to share and create solutions that fit the needs of developers, adopters, and researchers globally. ■

DET and Microsoft enter into strategic partnership to accelerate emirate's innovation roadmap



The Dubai Department of Economy and Tourism (DET) signed an agreement of intent with Microsoft, the US multinational technology giant, to accelerate the emirate's innovation roadmap.

Dubai has emerged at the forefront of shaping the world's future with an ambitious plan for deploying advanced technologies and the collaboration signifies a dedicated effort to enhance the emirate's digital economy growth, innovation, and development in line with the goals of the Dubai Economic Agenda, D33.

To drive Dubai's strategic ambitions, the work with Microsoft will focus on leveraging smart solutions and applications to achieve the city's technology transformation objectives within the logistics, SMEs and education sectors.

Hadi Badri, CEO of the Dubai Economic Development Corporation (DED), said: "This landmark collaboration will leverage the unique strengths and knowledge of DET and Microsoft, showcasing Dubai's ability to build strong public-private partnerships. Aligned with the Dubai Economic Agenda, D33, our agreement with Microsoft is central to our proven development strategy in harnessing the strengths of global partners, facilitating

economic growth through exceptional access to sector knowledge, technical expertise and mentorship opportunities for key sectors."

"Having established its regional HQ in the emirate almost a quarter of a century ago, Microsoft has long demonstrated its commitment to Dubai. Five years ago, the corporation also chose the city for its first data centre in the Middle East, which has been a key driver behind Dubai's advanced-technology transformation, serving as a foundation for the deployment of modern technologies, including AI," added Badri.

Naim Yazbeck, General Manager of Microsoft UAE, said: "Dubai stands at the forefront of global technology, and we are honoured to contribute to its progress. This planned collaboration represents a shared commitment to drive innovation, promote economic development and build a thriving knowledge-based ecosystem for the future."

Microsoft will leverage its resources and expertise to facilitate access for technology start-ups and entrepreneurs and enhance the prospects of success and innovation. Aligned with the D33 Agenda, the technology transformation initiatives were launched to facilitate the testing and marketing of new

products and technologies and position Dubai as a global innovation hub. To spearhead Dubai's trajectory as a global leader in innovation and technology, Microsoft will offer cutting-edge and affordable technology solutions for SMEs in priority sectors to increase SME productivity and effectively utilise data to contribute to business growth and innovation in the emirate.

A key pillar of the planned collaboration is the digital advancement of Dubai's educational institutions, with a special focus on higher education. Through the integration of Microsoft's innovative solutions and teaching methodologies, the work aims to reinforce Dubai's status as a pioneer in digital education. This collaborative endeavour is set to ensure that educational institutions in Dubai continue to lead in the era of smart learning and innovation.

The collaboration between Dubai and Microsoft is a testament to the dedication to driving advancements in logistics, innovation, technology, SME growth, and educational excellence. It marks a significant milestone in the journey towards realising the ambitious vision for Dubai's economic and educational future, fostering a thriving environment for innovation, trade, and learning. ■

Ooredoo announces FY 2023 performance with 2% revenue and 4% EBITDA growth

Board reports net profit reached record high of QAR 3.0 billion, proposes cash dividend of QAR 0.55 per share, up 28%

Consolidated Group	Quarterly Analysis			YTD Analysis		
	Q4 2023	Q4 2022	% Change	FY 2023	FY 2022	% Change
Revenue (QAR m)	5,923	5,845	1%	23,164	22,698	2%
EBITDA (QAR m)	2,326	2,238	4%	9,717	9,375	4%
EBITDA Margin (%)	39%	38%	1pp	42%	41%	1pp
EBITDA (QAR m) - Normalized	2,289	2,238	2%	9,623	9,129	5%
Net Profit attributable to Ooredoo Shareholders (QAR m)	352	277	27%	3,016	2,360	28%
Normalized Net Profit attributable to Ooredoo Shareholders (QAR m)	745	687	8%	3,279	2,821	16%
CAPEX (QAR m)	1,229	1,174	5%	2,821	2,729	3%
CAPEX/Revenue (%)	21%	20%	-	12%	12%	-
Free Cash Flow (QAR m) - Normalized	1,060	1,064	-	6,802	6,401	6%
Customers (m)	57.6	56.0	3%	57.6	56.0	3%
Customers (m) (incl IOH)	156.4	158.2	-1%	156.4	158.2	-1%

Ooredoo has announced its financial results for the year ended December 31, 2023.

Commenting on the results, HE Sheikh Faisal Bin Thani Al Thani, Chairman of Ooredoo, said: "Ooredoo strives to enhance people's digital lives and deliver value to its stakeholders. In 2023, we continued to provide best-in-class connectivity and deliver superior customer experience by investing in our capabilities and infrastructure. Revenue grew by 2% to QAR 23.2 billion while reported Net Profit increased by a healthy 28% to QAR 3.0 billion, a historical high.

"I am pleased to announce that the Board of Directors will recommend a cash dividend distribution of QAR 0.55 per share, in line with our sustainable and

progressive dividend policy, at the Annual General Meeting in March.

"Our success is facilitated by our ongoing digital transformation, which not only contributes to our resilience but also empowers us to capitalize on market opportunities and position ourselves for long-term sustainable growth. Our adaptability in navigating a dynamic market landscape ensures sustained success and attractive returns.

"Looking forward, we remain dedicated to our strategic path that unlocks capital and enhances value for our stakeholders, solidifying our position as an industry leader," Al Thani added.

Also commenting on the results, Aziz

Aluthman Fakhroo, Managing Director and CEO of Ooredoo Group said: "2023 was a noteworthy year. We improved our financial position and made substantial progress against our strategic priorities.

"We delivered financial results in line with our full-year 2023 guidance. Revenue grew by 2% to QAR 23.2 billion. EBITDA increased by 4% to QAR 9.7 billion and the EBITDA margin expanded by 1pp to 42%, supported by topline growth and disciplined approach to costs.

"The growth for the year was driven by solid performances in Iraq, Kuwait, Algeria, and Maldives.

"The Group achieved an all-time high reported Net Profit of QAR 3.0 billion,

up by 28% and strong normalized FCF generation of QAR 6.8 billion, up 6%.

"We announced the establishment of the region's largest independent tower company in partnership with Zain and TASC at a USD 2.2 billion valuation, marking a significant milestone.

"These accomplishments are the result of teamwork, and I am immensely proud of my colleagues' dedication.

"As we look ahead, we will continue to drive operational efficiency for profitability and cash generation while advancing our strategic priorities as we evolve toward becoming the leading digital infrastructure provider in the region," Fakhroo concluded.

Strategic review

Ooredoo remains committed to its strategy based on five fundamental pillars: delivering exceptional customer experience, empowering our people, and nurturing talent, driving innovation as a smart telco, continuously evolving and fortifying our core operations, and maintaining a value-focused portfolio.

On December 6, Ooredoo held their 2023 Capital Markets Day, where they presented the progress made on their strategic initiatives within the Towers, Data Centers, and Fintech verticals.

TowerCo

On December 5, 2023, Ooredoo Group, Zain Group and TASC Towers Holding jointly announced signing of definitive agreements to create the largest tower company in the MENA region, in a cash and share deal. The transaction has crystallized the value of our tower assets.

Transaction highlights:

- Ooredoo, Zain and TASC Towers Create the Largest Tower Company in the MENA Region valued at USD 2.2 billion



Sheikh Faisal Bin Thani Al Thani
Chairman, Ooredoo Group



Aziz Aluthman Fakhroo
MD & CEO, Ooredoo Group

- This transaction concerns tower assets in Qatar, Kuwait, Jordan, Iraq, Algeria and Tunisia

- The acquisition and merger of close to 30,000 strong tower asset is expected to create significant value, capital efficiencies and empower MENA's digital future

- This independent company's operating model is to provide passive infrastructure as a service and contribute to the reduction of the MENA region's carbon footprint

- Combined markets of Qatar, Kuwait, Jordan, Iraq, Algeria and Tunisia expected to achieve a run-rate revenue of USD 500 million annually

- Ooredoo Group will own 49.3% shareholding in the independent tower company

Refer to the link for the full published announcement: Towers

Data centers

Ooredoo made progress on the carve-out of its data centers to integrate into a new carrier neutral platform. Qatar and Tunisia have been carved out. The carve-out of Kuwait, Oman, and Iraq are expected to be completed in the first half of 2024.

The Group has 23 active data centers in its footprint, with three additional data centers in Oman ready for operational handover.

The data center carve-out aims to expand capacity to 120 megawatts with a USD 1 billion investment over the medium to long term. As the market leader in its footprint, Ooredoo is uniquely positioned to meet rising demand for localized cloud services.

Fintech

Ooredoo Financial Technology International (OFTI) was established as a wholly owned Fintech holding company. The fintech business in Qatar has been carved out and will be allocated under the FinTech holding company later this year. The Group plans to undertake a similar carve-out in Maldives as well.

In 2023, Ooredoo applied for a Payment Service Provider (PSP) license in Oman and received an approval in principle from the Central Bank. Ooredoo is now in testing phase to receive the final approval and launch our Fintech product in Oman. The Group will continue to pursue license applications in Kuwait, Iraq, and Tunisia this year.

OFTI aims to build an integrated

marketplace to financially empower people and businesses in the MENA region.

Financial highlights

Revenue

Revenue grew ahead of FY 23 guidance target with an increase of 2%YoY to QAR 23.2 billion (2022: QAR 22.7 billion) driven by sustained growth in Iraq, Algeria, Kuwait, and Maldives. This was partially offset by a decline in Revenue in Qatar, Tunisia as well as in Myanmar and Palestine (due to foreign exchange depreciation).

EBITDA & EBITDA Margin

Ooredoo's focus on profitability led to an EBITDA of QAR 9.7 billion, up by 4%YoY. EBITDA margin expanded by 1pp to 42% thanks to healthy service revenue growth and disciplined approach to cost control.

The strong profitability improvement in Iraq, Algeria, and Kuwait was partially offset by lower EBITDA in Qatar, Oman, and Tunisia.

Net Profit

Net Profit increased 28%YoY to QAR 3.0 billion (2022: QAR 2.4 billion).

Normalized Net Profit grew by 16%YoY to reach QAR 3.3 billion in FY 2022, compared to QAR 2.8 billion in FY 2022. Normalized Net Profit is net profit adjusted for foreign exchange, impairments, and exceptional items (QAR 446 million gain from the NMTC legal case, Meeza IPO gain of QAR 139 million, QAR 56 million gain on the disposal of towers and QAR 37 million gain on data center carve out in Indonesia).

The delivery of these strong Net Profit figures is a testament to the Group's ongoing focus on profitability and efficient operational management.

Capital expenditure (CAPEX)

Group CAPEX spend at QAR 2.8 billion for FY 2023, reflecting a 3%YoY growth.

Free Cash Flow

Normalized Free Cash Flow increased by 6%YoY to QAR 6.8 billion supported by EBITDA expansion. Solid performances in Iraq, Kuwait, Algeria, and Maldives contributed positively to additional FCF generation in the year.

Debt

Ooredoo Group retained its robust investment grade rating in 2023. Leverage (Net Debt/EBITDA) ratio of 0.7x, remains well below the Board's guidance range of 1.5x to 2.5x. Furthermore, the Group's financial position remains secure from interest rate risks as approximately 96% of the debt is structured on a fixed rate basis. Liquidity remains strong, with QAR 10.5 billion in cash reserves and QAR 5.0 billion available in undrawn facilities.

Customer base

Across the Group, most of the operations added customers to the network closing the year with a total customer base of 57.6 million, up by 3%YoY.

Including IOH, the customer base reached a total of 156.4 million.

Dividends

The Board will recommend the distribution of a cash dividend of QAR 0.55 per share at the Annual General Meeting, to be held in March 2024. This represents an increase of 28%YoY and a payout of 59% of normalized earnings and is in line with the dividend policy. Ooredoo Group has a sustainable and progressive dividend policy which aims for a payout in the range of 40% to 60% of normalized earnings.

Operating Companies FY 2023 highlights

Middle East

Ooredoo Qatar

Ooredoo Qatar increased its customer

base by 2%YoY (excluding the FIFA 2022 connections) to 3.0 million despite a challenging operating environment (softer economic activity and increased competition in the mobile segment).

Qatar delivered revenue of QAR 7,286 million in 2023 (2022: QAR 7,960 million). On a reported basis, this reflects an 8% decrease YoY as the FY 2022 base was bolstered by the World Cup. During the year, the operation decided to scale down the low margin wholesale business and carved-out Ooredoo Financial Services. On a like-for-like basis excluding the FIFA impact, revenue remained flat.

EBITDA decreased by 6%YoY to QAR 3,603 million due to a higher comparison base and one-off impacts. Normalizing for the aforementioned items and as well as one-off provisions, EBITDA declined by 1%YoY.

The operation sustained a solid EBITDA margin of 49%, up by 1pp YoY.

Ooredoo Kuwait

Ooredoo Kuwait delivered a strong result for the year, supported by the drive for operational efficiencies. The focus on profitability boosted Ooredoo Kuwait to second position in terms of EBITDA market share, marking a significant achievement.

Revenue grew by 4%YoY to QAR 2,914 million, supported by higher service revenue (in voice and data).

Revenue growth and cost efficiencies contributed to an EBITDA expansion of 14%YoY to QAR 971 million and a 3pp improvement in the EBITDA margin to close at 33%.

Ooredoo Kuwait grew its customer base by 5%YoY to reach 2.8 million subscribers supported by a strong performance in the prepaid segment.

Ooredoo Oman

Ooredoo Oman grew its customer base by

2%YoY to 3.1 million subscribers.

Revenue remained flat at QAR 2,453 million mainly due to lower mobile prepaid, wholesale business and fixed revenues as the competitive environment in Oman intensified in the year.

EBITDA declined by 9%YoY to QAR 1,156 million, impacted mainly by lower gross margin and higher operating costs. The operation sustained a solid EBITDA margin of 47%.

Asiacell – Iraq

Asiacell maintained a strong performance throughout 2023, delivering double-digit revenue and EBITDA growth while expanding its customer base.

Revenue increased 21%YoY to QAR 4,452 million supported by higher data revenue, which in turn primarily drove an increase in EBITDA of 24%YoY to QAR 1,953 million. The operation delivered a healthy margin of 44%, up by 1pp. The customer base increased 4%YoY to 17.7 million due to favorable market dynamics.

Ooredoo Palestine

The customer base increased by 2%YoY to 1.4 million customers. Ooredoo Palestine maintained its market leadership position for customer satisfaction.

Revenue declined by 6%YoY to QAR 397 million due to a challenging operating environment. Excluding the negative FX impact, revenue increased by 2%.

Notwithstanding the top-line challenges, the operation benefited from sustained cost optimization in the year, resulting in EBITDA remaining flat YoY (excluding the negative FX impact, EBITDA increased by 14%) with a robust EBITDA margin of 39%.

North Africa

Ooredoo Algeria

Ooredoo Algeria delivered a healthy

performance for the year. Revenue increased by 11%YoY to QAR 2,462 million supported by higher data revenue driven by a rise in data usage. The appreciation of the Algerian Dinar by 5% against the Qatari Riyal also contributed to the increase in revenue.

The operation continued to optimize cost across the business, driving profitability. EBITDA increased by 26%YoY to QAR 992 million while EBITDA margin expanded by 5pp to 40%.

Ooredoo Algeria recorded a growth of 3%YoY in its customer base to 13.4 million, primarily driven by the ongoing network densification to improve the customer satisfaction in coverage and experience.

The strong result was attained in a challenging operating environment where competition in the mobile segment intensified during the year and in parallel, regulatory constraints limited the supply of handsets into the Algerian market.

Ooredoo Tunisia

The customer base grew by 2%YoY to 7.3 million as Ooredoo Tunisia maintained its leadership position on the mobile segment and continued to attract fixed subscribers.

The mobile market in Tunisia experienced a slowdown. Revenue was flat YoY at QAR 1,470 million. EBITDA decreased by 15% YoY to QAR 556 million while the EBITDA margin eroded by 7pp to 38%.

Considering these challenges, management remains attentive to the cost structure and is seeking to improve the operation's effectiveness and efficiency.

Asia

Indosat Ooredoo Hutchison (IOH) | Accounted for as a joint venture

IOH announced its FY 2023 financial

results on 7 February 2024. (IOH)

In local currency, the operation delivered a solid performance. Revenue grew by 10%. An even stronger growth of 22% was reported for EBITDA, resulting in a healthy EBITDA margin of 47%, up by 5pp.

Ooredoo Maldives

The Maldives operation ended the year with a solid set of results. Revenue increased by 9%YoY to QAR 495 million with growth across all business segments.

EBITDA grew 14%YoY to QAR 278 million due to growth in the higher margin service revenue as well as effective cost control measures.

The customer base closed at almost 400k customers, up by 1%YoY.

Ooredoo Myanmar

In September 2022, Ooredoo Group announced the sale of its telecom business in Myanmar to Nine Communications Pte. Ltd. The intention remains to complete the transaction which remains subject to customary closing conditions, including ongoing regulatory approvals in Myanmar.

The customer base increased by 13% YoY to 8.5 million. Active digitization efforts have contributed to an improved customer experience as expressed in Net Promotor and Customer satisfaction scores.

On a local currency basis, revenue grew by 4%YoY supported by customer growth and pricing optimizations. EBITDA improved by 4%YoY owing to revenue uplift and rigid cost control. This good result was achieved in a challenging operating environment.

On a reported basis (in Qatari Riyal), Revenue and EBITDA continued to be impacted by the sustained weakness in the Kyat. ■

Next generation satellite systems continue to disrupt satellite capacity pricing landscape

Satellite service pricing, driven by next-generation satellite systems, continues to re-shape the industry, triggering a transition towards managed services and attractive \$/GB economics

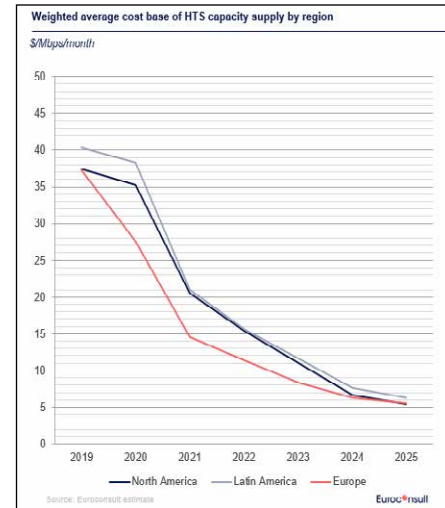
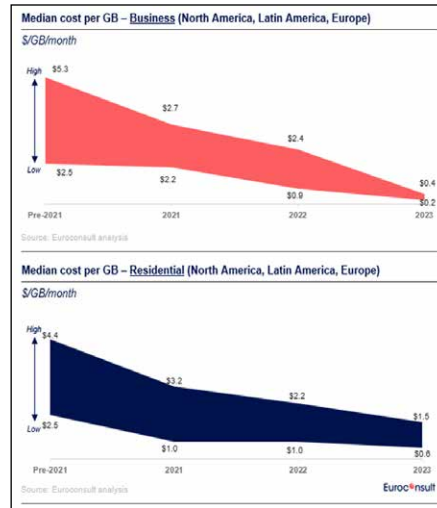
Euroconsult has released the latest edition of its FSS Capacity Pricing Trends report which unveils continued shifts in the capacity pricing landscape.

Satellite capacity pricing is experiencing rapid declines in an increasingly disruptive market, supported by rise of next-generation geostationary (GEO) and non-geostationary orbit (NGSO) high-throughput satellite (HTS) systems. Massive influx of supply in the market has ultimately contributed to a commoditization effect on connectivity, due to which the industry is witnessing a shift towards managed service offerings with attractive \$/GB economics, primarily driven by Starlink.

Over the past five years, global average capacity pricing in video and data markets has dropped by approximately -16% (-3% CAGR) and -77%, (-26% CAGR) respectively. This decline is more pronounced in data markets due to abundant supply from NGSO (primarily Starlink) and HTS systems, while video markets have seen a lesser decline, largely due to stagnated regular supply and market stickiness to long-term contracted prices.

The report also notes that the decreasing cost base of capacity (indicating efficiency of capex invested in satellite manufacturing considering sellable capacity and expected lifetime), initiated with the advent of Starlink, is expected to stabilize over the next 2-3 years leading to a potentially slower capacity price erosion compared to previous years.

The dynamics outlined in the report signal continued changes for the industry, potentially marking a structural shift away from the traditional wholesale capacity



leasing towards managed service packages supplemented by value-added services. This shift is triggering a re-alignment of operational strategies among industry stakeholders. Operators are moving towards vertical integration by providing managed capacity plans to service providers and/or directly to end users. Service providers are increasingly opting for these pre-made packages from satellite operators to reduce capacity management complexities and focus more on providing value-added services (Cyber security, Cloud connectivity, Telematics & IoT solutions etc.)

"Starlink's pocket-friendly pricing and higher availability of service plans have triggered a structural shift in the industry away from wholesale capacity leasing to more managed solutions setting a wave of strategy re-alignment across players. Operators are choosing to directly serve end customers with managed service plans giving them greater control of capacity prices while service providers are moving away from capacity management, focusing on value add-ons.", said Senior Consultant

Grace Khanuja. Owing to the shift in industry dynamics, the price per GB has witnessed a converging trend across key geographies over the past 3-4 years. The pre-2021 period was marked by median prices ranging greater than \$2 to \$5 per GB per month given the limited available capacity of legacy satellite systems that constrained monthly GB allowances. Rise in available capacity supply with the launch of Starlink across markets coupled with new service plans from incumbent satellite players (such as Viasat, Hughes in the Americas and Eutelsat Konnect in Europe) has abruptly lowered the price range to \$0.2 to \$1.5 per GB per month in 2023 given the disproportionate increase in GB allowances vs service plan costs.

The FSS Capacity Pricing Trends 6th edition is now available on Euroconsult's digital platform in Standard and Premium versions, offering Euroconsult's pioneering and unfettered data access and readability. A free extract can be downloaded. 📄

Azerbaijan starts exporting space knowledge



After possessing an orbital position in space, Azerbaijan now not only provides satellite services but also commercializes the knowledge and experience it has gained on the international space market.

Thus, Azercosmos has presented a training and consultancy program on the management of radio frequencies, which is its own intellectual product, to the Telecommunications Regulatory Authority of the Kingdom of Bahrain.

The 10-day program held in the capital city of the Kingdom of Bahrain, Manama, covered the methods of managing radio frequencies, preparation of applications for the registration of satellites and ground stations, analysis and elimination of interference between satellite networks, as well as topics related to international laws and legal standards in this direction. At the end of the training program, certificates were presented to the participants.

Azercosmos will continue exporting this knowledge product it has created for proper and structured coordination at the international level in the management of radio frequencies to the countries developing in the field of space in Africa,



Central Asia, and the Middle East.

Radio frequencies represent a valuable

and limited resource used for various forms of wireless communication, such as radio and television broadcasting, mobile communication, broadband communication, aviation and maritime navigation, as well as the coordination of satellite networks. The effective use and coordination of these resources in various types of radio frequency services are regulated within the legislation approved by the International Telecommunication Union (ITU). 📄

Navigating cost dilemma in the world of hybrid multi-cloud



As organizations are driven towards digital transformation strategies and as they modernize legacy applications to achieve business agility, it is clear that hybrid cloud environments is the way forward. However, with a mix of private and public clouds, expanding across multiple cloud service providers, they face the daunting task of maintaining visibility and control over cloud costs. Manually tracking and analyzing cloud usage across different accounts and services is a time-consuming and error-prone process that can lead to cost overruns and hidden inefficiencies. Effective multi-cloud cost governance requires a unified approach that aggregates and analyzes data from all cloud providers, providing a comprehensive view of cloud spending. This visibility enables organizations to identify underutilized resources, optimize pricing strategies, and enforce cost policies across their entire multi-cloud environment.

The Power of Automation in Multi-Cloud Cost Management

Automation is a game-changer for multi-cloud cost management. By automating routine tasks, such as resource provisioning, scaling, and cost analysis, organizations can free up their IT teams to focus on strategic initiatives and innovation. Automation also helps to ensure consistency and compliance with cloud policies, reducing the risk of errors and non-compliance issues.

Nutanix define key pillars of automation that serves the multi-cloud cost management and governance as following:

- **Resource provisioning automation:**

Automate the creation and provisioning of apps/data, ensuring cost-effectiveness and consistency across environments.

- **Resource scaling automation:** Leverage automated scaling policies to dynamically adjust resource capacity based on real-time usage patterns, preventing overprovisioning and unnecessary costs.

- **Cost monitoring and alerting:** Employ automated monitoring tools to track cloud spending, identify anomalies, and generate alerts for potential cost overruns or non-compliant usage.



Mohammad Wahba -
Director, Systems Engineering,
at Nutanix Middle East

- **Cost optimization recommendations:** Implement AI-powered tools to analyze cloud usage patterns and recommend cost-saving strategies, such as switching to more cost-effective instance types or optimizing storage allocation.

Nutanix, an established leader in hybrid multicloud computing assists organizations

with its unique offering for 'FinOps-as-a-Service'. The company provides enterprises with a unique offering for multi-cloud cost management & governance assuring:

- One-click visibility
- Control Cloud Sprawl
- Automated insights

Nutanix's leadership in the field of cloud cost management comes with new innovations emerging to address the challenges of multi-cloud environments.

- **AI-powered cost forecasting:** AI algorithms can be used to predict future cloud spending based on historical usage patterns and market trends, enabling proactive cost management and budgeting.

- **Cloud cost anomaly detection:** Machine learning techniques can identify anomalies in cloud usage patterns, such as spikes in resource consumption or unexpected account activity, helping to uncover potential issues before they lead to significant costs.

- **Granular cost allocation:** Tools are emerging that enable organizations to allocate cloud costs to specific business units or projects, providing greater visibility into cost drivers and enabling more granular cost optimization.

In summary, Nutanix FinOps-as-a-Service helps organizations achieve optimum hybrid multicloud cost control with a complete offering that combines best-in-class cloud consumption analytics with award-winning Professional Services. **■**

Riyadh Air accelerates digital expansion with Oracle Fusion Cloud Applications Suite to integrate and scale core business functions

Riyadh Air has selected Oracle Fusion Cloud Applications Suite to efficiently manage its core business operations after a competitive bidding process. The services include digitalizing finance, supply chain, and human capital management. The implementation will help Riyadh Air develop a modern, scalable, and secure business platform to enable data driven decision making, reduce costs, enhance employee engagement, and streamline procurement processes. Riyadh Air has chosen Tech Mahindra as the implementation partner for this initiative, which will help Riyadh Air evolve as the world's first digitally native airline.

Adam Boukadida, Chief Financial Officer at Riyadh Air, said, "Riyadh Air aims to disrupt the future of air travel and as part of our vision we need to be at the forefront of innovation and technology. A key part of this approach is to partner with world-class experts as we build technical capabilities that enable us to deliver a seamless digital-first experience to our guests".

Since it launched in March 2023, Riyadh Air has signed several technology and engineering partnerships to enhance Riyadh Air's offerings, services, and operational models, and set new standards in aviation sustainability and innovation. The airline now has major agreements with Lufthansa Systems, IBM Consulting, Accenture, Swiss AS, CAE, and Microsoft respectively.

"Riyadh Air represents the true ambition, capability, and global outlook of Saudi Arabia. The Kingdom's aviation sector is rapidly expanding, and Riyadh Air will play a vital role in helping Saudi Arabia achieve its 2030 aviation goals that aim to outpace global growth", said Reham AlMusa, Vice President – Cloud Applications, Saudi Arabia, and Managing Director at Oracle Saudi Arabia. "Riyadh Air represents a major moment for the aviation industry, and with the implementation of Oracle Fusion Applications, the airline is preparing a future ready digital



platform that will help drive rapid growth, nurture a truly connected workforce, prepare a resilient supply chain, and deliver unique digital experience to the modern-day global traveller."

Under this initiative, Riyadh Air will deploy Oracle Fusion Cloud Enterprise Resource Planning (ERP), Oracle Fusion Cloud Human Capital Management (HCM), and Oracle Fusion Cloud Supply Chain & Manufacturing (SCM). Oracle Fusion Applications will enable Riyadh Air to take advantage of the cloud and break down organizational silos, standardize processes, and manage finance, supply chain, and HR data on a single integrated platform. With quarterly update cycles, Oracle Fusion Applications provides access to continuous

innovation so the airline can make faster and better decisions and outpace change.

"In the era of digitalization, industries demand innovative solutions for enhanced efficiency and customer experiences. Tech Mahindra is committed to advancing Saudi Arabia's digital future by delivering cutting-edge solutions. As a digital transformation leader, we recognize the vital role technology is playing in driving innovation. With extensive experience in implementing Oracle for airlines, we are well-equipped to support Riyadh Air's digital transformation journey. We look forward to working together to build a future-ready foundation for the airline industry," said Vikram Nair, President, EMEA Business, Tech Mahindra. **■**

CommScope unveils SYSTIMAX 2.0 providing innovative solutions to address network infrastructure challenges

CommScope announces SYSTIMAX® 2.0 enhancements, the next generation of its SYSTIMAX building and data center connectivity portfolio which provides customers with the latest structured cabling solutions and support to meet the challenges of today and tomorrow.

Inside buildings, data centers and across campuses, technology disruption and operational demands are intensifying. Therefore, it is more important than ever to deploy an agile, dependable and future-ready infrastructure. For nearly 40 years, SYSTIMAX solutions have led the trajectory of tomorrow's network technologies, supporting customers' network evolution within a fluid business environment. As the trusted solution in structured cabling, SYSTIMAX technology has been synonymous with exceeding the standards of enterprise connectivity, continuously evolving to redefine how building, data center and campus networks operate. SYSTIMAX 2.0 enhancements carry that legacy forward, leveraging CommScope's rich history of performance and reliability in copper, fiber and network intelligence.

"With the SYSTIMAX 2.0 enhancements, CommScope is expanding its support for future customer needs with continuous technology innovation, world-class performance and reliability, application assurance and unrivaled global support," stated Luc Adriaenssens, VP of Enterprise Product Management and R&D, CommScope. "We will be evolving the SYSTIMAX portfolio of products and services to ensure we continue to meet those needs."

Two New Innovative Solutions

Customers increasingly need to support higher-demand devices on their twisted-pair Ethernet networks. The GigaSPEED XL5™ technology is CommScope's new multi-



Luc Adriaenssens

patented solution for customers needing to step up from 1 Gbps copper before making a commitment to 10 Gbps copper. The GigaSPEED XL5 solution supports applications such as multigigabit backhaul connectivity for advanced wireless access points. This new solution supports 2.5/5 gigabit Ethernet applications in 4-connector, 100m channels with bundled cables, while maintaining the ease of installation of our GigaSPEED XL® solution.

CommScope's new VisiPORT™ solution is an automated copper and fiber port status and capacity monitoring system that improves efficiency, reduces errors and removes the need for ongoing database maintenance. Using real-time data to lead decision-making reduces errors; the VisiPORT solution detects and transmits events upon the insertion or removal of a plug and can provide alerts on unexpected or unapproved patching activity. The solution is easy to deploy and provides instantaneous port status and port capacity information with the ability to set user defined thresholds for action. The VisiPORT solution is comprised of intelligent copper panels and fiber shelves with built-in port sensors and system controllers. The solution leverages the port-sensing technology that is foundational to CommScope's comprehensive imVision® Automated Infrastructure Management (AIM) solution.

In a fast-changing environment, data center and facilities managers need simple real-time insights to improve efficiency and reduce connection errors. The SYSTIMAX VisiPORT solution meets this need.

Enhanced SYSTIMAX Assurance™

Network architects and managers need support in a rapidly changing environment. CommScope has long been known for its service organization; now, the SYSTIMAX Assurance program is unveiling additional enhanced capabilities with 360-degree customer support from 80+ Systems Engineering teams around the world and more than 10,000 SYSTIMAX-certified partners in 130 countries.

The SYSTIMAX Assurance program now includes 24/7 live premium technical support and a host of other benefits all backed by our 25-Year Product Extended Warranty and Application Assurance. For full details on what the program entails, please visit our website.

SYSTIMAX 2.0

At the core of the SYSTIMAX 2.0 experience are our flagship solutions including fiber, intelligence, edge architectures and copper portfolio, which customers have historically relied on for successful network evolution. In aligning our solutions under the SYSTIMAX 2.0 program, customers can make the most of their networks for years to come.

The new SYSTIMAX 2.0 program is a complete solution built on our core pillars including: fiber and copper structured cabling solutions, network intelligence, edge and extended distance solutions, and customer support. These pillars serve as a foundation offering unparalleled solutions providing customers more options that meet their evolving network needs. ■

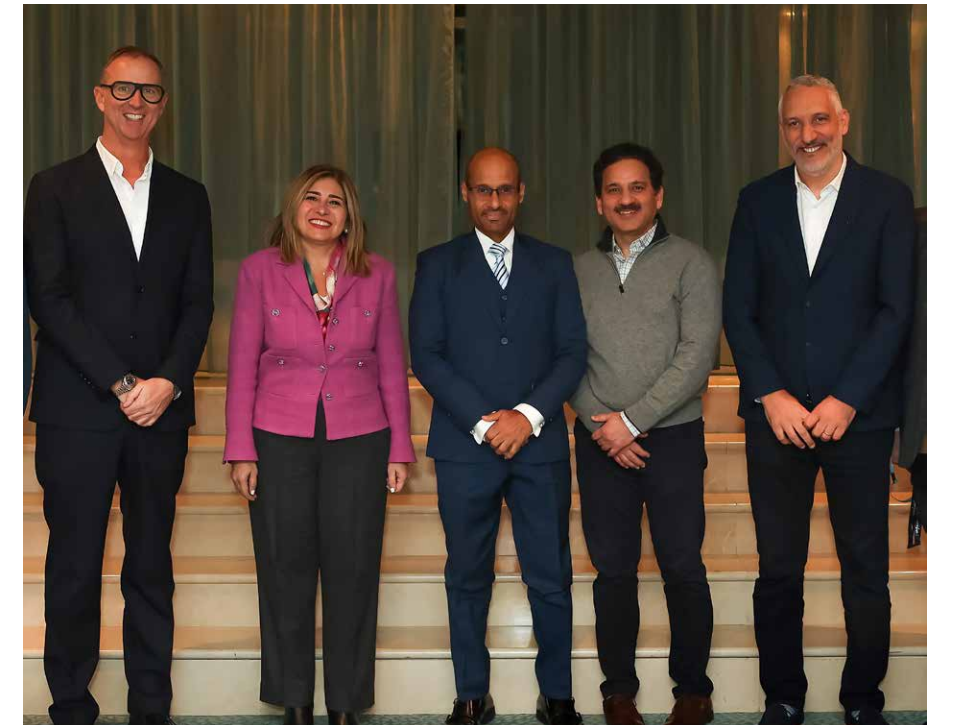
Cisco Duo plans to launch new cloud data center in UAE to support customer cybersecurity readiness

Cisco has announced its plan for a new local cloud data center in the UAE for its Duo multifactor authentication (MFA) and secure access solution. Set to launch in mid-2024, the new data center will support businesses of all sizes in strengthening their cybersecurity posture and improving connection performance.

Commenting on the announcement, H.E. Dr. Mohammed Hamad Al-Kuwaiti, Head of Cybersecurity of the UAE Government, said: "The UAE is a leader in adopting new and exciting technologies that will be shaping the country's future. Cybersecurity is a crucial component of a successful digital transformation journey. Our goal is to build a safe and resilient cyber infrastructure in the UAE that enables citizens to fulfill their aspirations and empower businesses to thrive. Today's announcement of the Cisco Duo cloud data center in the UAE is important for supporting organizations in responding to the ever-changing cyber risks of the digital age and will contribute to a strong cyber defense ecosystem that protects critical infrastructure and prevents cyberthreats."

The launch of the cloud data centre in Dubai is part of Cisco's and Duo's strategy to build security infrastructure globally that helps prepare and secure customers for the future. It will support full functionality of Duo's robust zero-trust platform, including multi-factor authentication (MFA), single sign-on (SSO), Zero Trust Network Access (ZTNA) for secure remote access, device trust, password-less, adaptive risk-based policies and automated malicious user behaviour detection using Machine Learning (ML) and Artificial Intelligence (AI). It will also enable businesses to enhance their performance and user experience thanks to connection proximity.

"As companies across the globe continue



to strengthen their security efforts, it is more crucial than ever to establish a secure infrastructure that safeguards organizations from the growing threat landscape," says Raj Chopra, Senior Vice President and Chief Product Officer for Cisco Security. "Cisco puts identity at the center of our security strategy, leveraging Duo's capabilities to keep customer data highly secure, and enabling them to focus on providing the best user experience for their customers."

Today, identity has emerged as the new perimeter of cybersecurity; it is the number one cybersecurity risk according to Cisco's Cybersecurity Readiness Index. Findings from Cisco's 2024 Duo Trusted Access Report based on 16 billion authentications on 58 million different devices worldwide show that companies recognize and use multi-factor authentication (MFA) and password-less technologies as key elements for risk reduction and IT security. The

number of MFA authentications using Duo rose by 41% in the past year.

Reem Asaad, Vice President, Cisco Middle East and Africa commented: "We understand the complexity of today's threat landscape and we are proud to offer solutions that help our customers address these challenges. The Cisco Duo cloud data center is a critical investment to support our customers in building a cloud-based, secure and agile IT infrastructure that can adapt and respond to the ever-changing cyber risks of the digital age."

The cloud data center in the UAE is part of Cisco Duo's global network of cloud data centers across Europe, the Middle East, Africa, Asia Pacific and the Americas. These provide local customers, particularly those in highly regulated industries, such as public sector and financial services, with more choice over service delivery locations. ■

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