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# TELECOM Review

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**6**

■ **NXN:** The digital enabler

**14**

■ **Hatem Dowidar discusses Etisalat's groundbreaking milestones and navigating the COVID era**

**16**

■ **ITC's managed security services ensuring stable and secure connectivity**

**20**

■ **Sofrecom embracing the digital transformation game**

**Toni Eid,**
founder
editor in chief
Telecom Review International

# On behalf of all our brands,
# WE WISH YOU SUCCESS AND SAFETY

As a new year begins, I would like to wish our readers, customers, and partners a safe 2021, on behalf of Telecom Review Middle East/Europe, Telecom Review Asia Pacific, Telecom Review Africa, Telecom Review North America and our new brand Telecom Review Arabia (previously known as Teknotel), with hopes that business will resume as soon as possible wherever you are operating.

Our new brand TELECOM REVIEW ARABIA (www.telecomreviewarabia.com) is in fact the first brand we launched over 16 years ago under a different name. It was the first ICT magazine and website targeting the Arab readers in the MENA region.

Telecom review Arabia will be a unique media conveying updates in Arabic at the age of internet when the English language is reigning.

The launching of Telecom Review Arabia is not a mere rebranding of Teknotel, it's a commitment from Trace Media to the Arabic language in the time of globalization.

The launching coincides with the World Arabic Language Day celebrated on December 18th, which reflects our commitment towards over 300 million Arabic readers to bring them telecom and ICT news in their mother tongue.

When we first launched our Arabic edition, hundreds of universities in the Arab Word subscribed to it to provide to the new generation ICT content in Arabic.

We will continue this journey with a full-fledged media platform in Arabic with a strong presence on social media platforms such as LinkedIn.

To our Arabic readers we say: we are here again together.

تيليكوم ريفيو

منصة قطاع الاتصالات والتكنولوجيا

**TELECOM Review**

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Introducing
**TELECOM
REVIEW ARABIA**
Previously known
as Teknotel

نقدم لكم

**تيليكوم
ريفيو عربية**
المعروفة سابقاً
بإسم تكنوتل

**Ghazi Atallah,**
CEO, NXN

# NXN
## AI ✦ DATA ✦ DIGITAL

# The digital enabler

NXN has proven to be an expert in digital transformation. 2020 was challenging but NXN was up to the challenge. In an exclusive interview with Telecom Review, Ghazi Atallah, CEO, NXN explained why the company is a digital enabler and how telcos will embrace digital transformation in 2021 and beyond.

**2020 was a very challenging year. How did NXN help its customers with digital transformation to overcome the new challenges presented by the pandemic?**

Last year was a difficult one for many and brought a wide range of unexpected challenges. Fortunately, technology industries were the best equipped to step up to these challenges. NXN, for example, already had the technology and processes it needed to provide the necessary flexibility to work remotely, collaborate digitally and ensure continuity for customer projects.

We are grateful that last year was a busy one for NXN. Whilst it was hardly 'business as usual', we were able to continue to develop and progress customer projects and achieve the desired outcomes. If anything, the circumstances of 2020, actually brought more focus to digital initiatives and how they contribute to business performance.

I believe that Covid-19 helped to both accelerate the confluence of physical

and digital worlds and bring focus from leadership on the ways in which digital transformation can help solve real-world problems.

**What will be the main points of focus for NXN in 2021?**
NXN's focus remains the same, helping governments, cities, service providers and businesses reap the benefits from digital transformation and next-generation technology innovations. And we still have so much to do.

When leaders think of digital transformation, they tend to think of large-scale, all-encompassing initiatives that change, enhance and improve the way they do business across the organisation. Whilst this is often true, the devil is very much in the detail. Ambitious digital transformation initiatives often create monsters that gobble up resources, budget and delay real progress.

NXN works closely with large organisations to define what success means, develop strategy and create a blueprint for digital transformation initiatives. However, what makes digital transformation initiatives work is the very specific definition, alignment and implementation of every service under the overall plan. For that you need the right methodologies, the right business planning, deep expertise in data, new technologies, sector experience, plus the solutions to overcome common data, technology, organisational and business obstacles. That's what NXN brings.

**In past interviews with Telecom Review you've referred to NXN as 'an enabler'. What does that mean to customers?**
NXN is a digital enabler. We enable smart cities, enterprises and service providers to embrace disruptive technologies and achieve their desired outcomes. In the telco sector, we bring deep understanding of digital transformation strategy, data strategy and data governance, plus the service development and implementation that they need to make progress.

We also partner with service providers to enable them to sell whitelabel

smart services to cities, government departments and industry, creating new revenue streams. NXN can also help service providers address specific customer or market needs, developing new smart services that can provide new revenue streams.

Lastly, NXN helps provide telcos with the agility required to transform and the digital savvy to create a service delivery environment. Our role extends beyond advice, products and services, we also manage services and optimise outcomes to enable better performance, cost-savings, new business models and additional revenue streams.

**What will digital transformation mean for telcos in 2021?**
Digital transformation is both an enormous opportunity for telecom service providers and a tremendous challenge. Telcos traditionally managed infrastructure and connectivity and, over the years, have generally struggled when trying to introduce non-traditional value-added services. The success and global demand for cloud services has now

> Digital transformation is both an enormous opportunity for telecom service providers and a tremendous challenge

tipped the balance in the telecom sector's favour again. Today, more and more service providers are offering cloud services, but the market is changing fast.

The whole concept of cloud services is now evolving dramatically and creating an opportunity for telcos to position themselves as core digital transformation service providers. The demand for smart digital services from businesses, government departments and smart cities is growing fast as digital transformation becomes the norm. However, the expertise, time, development and management required for such services have proven to be a significant burden for even enterprise customers. Service providers have a golden opportunity to create, deliver and manage smart cloud services faster and more efficiently than anyone else.

**Do you think telcos are ready to lead in the digital transformation space?**

Telcos are well positioned compared to other technology businesses. They have the capital, the infrastructure and the connectivity they need, but they have challenges making better use of their data, understanding their customers' digital transformation needs and being able to deliver smart services that help customers achieve desired outcomes.

Some service providers are moving faster than others, but overall the industry must embrace radical change - the digital transformation of itself - before it can take full advantage of the smart services opportunity.

**Are smart cities, government entities and enterprises ready to embrace smart cloud services?**

Investment in digital transformation worldwide, and in particular across the MENA region, is growing fast. However, we've now all seen enough costly digital transformation failures to make cities, government and private sector

enterprises be much more careful when embarking on new initiatives.

There is now an increasing focus on agility and defining projects that can be implemented quickly and help accelerate better outcomes. This will fuel demand for smart digital services leveraging cloud infrastructure, since they can be defined and deployed easier, faster and cheaper by a service provider. However, when your organisation relies on smart services to underpin your business, trust is a key issue, so you want to make sure your partner has an in depth understanding of both the business objectives you are trying to achieve and the digital technology landscape that would enable these services.

**How much risk is involved in smart cities' digital transformation?**

It's no accident that smart city technologies and solutions are the topic of one of Gartner's most popular 'hype cycle' reports. There are lots

of new technology innovations that offer great benefits if they can be implemented effectively, problems can be solved and they are aligned to strategy. However, the experience and expertise to leverage these new innovations is hard to come by and many implementations of new technologies fail. NXN was highlighted by Gartner in its most recent Smart City Technologies and Solutions Hype Cycle report as a reference vendor for implementing five key smart city technology solution categories including smart city as-a-service solutions.

### Is it about embracing new technologies or new mindsets?

Both. There are huge benefits to be gained by embracing new disruptive technologies that can change business models and create new revenue streams, but getting strategy or implementation wrong can be a costly exercise. Taking full advantage of emerging technologies requires the right approach and specialised expertise. If you have these, then leadership can afford to be a lot more confident about the risks of disrupting their businesses. NXN provides that confidence and enables service providers to move faster to both optimise their current processes and introduce solutions to disrupt the way that they do business.

### It's often said that data is the new oil, what role does data play in shaping and delivering service provider offerings?

Data is going to play an increasingly critical role for all large businesses and for service providers in particular. For telcos, data is a huge challenge that urgently needs to be overcome. They have lots of data, but many telcos need to better organise, prepare and govern their data in order to be able to reap the benefits from data analytics and data science.

In light of the growing smart digital services opportunity, service providers need to take a hard look at their data strategy, data governance and data platforms or risk missing out. NXN is currently working closely with Zain Group to develop a group-wide data

strategy and set data governance, a strong data analytics and data science capability, together with the technology to support data's growing role and new data science use cases.

### What are the obstacles in leveraging data? Is it simply the challenge of siloed data?

Siloed data is certainly a part of it. NXN has invested heavily in its data practice to ensure that we empower our data and analytics team with the tools to address our customers' data challenges. Our highly experienced team helps customers define data strategy, data science, best practices, plus ongoing CDO advisory services.

Today's smart digital services require not only access to data within an organisation, but often access to data from across an ecosystem. Strategy is just as important as the technology that you use, because data strategy is a direction that you need to commit to. You need to have a vision for both short-term and the long-term.

### Any other company plans or initiatives that you would like to mention as we move into 2021?

NXN is committed to being the digital enabler of choice for governments, cities, enterprises, and service providers. So, we're continuing to build our expertise and portfolio of services to enable our customers to reap the benefits from digital transformation and next generation services.

In terms of our geographical reach, NXN is well established across the MENA region, but we are now also expanding internationally. In particular, we have now established an operation in Canada and look forward to bringing our unique portfolio of services to more global customers during the coming year. **TR**

> NXN is committed to being the digital enabler of choice for governments, cities, enterprises, and service providers

# A glimpse of NXN

NXN works with leaders in business, city management and public sector organisations to simplify and accelerate their digital transformation and next-generation technology innovations. The company focuses on empowering customers to embrace innovation, digital disruption and future technologies, allowing them to make their aspirations a reality.

Founded in 2007, NXN is an end-to-end smart digital services provider, leveraging the deep expertise of its industry consulting, data, and technology teams. The company's DNX Digital Services Platform provides customers with the agility they need to fast track innovation, break down data silos and implement disruptive technology solutions with confidence.

# A digital transformation enabler

Beginning its journey as a niche player, instrumental in building leading smart cities across the Middle East, NXN is a core platform provider and has a fully-fledged digital transformation portfolio. The company has become a pioneer in delivering turnkey digital transformation services to high-profile private and public sector organisations, from planning to execution. NXN's services and solutions are supported by partnerships and strategic alliances with the likes of Dell, Microsoft, Schneider Electric, Zain Group, Cloudera, VMware, Software AG and Secureworks.

NXN dramatically improves the digital transformation journey of businesses, local governments and other public sector organisations, across the region and around the world. It has rich experience in smart city master planning as well as in developing Smart City as-a-Service solutions for vital sectors such as districts and master developments, healthcare, plus safety and security.

# Government

NXN Government enables public sector organisations to fast-track their digital transformation with its award-winning digital government platform and services. The company's Digital Government Maturity Framework helps government agencies plan digital transformation projects taking into account all-important business process, technology and human factors.

# DNX digital services platform

NXN's smart digital services integration and delivery platform, DNX, enables customers to embrace innovation, digital disruption and future technologies with confidence. The DNX platform integrates infrastructure, data, emerging technologies and the Internet-of-Things (IoT) to seamlessly connect and support the roll-out of new digital applications and services.

## Healthcare

NXN Smart Healthcare is a growing suite of services that allow institutions to deploy intelligent digital health solutions, seamlessly integrated with their systems, data and digital health ecosystem. NXN enables customers to adopt value-enhancing innovations, streamline their healthcare ecosystems, supporting healthcare workers and introducing patient-centred digital services.

## Telecommuni- cations

NXN Telecom provides a suite of services and solutions to enable telecom services providers to embrace disruptive innovations, enhancing business performance and creating new revenue opportunities. NXN both works with service providers to develop new smart digital services and opens up new revenue streams by providing them with whitelabel services.

## Smart cities

NXN's Smart City master planning methodology, coupled with its in-depth understanding of the city challenges, regional nuances, and digital and smart solutions allow the company to develop grounded and feasible planning that helps city governments realise their goals. NXN's data advisory services help enable a city's journey towards becoming a data-driven Smart city with action-oriented reporting and insights.

## Digital transformation

NXN's deep understanding of digital transformation, digital services and data strategies, combined with the power of its DNX Digital Services Platform, have made the company a top choice for governments, cities, service providers and large enterprises across the region.

The company offers customers a unique combination of experience, expertise, capabilities and technologies:

**Digital core and platform capabilities** - NXN is equipped with the latest and the best digital technologies to suit customer needs. The DNX digital services platform integrates new technologies, platforms and systems that meet the transformational need of cities, districts and organisations.

**Industry expertise and consulting heritage** - NXN's team has broad experience in advisory and consultancy, plus deep experience in core industry sectors.

**Data analytics and data science** - NXN's offers customers a wealth of expertise in data strategy, data science and advanced analytics, enabling customers to drive the optimum value from their data.

**Agile digital services development** - NXN's agile development process, coupled with the company's expert industry, technology and data science knowledge, helps customers create transformational digital services.

# 2021

# The year of new opportunities

2020 has been quite a year and the least we can say is that it was "unprecedented". Existing ICT and telecommunication trends gained more ground in light of the new normal imposed on everyone as a result of the COVID-19 pandemic. The telecommunications industry was put under the spotlight given its substantial role in keeping businesses and almost all sectors running. As 2021 begins, new opportunities for telecom players will emerge.

Businesses have been obliged to reshuffle their priorities in 2020 in order to meet the new demands and seize market opportunities. Most importantly, 2021 is set to bring revenue growth to the telecoms sector. Analysys Mason's latest forecasts predict that telecoms service revenue worldwide in 2020 will be USD43 billion less than it was in 2019 (a year-on-year decline of 2.7%). A third of this loss will be recouped in 2021 with growth of USD13 billion (up 1% on 2020), but global telecoms revenue will not exceed 2019 levels again until 2023.

### Digital transformation: The backlash

Digital transformation was the highlight of 2020. Companies who were "digitally-ready" were able to overcome all the challenges brought about by the COVID-19 pandemic. For those who weren't, digital transformation was rapidly placed on top of their priorities. However, many fear that the efforts deployed by businesses to embark of a digital transformation journey swiftly may go beyond their actual capabilities and cause a backlash in 2021.

Patrick Smith, CTO EMEA, Pure Storage says: "For those businesses that hadn't already embarked on a digital transformation journey, the pandemic forced them to overhaul their IT, and at speed. In the process, many companies over rotated in their technology choices, opting for infrastructure beyond their needs and choosing expensive solutions with vast capacity. In the long term, these choices may prove unsustainable, and in 2021 businesses will need to refocus on the medium-term, rebalance and opt for the solutions that fit their needs whilst remaining agile. In 2021 the CTO's role will need to adapt to being the 'renegotiator' — finding the best tuned systems for streamlined budgets."

### Cloud solutions: A new addition

"In the coming year, public and private monikers will converge into a singular experience around billing, payment, identity, logistics, and security. The consumerization of the enterprise will only be complete when build (private

clouds) vs. buy (public clouds) becomes a non-issue for the enterprise architect. Clouds will converge, post-pandemic, with 2021 being the year of desktop-as-a-service (DaaS), disaster recovery-as-a-service (DRaaS), and database-as-a-service (DBaaS)", according to Aaron White, regional sales director - Middle East at Nutanix.

For operators to seize the new opportunities in 2021, they must consider cloud solutions as part of their portfolio. Operators providing cloud capabilities will combine unified communications, security and remote access which can enable home working and cloud gaming.

### The rise of artificial intelligence

The role of artificial intelligence and machine learning will be amplified in 2021. We have seen how AI technologies were at the frontlines of the fight against COVID-19 whether in terms of logistics or healthcare.

"2021 will see the biggest rise of AI/ML in the history of healthcare -- pharma, biotech, life sciences -- as humankind grapples with the current pandemic. We will blur the lines between computing and biotech for high-velocity advancements in the field of virology", says Nutanix's Aaron White.

### 5G's role

According to Analysys Mason's latest TMT report, Virtual RAN deployments will largely be deferred beyond 2021 but will represent a USD22 billion market by 2025. Many operators will deploy 5G core networks independently of their relationships with RAN suppliers which will mean that the mobile network will be open to more vendors.

On the consumer side, 5G will not be much of a game changer. In such economically uncertain times, consumers will be reluctant to pay more for 5G services. Furthermore, many operators still have to demonstrate their 5G capability and improve its coverage.

However, 5G market will likely be central to the 5G business case, even though B2B offers are still rare. 5G back-up for fixed services (for example in SD-WAN solutions) will become prevalent

and more standalone 5G products for enterprises will be launched.

### Innovation will define 2021

The disruption caused by the COVID-19 pandemic will accelerate IT innovation. The new normal, fueled by advanced technologies, will continue to change the way we work, study, and live. Automation will be one of the keywords in the new year for it will support businesses and mobile operators to cater to customers' demands. Spending on fully automated orchestration required by 5G core virtual networks is expected to increase from USD4 billion in 2020 to USD20 billion in 2025.

The world wasn't well prepared when the pandemic hit in 2020. 2021 will be the year of opportunities and learnt lessons. The telecommunications industry has proven its ability to manage crisis — better yet, find solutions — and there is no doubt that in the upcoming year, new proactive solutions and innovations will emerge. **TR**

> There is no doubt that in the upcoming year, new proactive solutions and innovations will emerge

**Hatem Dowidar,**
**Acting CEO of Etisalat Group and**
**CEO OF Etisalat International**

# Hatem Dowidar discusses Etisalat's groundbreaking milestones and navigating the COVID era

Telecom Review managed to secure an exclusive interview with Hatem Dowidar, CEO of Etisalat Group and CEO of Etisalat International, to talk about the exhibition, how the telco dealt with the pandemic and their latest achievements in the 5G network space.

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### Could you tell us a little bit about Etisalat's presence at GITEX this year?

This year, as always, Etisalat brings a lot of future innovations. It's part of our motto of enabling the digital future. We are showcasing the future of health, transport, smart homes, smart offices and putting all these together in a connected world. If you go around, you will have a chance to see all things from self-driving cards to self-flying planes to wheelchairs that can be commanded by voice, to all things that can help you work and learn from home.

I also think that our retail section this year is very interesting. In a COVID world, where people want to decrease physical interaction. We have use cases that allow you, as the customer, to do the shopping and checkout all on your own in a shop, where you can pack things in a more practical way without having to interact with others physically. This is just one example of a use case which we have been able to support in the world's shift to the new normal.

### What was Etisalat's experience like throughout the pandemic?

Our customers were our utmost priority so we wanted to make sure that we could continue to provide our customer service when the demand was higher than ever because people were working and learning from home; we could not afford to let them down.

During that period, we made sure that we provided the best service we had. We provided the extra capacity on the network to take on all the extra usage, without having an effect on them.

We also made it our priority to ensure that our employees were safe. We did this by ensuring that when they would have to fix things at our stations or at customer premises, that they were all well-protected for their own good and the good of our customers simultaneously. This was very tricky to achieve in a matter of days when the pandemic started. In order to provide these services remotely, we enabled a lot of our staff to work remotely. This was the case for customer services agents who answered calls remotely as well as the sales and marketing teams. We had to find a different way for all our teams to do things remotely whilst maintaining top-notch services to our customers.

### What are some of the key takeaways from 2020 that Etisalat will bring into 2021?

2020 showed us that things can indeed be done differently. We can work remotely without having the need to be present at the office. With the use of more technology tools, this was made possible.

Previously, we used to travel a lot because as you may know, we serve customers in 16 different countries. This required the management level of our team to travel quite often. However, we now do more remote meetings and travel less. We have come to realize that we can do a lot more things remotely and that this allows for more flexibility for people in the way they work.

We managed to do all this while improving productivity and making sure that our services to our customers were even better.

### Etisalat was recently awarded for having the fastest mobile network in the world by Ookla. Could you provide us with a comment on that?

At Etisalat, we have always had the desire to bring the latest technologies into the markets that we operate in. In fact, we were the first operator in the Middle East with 3G to come with 4G. We always make sure that we bring the latest technologies and that we provide the fastest network and measures.

This is based on hundreds of thousands of tests that customers do around the world; that is how the network speed is calculated. It is a very scientific and elaborate way of measuring the quality of the network.

We knew that we were ranking high, month after month, so we really went the extra mile to make sure that we keep improving our network in a way that allows us to become to best in the world and offer the best services to our customers- but it doesn't stop here. In fact, we just announced a new milestone this week for having the fastest ever 5G data session in the world. We reached 9.1 Gbps which set a new world record as the fastest in the world. **TR**

> Our customers were our utmost priority so we wanted to make sure that we could continue to provide our customer service when the demand was higher than ever

Radwan Al Mufleh,
Chief Commercial Officer, ITC

# ITC's managed security services ensuring stable and secure connectivity

Integrated Telecom Company (ITC), the leading Saudi-based telecom, has grown tremendously over the past few years to become one of the region's fastest-growing telecom companies. Their services have ranged across various sections such as broadband, cloud computing, security services, and managed services, among many others.

**TELECOM Review**

**T**elecom Review sat down with Radwan Al Mufleh, Chief Commercial Officer at ITC, to discuss their experience throughout the pandemic and how they managed to cope with the repercussions brought about by COVID-19.

**With the surge of data traffic due to COVID-19, how does ITC's managed security services help overcome the ensuing challenges and guarantee the resilience required in the digital era?**
Since its beginnings, ITC was built on the ideas of resilience and innovation, and these business drivers proved themselves many times through our 15 years of existence and specifically during 2020.

The way that ITC invested in its national and international connectivity networks, partners, employees, and market-leading products was the right strategy, which allowed ITC to dramatically increase its penetration in the Fiber-to-the-Home (FTTH) market during the Covid-19 period, expand its base of B2B customers and even launch multiple leading services.

More specifically, the well-integrated and end-to-end managed security portfolio of services launched initially in April 2019 saw its importance increase in conjunction with the increased volume of cyber-attacks on Saudi companies.

For example, we had a 50% increase in revenues for our Anti-DDoS protection service, a 100% increase in our SIEM, Vulnerability Management and Penetration Testing revenues, and a steady increase in our Virtual and Web Application Firewall services.

These services are a small part of our MSS portfolio and provide continuous, 24x7 outsourced protection to our customers, guaranteeing their resilience and business continuity and allowing them reduced operational costs and peace of mind to continue focusing on their core business, as we understand that Cybersecurity is not everybody's core strength.

**In a highly competitive market, what differentiates ITC's managed security services?**
Any respectable company knows that it is imperative to properly cover the three traditional dimensions to deliver any service: People, Process, and Technology. More specifically, to properly deliver Managed Security Services, you need to add a fourth dimension: Speed of Response, and this is where ITC's Cybersecurity teams excel.

ITC relies on its proven market reputation in delivering stable and secure connectivity and B2B products and its present experienced resources to build for the future and continue separating itself from less capable smaller players in the Saudi market.

**How is ITC guaranteeing the best security solutions for its customers, and how is it responding to recurring cyberattacks that have increased with quarantine and remote working?**
Our MSS services portfolio consists of tightly integrated products that, combined, deliver end-to-end protection from the endpoint through the network, the computing infrastructure, systems, and security devices.

Our cutting-edge Security Operation Center (SOC) team enables us to offer 24x7 security monitoring through our SIEM, up-to-the-minute Threat Intelligence enrichment, full lifecycle Vulnerability management, incident response, endpoint detection, and response and email and web gateway security are specially geared to customers and employees working remotely, the favorite target of hackers in 2020 and beyond.

The combination of these end-to-end MSS products and our continuous enhancements and updates, all backed by strict SLA's, is our best response to the recurring attacks threatening the Kingdom of Saudi Arabia.

**What are the changes that ITC's cybersecurity team has applied to its strategy and approach in the pandemic context? How do you see the future of the company?**
As an immediate response in the height of the pandemic during the third and fourth quarters of this year, ITC moved to double-down on its internal cybersecurity protection for its own customers and networks and simultaneously launched an extensive campaign with its B2B customers to position all MSS services and show their value in reducing business risk and impact.

This new cybersecurity strategy is now more mature. It will continue for the next year as ITC does not see any reduction in attacks and risks, so it will continue investing in more MSS product lines, launching a flurry of new services in the first quarter of 2021 to achieve even better product-market fit for a wider range of companies in all major sectors. **TR**

> The well-integrated and end-to-end managed security portfolio of services saw its importance increase in conjunction with the increased volume of cyber-attacks on Saudi companies

# The UAE first to significantly increase indoor wireless network speeds

In line with the vision of TRA to enhance the regional and global leadership of the United Arab Emirates in the field of communications and information technology, the country's regulatory authority has designated an additional 500 MHz radio spectrum of 6 GHz band (specifically 5925-6425 MHz) to Wi-Fi for indoor use at an EIRP of 250 mW under class authorization.

As a regional leader in ICT, the UAE's TRA is one of the world's most forward-looking regulators. With this latest addition, the UAE has become the first country in the MENA region to release additional 500 MHz of radio spectrum frequency in the 6 GHz band to the total spectrum of approximately 11.5 GHz (in 2.4, 5, 5.8 & 60 GHz bands) already available for Wi-Fi. This will significantly boost the speed of indoor wireless networks in the UAE, helping to keep up with the increasing use of wireless services by individuals, companies and different business sectors for day-to-day activities, and to accommodate new applications which drive demand for faster speeds and greater reliability. Today, Wi-Fi is a critical investment that connects people to workplaces, businesses, education and healthcare.

Interestingly 99% of homes in the UAE have internet access as per ITU database published in June 2020, and Wi-Fi plays an essential role in providing connectivity between users' routers and the increasing number of wireless-enabled consumer electronics devices in their homes including TVs, smart appliances, games consoles, and portable/mobile devices such as smartphones, tablets, remote controllers, 3D visors, laptops etc.

The latest (Wi-Fi) standard promises theoretical peak data speeds of 10 Gbps (Gigabits per second), as well as better management of spectrum in congested environments, faster latency, improved power efficiency and various other changes.

Commenting on this decision, H.E. Hamad Obaid Al Mansoori, Head of the UAE Digital Government and TRA Director General, said, "The COVID-19 current situation has stressed the importance of having reliable Wi-Fi systems in our homes. This reliability on Wi-Fi networks has been driven by the increasing demand of internet use in remote-working, education and data-intensive activities such as multimedia streaming on multiple devices at the same time."

H.E. Al Mansoori highlighted that the UAE always endeavors to strengthen the telecommunications infrastructure and the efficiency of its national resources. He added: "We look forward towards satisfying the UAE society and businesses' increasing expectations of Wi-Fi networks. We will ensure optimal use of the spectrum while encouraging innovation and investment in Wi-Fi, and other wireless technologies".

# Egypt chosen as Arab digital capital for 2021

The 24th meeting of the Arab Telecommunications and Information Council of Ministers was organized virtually through video conferencing technology. This edition was presided by Egypt which was chosen as the new Arab digital capital for 2021.

The Arab digital capital initiative was launched to create a stimulating environment for investment in the ICT sector. The initiative highlights the city's technical value and its key role in promoting technology and innovation.

Dr. Amro Talaat, minister of telecommunications and information technology of Egypt confirmed that the meeting is held in the framework of the common efforts deployed to achieve an Arab digital society in light of the technological revolution that the world is witnessing. He added that the COVID-19 pandemic proved that the ICT sector is a key player and the driver of all other sectors.

In his speech, Dr. Talaat shared Egypt vision which consists of three pillars that aim to create an Arab digital society: digital transformation, capacity and digital skills building and driving innovation. He also assured that Egypt will continue to play its role as one the Arab countries hosting a great number of international cables, whereby it has continued the development of international infrastructure by adding more stations on the fifteen international cables passing by Egypt. Dr. Talaat called other Arab countries to create an international network that links all Arab countries, and for that purpose, Egypt will commit to offering 10 Gb/s on all Telecom Egypt's submarine cables to link Egypt with the other Arab countries.

The meeting also discussed the activities of observing entities within the Arab Telecommunications and Information Council of Ministers such as the Arab regional office of the ITU, AICTO, the Arab network of ICT regulating entities and the Arab-Chinese center of technology sharing.

# du's Acting CEO on driving a better society through partnerships and technologies

du showcased some of its cutting-edge innovations and solutions at the 40th edition of GITEX Technology Week. In its mission to help enterprises achieve their digital transformation objective, the company announced the launch of its digital platform, newly-formed partnerships, and opening of data centers in the region. As always, du's strategic vision is clear and that is to help customers embark upon digitalization.

**Fahad Al Hassawi,**
Acting CEO, du

In an exclusive interview with Telecom Review, Fahad Al Hassawi, Acting CEO, du, outlined the importance of humanizing experience and simplifying technology so that it does not overwhelm the consumer.

### How did du weather the COVID-19 storm when it hit?

Connectivity was already an essential component of society in the pre-pandemic landscape, yet its importance suddenly grew exponentially due to lockdown measures and movement restrictions. Besides remote learning and the education sector moving online, business across a host of sectors also needed to transition their operations to digital and residents required more services to keep in touch with loved ones. As such, our role as a leading national telco provider had perhaps never been more crucial when the COVID-19 storm hit. At du, we supported residents and the education, business, and healthcare sectors in every way possible in line with our corporate social responsibilities, ensuring the population had seamless access to the services they needed to remain connected in personal and professional life.

During this time, the work we had been doing since our establishment in 2005 came to fulfillment as we supported communities, industries, and the country in addressing challenges presented by the pandemic. In terms of the health sector, we ensured hospitals and medical centers were seamlessly connected and rolled out special offerings to support frontline workers and COVID-19 volunteers. We also ensured remote learning and working was successful nationwide, increasing bandwidth and network capacity, providing access to school/university websites, offering collaborative tools for enterprises, and launching a new platform to enable SMEs to conduct simple, secure, and trusted business transactions.

### COVID-19 has triggered many changes in the way we live and work. What digital trends are here to stay after the pandemic has passed?

Digital trends have evolved substantially since the pandemic first emerged due the impacts previously mentioned, and future reform projected over the next 5-10 years prior to the outbreak actually transpired within months. As such, reverting back to pre-pandemic practices in their entirety will not occur

because of newfound capabilities in terms of speed, efficiency, and effectiveness. Although some recent changes will not persist as we progress towards a fully recovery, other will remain indefinitely and among these are several digital trends. 5G is one, and the accelerated rollout and adoption of recent times will continue due to its power and sustainability. Another is the influence of analytics – a myriad of companies from various sectors have successfully complied data and overhauled decision-making processes through the emerging technology. Furthermore, artificial intelligence (AI), machine learning, and blockchain are other technologies that have powered businesses through the pandemic, and implementation of these will also continue when the pandemic passes.

### What is next for du in 2021?

For du, 2021 is all about continuing to delight our customers, serve our communities, support the national agenda, be the employer of choice for our shareholders, and drive business excellence, innovation, and widespread transformation. The technologies and solutions previously mentioned that we are currently showcasing at GITEX 2020 will have a prominent role to play in the next 12 months and beyond, as will every internal department and our broad partnership ecosystem. Furthermore, the immediate future in terms of 2021 also entails launching our new data centers, further progressing our 5G rollout at the national level, ensuring the whole of society remains connected, and assisting wherever possible with regards to emerging from the difficulties of 2020. **TR**

**Guillaume Boudin,**
**CEO, Sofrecom Group**

# Sofrecom embracing the digital transformation game

In a period where Covid-19 raids the world and shuts down businesses, Sofrecom has emerged stronger, coping with the new normal. In an exclusive interview with Telecom Review, Guillaume Boudin, CEO of Sofrecom Group, shared how they were able to stay ahead of the digital transformation game amid the pandemic, their new project, and more insightful subjects.

**How did Sofrecom accompany its customers during the Covid-19 crisis?**
Our first priority was to ensure the business continuity of our customers' projects, while ensuring the safety of our employees. Where lockdown was imposed, teams switched to remote working, with field operations when authorizations were possible and with the necessary security measures in place. As a result, the majority of our customers' projects continued despite the crisis. However, few projects had to be postponed, and schedules redefined accordingly.

In addition, we offered support to our customers in the implementation of business continuity plans, using a proven methodology.

**How should organizations shift their strategies to cope with the new normal?**
In the telco market, as in all markets, this crisis has clearly accelerated the digital transformation: digitalization of the customer relationship, digitalization of the company's internal processes and development of the use of digital collaboration tools.

Companies that were on digital business models have done well. Those that were only on mainly physical

distribution modes suffered a lot, and launched e-commerce or click and collect projects.

In the context of crises, digital transformation is essential for business continuity. Beyond that, it also allows better productivity and significant cost optimization.

Working remotely will also be reinforced in the new normal, and new employment expectations will emerge which companies will have to meet. The workplace will become a place for exchanges and encounters, calling on companies to rethink new ways of organizing work and workspaces.

Finally, we see an increased commitment of companies and states in actions to preserve the environment and fight against climate change. The carbon footprints of activities will be increasingly monitored, and action plans will be implemented to improve carbon balances.

### What are the practices and measures you take as a company to stay ahead of the digital transformation game?

Our monitoring teams decipher trends and disruptions in the sector. We work closely with the business departments to understand and support the business and operational needs. As specialists in the telecommunications sector, our cross-functional expertise, combining business consulting, network engineering and IT development, allow us to be present from end to end throughout the value chain. We rely on agile methods, among others, to provide scalable solutions that meet our customers' needs. With aata/AI approaches, we help our customers to improve their operational performance both on networks efficiency and on customer experience.

### Could you tell us more about your very high broadband projects?

Very high broadband holds the promise of improving people's quality of life, the competitiveness of businesses, the efficiency of public services and the modernization of governments. It is by improving speeds and quality of service (QoS) that fiber will make it possible to restore equality between citizens and businesses in terms of access to information.

Our teams actively contribute to the development of national broadband strategies and their deployment by adapting our support to our customers' local contexts. For example, in the Kingdom of Saudi Arabia, we have been working for more than two years with our partner Integrated Telecom Company to design and deploy fiber connectivity throughout the kingdom. We are currently supporting Facebook in the deployment of broadband fiber in CAR. Our teams of change management and skills development, are contributing to the creation of the first digital school to train technicians to deploy fiber and enable the country to have the necessary skills. In Niger, Mauritania and Congo, we have supported governments in the definition and implementation of their national digital strategies. Finally our engineers are currently finalizing several campaigns to measure the quality of mobile services in Sub-Saharan Africa.

### According to you, what are the challenges that companies face today while deploying FTTX networks?

By making national and international data exchange more fluid, fiber opens up access to remote and hosted services (storage, security, SaaS, etc.). It enables the development of national or regional data centers. It facilitates national and international collaborations, and accelerates the emergence of startups.

Pooling investments and infrastructures is one of the keys to deploying fiber to the end customer. It enables synergies between operators. Subject to strict supervision by regulators and clear competition rules for operators, it accelerates deployment by sharing investment costs and concentrating energies on more efficient deployment. By stimulating competition, it leads to more competitive offers at the right price for B2C or B2B customers. It thus contributes to the democratization of access to a quality connection.

In addition to the complexity of its deployment, fiber poses different marketing challenges depending on the maturity of the market. In the most mature markets, fiber brings the promise of new services: content, cloud gaming, online storage … The most developed services become accessible with unparalleled comfort and customer experience.

In more emerging markets, fiber is the means to democratize access to a quality connection, and to stimulate the development of offers and services. On the other hand, it contributes to the modernization of households' connectivity and accelerates the development of mobile internet while meeting users' expectations

In the B2B market, the stakes are enormous. Fiber offers the possibility of higher bandwidths, with a high quality of service, at much more reasonable price than in the past. A radical transformation for operators in certain markets, where B2B access offers, due to the cost it represented, remained inaccessible to a large proportion of corporate customers (especially VSEs and SMEs). Fiber therefore holds a strong promise of accelerating their business and opening up their markets for enterprises.

It also allow the broadening of the operators' customer base, provided they manage the transition from a margin-based economy to a more volume-focused economy properly.

### What are your plans for 2021 regarding the Middle East and Africa region?

Once again, the crisis has confirmed the essential role of digital technology for governments, businesses and citizens. The brutal slowdown in the global economy will require many transformation projects to manage the recovery while improving their operational performance. Our primary ambition is to continue to be the trusted partner of our customers to provide them with the necessary support for the recovery, taking into account technological contributions such as 5G and data/AI. Within this framework, in 2021, we will continue our contribution to the development of an inclusive digital and take into account the challenges of a sustainable development. **TR**

**Abdulrahman AlMufadda,**
CTO, Zain KSA

# Zain KSA's 5G supports an ICT-powered economy in line with Saudi Vision 2030

Zain KSA has been leading the way in 5G deployment in Saudi Arabia and the region. Telecom Review spoke to Abdulrahman AlMufadda, CTO, Zain KSA about the operator's achievements in terms of 5G, especially that it has won several awards this year including 3 Telecom Review Excellence Awards for "Best 5G User Growth," "Best Infrastructure/5G Deployment" and "Best Cloud Provider" and Ookla's SpeedTest award for Kingdom's "fastest fixed internet."

**Z**ain Saudi Arabia started to build 5G networks in 2019. How is the progress? Zain KSA aims to become a key enabler of digital transformation across the Kingdom, in line with Saudi Vision 2030, and avidly pursues this goal through a proactive expansion strategy. The first step we took towards 5G was groundwork upgrades. The infrastructure deployment progressed quite rapidly and in October 2019, Zain KSA rolled out the largest 5G network in the Middle East, Europe, and Africa, and 4th largest globally.

Within one year, we extended the 5G map to cover 50 cities across the Kingdom, powered by +4,700 sites. Our 5G covers all 13 Saudi administrative regions in the Kingdom, and the company had regional and international recognition on this achievement. Zain KSA ranked first in 4 indicators measured by CITC's Q3 2020 "Meqyas" report which includes: "Fixed internet download speed", "5G deployments across governorates", "5G deployment across regions" and "lowest latency for most played video games in the Kingdom."

Alongside geographic expansion, Zain KSA sought higher service quality and was the world's first operator to offer carrier aggregation feature which pushes network speeds to incomparable levels, revolutionizing user experience. Enabling superfast speeds of 2.4 Gbps, thus warranting for a better and faster experience in using IoT, e-games and business functionalities like never before.

Zain KSA's state-of-the-art 5G deployment has reinforced the Saudi ICT sector's position regionally and globally. In OpenSignal's rating, Saudi Arabia ranked first in the 5G download speed, with 144.5 Mbps, and it was named as one of the world's three digital risers worldwide by Digital Riser Report 2020. The Kingdom enjoys the 8th fastest mobile internet globally. The advanced Saudi ICT sector, powered by the novel 5G network, also supported the Kingdom's commendable headship of the G20 meetings which were held virtually this year for the first time ever. In addition to that, Riyadh was named the first digital Arab capital during the 23rd session of the Arab Council of Ministers for Communications and Information.

**As a leading 5G operator in the Middle East, what do you think of 5G development (inducing social and business values)?**
The pervasive deployment of 5G with its high capacity enables striking upload and download speeds that will unlock vast opportunities in numerous fields. As 5G-powered use cases are anticipated to generate major economic and social value, 5G providers have a great responsibility in underpinning a global ICT ecosystem that would contribute to achieving global development goals.

The full-scale deployment of 5G networks is expected to bring $13.2

trillion in global economic value by 2035, and generate 22.3 million jobs in the 5G global value chain. At the same time, hi-tech functionalities powered by 5G, namely AI and IoT, will transform businesses across many sectors.

On the Kingdom-level, Zain KSA capitalizes on its 5G network to meet the requirements of the national digitalization plan, especially as the Kingdom hopes 5G would contribute over $19 billion to its GDP by 2030 and to support 45 million new IoT devices over the next few years.

Alongside this immense macro-economic impact, high-speed connectivity has been a crucial support for economic and social sustainability during the lockdown months. When direct physical interaction was not an option, the world turned to 4G and 5G networks which became a vital lifeline efficiently supporting much of our transactions and activities from simple daily errands like grocery shopping, to education, as well as healthcare and business appointments.

Through fostering a new ecosystem based on utilizing the ultramodern technology, Zain KSA is contributing to a knowledge-based community and supporting Saudi Vision 2030's ambitious goals of improving the quality of life for citizens and creating a smart society. At the same time, it has enhanced Saudi Arabia's position among the world's top investors in digital services and supported its quest to become a global hi-tech hub.

**5G FWA is the first mature 5G use case. How did Zain KSA develop this use case?**
Zain KSA capitalizes on its well-invested infrastructure to provide the full range of 5G services across mobile and fixed wireless connections. We have crafted a range of solutions that enable users to fully experience the innovative technology.

The 5G fixed wireless access scheme has been hailed as a flagship proposition that delivers hi-speed FWA in regions that are not covered by fiber networks, and enables the company to accommodate further growth in traffic

levels while maintaining the same high-quality service.

Zain KSA's FWA model is based on the use of high-quality, home/office devices (CPEs).

Zain KSA appropriately utilized its 5G roll-out to become a converged provider delivering 5G mobile and fixed-wireless access over the same network and in the same areas, thus achieving higher operational efficiency. This powerful implementation was recognized by global observers, including Global ICT research firm Analysys Mason, and was also recognized by Ookla's SpeedTest which granted Zain KSA the Kingdom's "fastest fixed internet" award, and it was also granted Telecom Review's awards for "Best 5G User Growth," "Best Infrastructure/5G Deployment," and "Best Cloud Provider."

**How is Zain KSA capitalizing on the 5G network to grow its subscriber base? And now that iPhone 12 has been launched, what is Zain's plan to quickly develop users?**
With its iconic 5G rollout, Zain KSA quickly built its subscriber base and began to monetize the 5G deployment.

Zain KSA's 5G FWA users were increasing gradually with a rising trend which continued to present day. Concurrently, Zain KSA has partnered with flagship OTT entertainment providers, namely OSN, to provide entertainment packages, which is set to drive user growth further.

The rapid and efficient 5G rollout prompted remarkable feedback as Zain outshined several operators in CITC's Q3 2020 "Meqyas" report which ranked Zain KSA as first in the following categories: "fixed internet download speed", "5G deployments across governorates", "5G deployment across regions" and "lowest latency for most played video games in the Kingdom." These pioneering quality services will undoubtedly impact our subscriber base in the short and long run.

Additionally, Zain KSA partnered with global smartphone manufacturers to provide customers with value propositions and encourage the

community's adoption of the next generation network. In this sense, the release of the 5G-powered iPhone 12 ultimately means more people buying into 5G-enabled smartphones here in Saudi Arabia.

**B2B is the most important scenario for 5G. What is Zain KSA's key developments and expectations for B2B services?**
B2B is a lucrative growth area that Zain is focusing on, offering solutions to, and attracting enterprises of all sizes as well as various government departments across the Kingdom. Consequently, Zain KSA mobilized its innovative capacities to offer B2B bundles, featuring mobile and FWA 5G packages, Zain Cloud, and Zain Drone solutions, in addition to bespoke applications catering to the modern-day office requirements.

In the field of cloud-computing, Zain caters to numerous public and private enterprises through a partnership with global cloud computing giant, Alibaba. The Saudi-based Zain Cloud features steadfast infrastructure and is secured, thus combining high-security computing and storage with the convenience of a closely-managed cloud. During the pandemic, the solution proved to be instrumental for sustaining operations and maintaining service quality.

Additionally, Zain offers tailored drone solutions that promise to transform operations across multiple industries from logistics to filmmaking.

Zain KSA also offers the streamlined Geidea e-payment solution for mobile points of sale, M2M (machine to machine) SIM connectivity, remote work solutions, fleet management, and mobile management solutions.

The vast range of 5G-powered business solutions has unlocked a plenty of unlimited facilities that would eventually transform operations across all sectors. We are currently exploring further expansion of our B2B models, to support higher business digitalization and integrated smart city solutions that would future-proof businesses across the Kingdom and support an ICT-powered economy in alignment with Saudi Vision 2030. **TR**

**Amir Abdelazim,**
CTIO, Asiacell

# Transforming Asiacell's network in Iraq

Telecom Review has secured an interview with Amir Abdelazim, CTIO of Asiacell following their recent partnership with Nokia. He discussed in depth how Asiacell is deploying new technologies in Iraq to meet their customers' needs and highlighted the reason for selecting Nokia as a strategic partner.

**W**hat are Asiacell's plans to deploy new technologies and services in Iraq?

Asiacell has been the market leader in Iraq for quite some time. Our customers have high expectations from our digital and traditional services, as we constitute the first national Iraqi mobile operator in the market.

Our most important business initiative has been to deliver the most reliable and enjoyable experience to our customers. Our customers want a steady and consistent service, especially now as the digital platforms have become core to their lives. We have taken that into account in our planning and vision – to ensure that these services are delivered rightfully, focusing on customer satisfaction and a steadfast delivery, while maintaining the shareholders' value. That being said, Iraq is a special market. Literally every part of Iraq is a standalone autonomous ecosystem, with different customers' needs and different customers' requirements. Our strategy has been to ensure that our services are distributed more evenly, delivering the right broadband services to the customers, enforcing our metro network and being ready to launch 4G in Iraq by the beginning of 2021.

**How do you see those technologies improving Asiacell subscribers' experience?**

For Asiacell, digital transformation is becoming a lifestyle. This includes deploying the latest tools for customer experience management, digital services, customer value management, data lakes and big data deployments, as well as automating most of our operations. We are deploying a massive amount of data centres and new core nodes in our network across Iraq, as well as the latest technologies in fibre networks and transport services. These require a different set of tools and a different mindset within our teams, to ensure that this service is delivered the way it needs to be for all our customers.

We are also incorporating different levels of certification to future-proof our

deployments. Asiacell has invested in making our broadband services 3G or 4G-ready in every site on our network and prepared for the deployment and launch of 4G early next year. We have also modernised our IP network to be future-proofed for the latest technologies and for the broadband services. In addition, we modernised the digital platforms that can act on top of these type of services and deliver them to the customers.

We are already discussing the required monitoring and network management tools with our partners to make this function. We have deployed different levels of automation in our service and network management. We have also ensured that our teams are trained accordingly, and that our role transitions from managing our network to managing the tools that manage our networks.

**How can digital technologies such as artificial intelligence/machine learning improve operations in Asiacell network?**
Implementing the latest technologies such as artificial intelligence (AI) and machine learning (ML) in the operational, network optimisation and customer-centric aspects, is a top priority. Currently, the latest service operating centres in Iraq, and maybe the whole region, are being deployed in Asiacell. We ensure that the end-to-end service, from the moment a customer experiences an interruption in their service, to the minute when this service is restored, is tracked and automated, using minimum human intervention, to ensure that the service is restored quickly.

**What is the role of network optimization in Asiacell's operations? Where do you see the highest impact?**
Customers today do not have the patience to have their service disturbed.

Our operating model caters for that using artificial intelligence and machine learning.

Adopting the latest technologies is very important for us, and this includes using AI, ML and various other tools to support both front-end customer-facing services and internal services. We use the expertise of managed services partners,

through a goal-oriented type partnership, enabling us to make the best use of our infrastructure, human assets and tools.

**What do you expect from your network optimization services provider? What makes the perfect managed services partner?**
We expect to work as a team with the optimization service provider. We ensure that the partner has the skills and understands the challenges of the Iraqi market. Here, cultural harmony is very important, together with encouraging ongoing change in the culture of Asiacell, to bring it as close as possible to the customer needs. Customer centricity and a reliable network are key components to align values.

The best managed services partner is one with a geographical and demographical footprint, where we are delivering the service. Therefore, we are spreading our services differently within different managed services providers where it fits the purpose.
We expect our managed services partners to ensure that our customers are served at the right standard. We ensure that our partners are aligned with our standards of service and they can provide services geographical and demographical locations where they are required. We expect our partners to treat our customers as their own so that we harmonically integrate into one organisation that puts the customer first. We also expect our network planning and optimization partner to understand the latest technology and trends in the market, to educate both our employees and customers, ensuring they are delivered in the best fit to our customers. The availability, accessibility, and the depth of the support organisation behind our partner is also key when we choose a managed service or network planning and optimization partner.

Other key considerations include track record, physical presence on the ground, an understanding of the challenges in the region, and research and development capabilities into new technologies.

**Why have you selected Nokia?**
Nokia had the multi-vendor environment as part of their DNA.

Nokia is now a result of five or six different vendors merged into one, making the team rich in their multi-vendor experience, and flexible in terms of dealing with different types of equipment and technologies. The fact that Nokia reorganised to make Iraq a standalone focus region gave us a certain level of confidence that we are getting the right support from their organisation to ensure that the delivery of the service in Iraq is of the highest standard possible. We take 4G services seriously, as our customers have been waiting for it for some time. Therefore, we wanted to ensure we segregate the duties of our 4G launch correctly to provide a quality service. Nokia also have good multi-vendor tools and their people are used to working with multi-vendor environments. This gave us the comfort that they will be the right partner for us in delivering the network planning and optimisation services for our 4G launch in Iraq. We believe Nokia can deliver this together with Asiacell. **TR**

> The fact that Nokia reorganised to make Iraq a standalone focus region gave us a certain level of confidence

**Aloysius Cheang, Chief Security Officer, Huawei**

# Huawei's Aloysius Cheang talks UAE cybersecurity landscape

Huawei's presence at GITEX this year has been nothing short of impressive and innovative. Huawei UAE very recently appointed cybersecurity expert, Aloysius Cheang to be their Chief Security Officer, making him Huawei's first CSO in the region.

**T**elecom Review managed to secure an exclusive interview with Cheang to discuss the country's cybersecurity landscape and the key takeaways in this space from 2020.

**2020 has been an interesting year for cybersecurity. Could you tell us about some of the challenges that were faced during this time and how Huawei overcame them?**

Well, in 2020, we have seen that there's a new norm being set where a lot of us are forced to work from home. Working from home means that the traditional security perimeter defense is no longer effective as we have to extend the security controls all the way to your employees' homes. This also goes for the extended network that you will have to build that extension to your customers' network as well as our partners' network.

We are seeing that the primary utilization will drive a need for longer term strategy to be put in place for a zero trust approach to be taken

to build security for corporations and organizations. However, in the short run, most companies would probably have to rely on some basic cybersecurity hygiene to manage the current situation. Things like using VPN for access to your corporate network and improving management through credential management controls. Only the right access controls will give you access to the resources you need. Some other things can be done; simple things such as managing passwords by using something more complex and keeping in mind to put your company assets to try not to use them in complex situations.

**You are Huawei's first CSO in the region. Could you tell us a little bit about your experience with the region's cybersecurity landscape? What are some of your observations in this space?**

Cyber Security is moving extremely fast in the Middle East. We can see that the Middle East is in a Renaissance period, whereby there's a lot of requirements for cyber security that drive towards more attention being given to this topic, and that more companies are becoming aware that they need to

have a comprehensive end to end cybersecurity strategy. There's a lot of demand driving the need to build this strategy and this is further emphasize during the pandemic where there's an urgent need for that.

**What more can be done to strengthen the cybersecurity landscape in the UAE and how will Huawei cater to the current gaps in this field?**

In Huawei, we believe in value creation, together with our customers so that it is a shared success. We believe that there's a need for us to work together with the local ecosystems, to help nurture ecosystems, to build more so called expertise in terms of talent development, and to drive standards and best practices. It is important to set some kind of baseline cybersecurity strategy or hygiene that should be practiced by small and medium enterprises.

There is a need for us to participate even more actively to contribute to the industry and this is what we have set out to do right now, basically to give a call to arms to the UAE to establish it as the region's trusted cybersecurity hub. **TR**

**Nidal Abou-Ltaif,**
**President, Avaya International**

# Avaya's President on addressing the needs of the multiexperience economy

This year, Avaya is redefining customer and employee experience solutions to address the emerging needs of the multiexperience economy. The idea is to empower organizations with the communications and collaboration solutions they need to work smarter and engage with customers and employees more effectively.

Telecom Review managed to secure an interview with Nidal Abou-Ltaif, President at Avaya International, to discuss the company's expanding portfolio of rich solutions and services.

Avaya is launching a range of new cloud-based contact center solutions to give new ways to connect to customers in the current climate. The American multinational launched Contact Center as a Service (CCaaS) for public call centers with top tier partners – Google, Verizon and many more.

"Our CCaaS is built on Microsoft Azure, designed to enable customers on their journey to the cloud with a scalable, flexible and robust platform, which helps build team engagement and drive enhanced customer experiences."

In response to exponential uptake in video collaboration platforms, the company is also placing a spotlight on Avaya Spaces, an all-in-one video collaboration platform for the digital workplace.

"It can be used as a collaboration tool for all communication needs, including the new modernized world of video. It supports all kinds of collaboration, from video and messaging to document-sharing. It's a perfect productivity tool, and of course, it's very secure."

Avaya recently partnered with PTCL on QTaleem, an online digital learning education platform and part of the PTCL Education Cloud solution offering, to bring a video collaboration solution to schools across Pakistan. Avaya Spaces integrates with QTaleem to deliver seamless video classes.

Avaya's President believes the company's shift to the cloud has left it well-placed for a world where large numbers of people are working remotely.

"We launched and implemented many capabilities to help our customers cope with COVID-19 even before it began. We had no idea there would be a global pandemic so we're very proud of what we have done to help governments, airlines, hospitals and many other industries throughout this time."

"Our employees donated equipment to help with the issue and enabled around 2,500 employees to work remotely. We kept all call centers running during a critical period of time. So what began as an initiative in response to the pandemic eventually transformed into another business."

As the pioneer of contact center solutions for businesses, Abou-Ltaif believes the company has been lifted by the greater urgency for companies to digitize their operations.

"We are lucky that we have continued to grow during the pandemic, due to the flexibility of our technology and the way in which Avaya enables people to work from anywhere. It wasn't a trend for us – it is part of what we have always delivered to our customers."

"In 2021, we are ready to focus on offering our customers the choice to move to the cloud. We have built all of the necessary tools and a platform software services – Avaya OneCloud – to enable our customers to move towards the future."

"COVID-19 has accelerated the digital transformation and we are prepared, with all innovative tools and services, to make sure our customer can do this in a smooth way." TR

# Brands post COVID-19:

# Out with the old, in with the new

**The pandemic of 2020 has challenged every norm, including customer experience. With the spread of fear, extreme safety measures, and lockdowns, there came the inevitable shift in lifestyle and purchasing habits. Life across the board is now going through significant changes, and brands have found themselves at a crossroad: evolve or die.**

The majority of brands have indeed noticed and opted for doubling their efforts in providing the best experiences to ensure customer loyalty in a post-COVID19 world. We never thought that there would come a time when brands had to tilt their focus from being revenue-oriented to fully fostering their customers' best interests.

Business is still a fundamentally human enterprise; while technology provides us with the means to connect, it is the relationships we form that keep us connected. We're hearing more about "empathy at scale"; it includes a deep understanding of customer needs and responding to those needs in a genuine way. That's why we believe empathy-based technological disruptions are key enablers in any brand's survival toolkit today.

A perfect example is the telecom operator Ooredoo Kuwait. Its mission has always been to empower people to access and enjoy the best of the Internet in a way that is personal and unique. In one of its first initiatives to tackle the societal effects of the pandemic, the company offered thousands of frontline volunteers helping fight the pandemic, free mobile lines along with internet and voice as a gesture, in an attempt to praise their efforts.

Currently, the operator group has chosen new brands and rewards for their Nojoom members, in an attempt to stay relevant and support customers during quarantine. Those included food, grocery and pharmacy delivery services, movie streaming, online library and books, as well as online gaming. That was possible through our seamless platform, the Reward Marketplace, which helped transform Ooredoo Kuwait into a lifestyle provider. It also paved the way for ecosystem-centric loyalty programs in the region, providing customers with appealing and relevant deals from an array of merchants.

Even consumer brands need to take a step back and look closely at their customers. Business models and strategies have originated from observing customer insights, behavioral patterns and common practices. With new patterns and data surfacing, brands need to revisit their approach, and strive for a more humane and compassionate "alliance" with their customers.

So, what should brands expect in a post-COVID19 world?

In a nutshell, empathy will be indispensable for the success of digital transformation, and it will lead brand loyalty moving forward. The pandemic has also made clear that there is not one single digital transformation strategy for every company. Instead, companies must tailor their digital needs to the market conditions they are navigating.

Building communities and ecosystems around the brand is another reasonable next step for many companies, including ours. And making sure this ecosystem is aligned with a greater purpose will be fundamental. Today, brands have the opportunity to nix stale models and emerge even stronger after having maneuvered the storm with heart. **TR**

*By Rabih Farhat, founder and managing partner,* Related Inc

# The importance of rewards and partnerships

**In an exclusive interview with Telecom Review, Diane El Hachem, head of partnerships at Related Inc discusses the role of Related in the ICT industry and the importance of partnerships and rewards programs.**



**Diane El Hachem, head of partnerships at Related Inc**

**First of all, can you tell us more about your role as head of partnerships at Related? And why are partnerships an important part of the company's structure?**

Our mission is to build strong bonds between brands and their customers by creating memorable experiences. With more brands embracing the idea of partnerships to better engage customers, Related put together a dedicated unit of experienced resources, across the region, to help brands build these partnerships and create a mutually beneficial ecosystem.

This became an imminent part of our customer offering and product development because we know how crucial it is to offer relevant rewards at the right timing. During the early periods of COVID19, we had to acquire new types of rewards that appeal to customers in quarantine, such as VOD, online gaming, food, grocery and pharmaceutical deliveries. Consequently, we were able to increase our client's customer engagement; that same client (Ooredoo Kuwait) won the award for Best Loyalty and Rewards Program for 2020.

**How would you describe the role of Related in the ICT industry and what are the added values that the company offers?**

With our primary goal being to help brands build real and meaningful relationships with their customers, we focused on transforming mobile operators into lifestyle providers. This meant mobile operators had to shift from legacy models to innovative tools that increase customer loyalty, customer lifetime value and create new sources of revenue outside the traditional services.

We designed, implemented and managed a seamless rewards program - using our smart tools and methods - to build a wide palette of strategic partnerships that offer these rewards and memorable experiences to our end customers across all touch points.

That's where the reward marketplace came in; a one-stop solution for all loyalty program needs. To date, we've helped mobile operators:
- reach 85% customer satisfaction rate
- increase customer engagement with the program 7x times
- generate a 2% incremental revenue outside of core products

**As a woman in the ICT field, what is your take on women inclusion in this industry?**

There's a strong business case for women in leadership: gender diversity across company boards and senior leadership is correlated with superior business performance, improved ROI and higher share prices. Despite the increasing support from industry leaders calling for gender diversity and inclusion, the shift is still slow.

I encourage women to be part of the ICT industry; it's dynamic, constantly expanding and can provide enough opportunities to meet the various talents and skills of women in our region. There are perks to being one of the few women working in ICT, like having the opportunity to present a fresh perspective to matters and not trying to fit into existing frames, yet building new ones instead.

**What are the plans of Related for the upcoming year?**

Loyalty and incentive programs will gain more traction in 2021 given that businesses are now more cost-conscious and want to see a return on their marketing investments. As a company, we need to be fully ready to respond to changes in customer behavior while meeting the brands' objectives.

In a nutshell, we want to create moments of "magic" that ensure "loyalty". The plan is to expand our partnership network and help brands move from a transactional connection to an emotional interaction with customers, through experiential rewards. Moreover, we'll continue to implement our motto, "reward with a purpose", by serving critical industries - particularly after the pandemic - like healthcare and government, in areas of health and wellness, local tourism and education. Besides, we'll definitely be investing in innovative tools like contactless payments and digital currencies, and an even more solid data-driven base for personalized customer experience, through smart technology predictive models. **TR**

# CommScope discusses future of business and consumer relationships

As the year 2020 draws to a close, the ICT industry has faced one of its most challenging yet undoubtedly transformational years to date. The pandemic not only rapidly changed our current way of doing business but has also created a ripple effect that will surely be felt by multiple companies within ICT in the years to come. At this year's GITEX Technology Week, CommScope is one such company that has decided to embrace the new normal and participate in the event virtually.

**Ehab Kanary,**
**Vice President of Emerging**
**Markets Europe, Middle East**
**and Africa, CommScope**

**T**elecom Review secured an exclusive interview with Ehab Kanary, CommScope's Vice President of Emerging Markets Europe, Middle East and Africa to discuss the impact of the pandemic on the company's business operations and what the future holds for ICT events such as this.

"We're looking forward to continuing the conversation with customers, partners and organisations on how we work together beyond the pandemic. CommScope has been engaging industry leaders on the need to adapt to different economic environments while ensuring business resiliency. We are seeing accelerated adoption of digital transformation as companies modernise their networks," Ehab said.

At GITEX, CommScope plans to continue building its relationship with customers and take advantage of the new opportunities that have presented itself amid the pandemic. "The workplace and home dynamics are shifting globally, and CommScope is well positioned to tap into these opportunities through the networks of the future that we create," he added.

A recent example that addresses this need for connectivity is CommScope's partnership with Google's Area 120 for Orion Wifi, a platform that provides private, secure roaming for consumers while supporting public venues in fixing their cellular dead zones and monetize their networks.

When asked about how social distancing and Covid-19 safety precautions will affect GITEX, Ehab believes that virtual conferences are going to be a significant part of the future for the ICT industry; something which many of us will need to accept eventually.

Ehab concluded, "In terms of accessibility, cost savings, environmental footprint, etc. virtual events have a lot going for them. We believe this is the same case for GITEX.  We will see the benefits of networking in person as well as more accessibility to interesting content after the show. Ultimately, it's about the content that captivates audiences." **TR**

> CommScope has been engaging industry leaders on the need to adapt to different economic environments while ensuring business resiliency

**Dmitry Okorokov,
CEO, InfiNet Wireless**

# InfiNet Wireless CEO talks risks and opportunities amid pandemic

Telecom Review secured an exclusive interview with Dmitry Okorokov, CEO of InfiNet Wireless to discuss the company's participation at GITEX Technology Week 2020, its mission to provide new wireless solutions for the region and lessons learnt during the pandemic.

**C**ould you tell us about InfiNet Wireless' presence at GITEX this year? It has been a pleasure to finally come to a place like this because everybody had doubts this year. For us, it's our 12th consecutive GITEX. We never missed a single show and this year is no exception despite everything that's happening in the world. We're happy to be here.

Additionally, we have showcased many of our new wireless solutions and addressing the needs of customers due to the rise of 5G and IoT technology.

So we have a multitude of various solutions and various frequency bands which we were happy to share with our customers all around the region.

**What was the pandemic like for InfiNet Wireless? How did you overcome the challenges you faced during this time and what are some takeaways from the current climate as a whole?**
Any good company, which of course we are, converts the threats and risks into different opportunities, and I think this year showcased it more than any other year that we have been in the industry. This has been more than 20 years now. Basically, we learned to work remotely and we found that for example, R&D

work can be even more efficient when some engineers are working from home, rather than them having their work in the office.

On the other hand, we see a huge uptake in various projects, which were always there, but not to the extent that has been developing this year. I think this is just the beginning of something even bigger, which we will see in the next few years to come.

**What are your plans for 2021? Does it look positive for the industry as a whole?**
As I said, we have seen lots of different projects which have been raised from the ground by various partners from around the world and the demand will be growing at an even faster rate than we initially thought.

We are super excited about next year and a few other years to come. We are boosting our presence in the region and in the world globally as well as our R&D to make sure that we cope with this demand and that we stay on the leading edge of technology today. **TR**

> This is just the beginning of something even bigger, which we will see in the next few years to come

# Etisalat achieves world's fastest 5G speed of 9.1 Gbps



In yet another milestone in the 5G journey, Etisalat has achieved the world's fastest 5G download speed of 9.1 Gigabits per second.

The throughput has been achieved by aggregating multiple commercial spectrum band of n78(3.5GHz), n41(2.6GHz) and millimeter wave n258(26 GHz). This was accomplished through a prototype 5G device that aggregates all three bands.

Saeed Al Zarouni, Senior Vice President, Mobile Network, Etisalat, said, "We are pleased to announce that Etisalat UAE has achieved unprecedented 9.1 Gbps 5G network speed. This 5G ultra-wideband game-changing download speed is the fastest in the world. We at Etisalat always strive to meet the ever-increasing bandwidth demand from diverse needs of customers, businesses, automation, and gaming.

"Today's landmark announcement is a result of Etisalat's efforts in building a robust 5G network, and 9.1 Gbps is truly a huge leap forward in the 5G era to offer a speed 30 times faster than a 4G average throughput. This will have a significant and profound change on individuals, industries, society and the economy, transforming how we live and work."

Etisalat has led the telecom sector and in the region with the deployment of the 5G network setting a major benchmark in the industry by becoming the first telco in MENA in May 2018 to launch the commercial 5G network providing fixed wireless service in the UAE. This was followed by another major substantial breakthrough in its 5G journey by connecting and partnering with Expo 2020 as the first major commercial customer in the Middle East, Africa and South Asia (MEASA) region to access 5G services.

In May 2019, Etisalat was the first telecom operator in MENA to enable its customers to experience the power of the 5G network and release the first 5G handset before many others. Etisalat also became the first telco in MENA to provide indoor 5G coverage in selected buildings in the country.

Etisalat's mobile network was recently recognised by Ookla as the fastest in the world showcasing high speeds all throughout this year. UAE network ranked with the fastest mobile download speed worldwide in January, March and July 2020.

Etisalat is also the winner of Ookla's Speedtest Awards for fastest fixed broadband network in Q3-Q4 2019 and was recognised in the same year as the leading operator for fastest mobile and broadband network. With a download speed of 115.89 mbps and an overall ranking in the 'Speed Score' at 98.78, Etisalat is the only operator globally to rank higher than 90 as per Ookla Speedtest data.

# stc announces new 5G achievement in close collaboration with Nokia



stc announced another milestone in its 5G commercial network development, demonstrating New Radio (NR) with 8 carrier aggregation (CA) using Nokia advanced mmWave technology and on a single Qualcomm 5G chipset. The company established the 5G Non-standalone (NSA) data call by aggregating 8CC x100MHz on mmWave spectrum (26Ghz) on live network conditions in Makkah City.

mmWave spectrum can provide numerous high-capacity, low-latency 5G applications that will fuel economic growth and societal benefits in the kingdom and around the world. Moreover, 5G NR mmWave will support new and enhanced mobile experiences with fiber-like data speeds. It is a key spectrum for future 5G densification to address the capacity demand in hotspots and mass event areas.

Haithem Alfaraj, SVP, Technology and Operations, stc, said, "Stemming from our vision, we adopt leading next generation technology to reinvent customers' experience.

The achieved results of 5G mmWave testing mark a significant milestone in stc 5G journey and underpins stc determination to constantly evolve to be at the forefront of digital service providers in the region and globally."

Khalid Hussein, Head of stc Customer Business Team at Nokia, said, "This is indeed a remarkable feat in terms of 5G speed and throughput together with stc. Our mmWave technology has enabled the fastest 5G speed in the country and this achievement demonstrates the capacity of our commercially deployed 5G solutions. We are excited to have achieved this to deliver incredible 5G experiences to people and businesses in the country and continue to work with them for the evolution of stc's 5G network."

# Etisalat appoints new CEO



Etisalat Group has announced the appointment of Hatem Dowidar as CEO. Dowidar has been acting CEO since May 2020.

Hatem Dowidar joined Etisalat Group in September 2015 as group chief operating officer and was appointed as chief executive officer, international of Etisalat Group in March 2016. He sits on the subsidiaries' boards in Morocco, Egypt and Pakistan.

Prior to joining Etisalat Group, Dowidar was the group chief of staff for Vodafone Group based in London, reporting to Vodafone Group CEO. He brings 30 years of experience in multinational companies, and more than 24 years of these within the telecommunications industry, within various leadership positions in multinational companies.

He initially joined Vodafone Egypt in 1999, served as marketing director (CMO) and later became the CEO of Vodafone Egypt from 2009 - 2014, where he managed to take the business to out-right leadership, and kept the business growing with benchmark profitability in very challenging and competitive environments. Dowidar has a long track record of achievements in the various leadership positions he held at Vodafone Group and its subsidiaries, including Group Core Services Director, CEO of Vodafone Malta, CEO of Partner Markets with partnerships covering over 45 markets and Regional Director Emerging Markets. He also has extensive corporate governance experience from his representation as Chairman and Board Member in several Corporate Boards within and outside the Telecommunications industry.

# stc set to establish a digital hub for the MENA region



stc Group said that it intends to establish a premier digital hub for the MENA region, in cooperation with regional and international partners. This is expected to create an ecosystem of advanced technology services that will establish Saudi Arabia as a leading business hub in the region, and meet the expected future growth in services and investments in the ICT sector. This will be achieved by taking advantage of the Kingdom's strategic location at the intersection of three continents, and promoting investment in international connectivity services and data centers to leverage the Group's various assets, services, and advanced technologies. A number of next generation multi-terabit cables are currently in the planning stages to meet the very high cloud and content demands predicted in the future, and the first of those to come to the region will land with stc.

Existing assets, which stc will bring to this initiative, include its extensive international submarine cable network, which already offers the highest connectivity to the world for the region. This is achieved through stc's investment in a state of the art optical mesh, which ensures continuous service availability in the event of any cable outages by offering low latency to Europe from the Red Sea, and from the Gulf, and by leveraging the terrestrial cross border network. stc's optical terrestrial network connects to all neighboring countries, allowing it to offer faster connectivity to customers in many countries than they can achieve through the submarine cables.

The Group's future investments are expected to strengthen Saudi Arabia's position as the natural home for the region's digital services. The Kingdom has an enviable combination of infrastructure assets today, making it the first among G20 countries in terms of digital competitiveness during the past 30 years, according to a report by the European Center for Digital Competitiveness, which is based on the report of the World Economic Forum, in line with Vision 2030 which is the country's roadmap to becoming a hub connecting the three continents for multiple sectors. This world class digital ecosystem could achieve this goal and turn this vision into reality.

stc Group is a primary investor partner of the 2Africa submarine cable project, which will deliver very high capacity interconnectivity between the three continents. The Group will land this submarine cable in the Red Sea, and will extend it into the Gulf, linking multiple countries. It will also will facilitate multi-terabit connection to the North West region of Saudi Arabia, in support of the Kingdom's ambitious plans for Neom project, and onwards to Jordan.

# Etisalat Digital and FAB sign new IoT smart-building management system agreement



Etisalat Digital and First Abu Dhabi Bank (FAB) announced a strategic partnership to deploy a cloud-based IoT Smart Building solution, providing FAB 'anytime anywhere' access and ease of operations across its entire portfolio.

This is the first deployment of a portfolio-wide IoT smart-building management system for any of the UAE banks. The IoT solution – to be implemented across FAB's buildings and data center – meets the bank's requirements to integrate the existing legacy system into a state-of-the-art IOT platform, built and hosted in the Etisalat Cloud. It includes a series of software applications and dashboards addressing alarms, fault detection,

predictive analysis and centralized monitoring.

Salvador Anglada, Group Chief Business Officer, Etisalat, said, "We are honored to collaborate with FAB, the UAE's largest bank, to implement our Urban Intelligence solutions. By utilizing our cloud-based IoT Smart Building Platform, all assets and systems within FAB's buildings will be integrated and centralized into a single platform, providing 'anytime anywhere' access and ease of operations across its entire portfolio. This facilitates efficiency in maintenance and operations and reduces utility spend when operated by a team of energy engineers and specialists from our 24/7 IOT command center."

Banks own multiple buildings and also operate branches across the country, which require extensive facilities management, maintenance and operations. Etisalat Digital's Urban Intelligence solutions and IoT platform enables advanced and predictive analytics, which in turn provides unique insights into the buildings operations and empowers a truly smart facilities portfolio.

Vikas Anand, Executive Vice President and Head of Group Operations, First Abu Dhabi Bank, said, "Technology is a proven differentiator for FAB, and once again the bank is delighted to be a pioneer across the UAE's banking industry. Customers and businesses are increasingly expecting 'anytime anywhere' access and ease of operations across all elements of their life. It's only apt then that the UAE's largest bank embraces a cloud-based IoT Smart Building solution befitting the standards that our business and customers require. We are honored to collaborate with Etisalat, one of the world's leading telecom groups – and, like us, immensely proud of its Abu Dhabi roots – to implement its Urban Intelligence solutions. We look forward to a strong and successful relationship in this regard."

# stc marks new milestone with MENA's first live ORAN session



stc in collaboration with its partners stc Solutions and Altiostar, becomes the first operator in the MENA region to run live ORAN session's. ORAN is a revolutionary technology that promises to change the landscape of wireless service offering. ORAN runs on virtualized and modular software cloud-based technologies, delivering solutions in a quick and efficient manner.

The test of ORAN marks another milestone in stc's drive towards excellence, strengthening its position as the leading operator in the MENA region, having previously been the first operator to launch commercial 5G services in 2018.

With ORAN stc will provide the foundation for next-generation wireless networks, improving the quality of many real-time services and enabling an endless number of use-cases in a fully virtualized network infrastructure, aiding interoperability, diversity and open ecosystem.

ORAN will keep stc in line with its strategic drive for a bright digital

future aligning with its DARE strategy and being an essential ingredient of Kingdom's drive towards digitization which is an instrumental element of Kingdom's 2030 vision.

Eng. Khaled Aldharrab, VP, Infrastructure, stc, said, "Open RAN is a large and crucial part of stc's future virtualized infrastructure. This technology is promising to change the way we currently think of Network solutions, providing: Openness, disaggregation, speed, efficiency and reduced time to market. The future of Cloud-Native, modular software and Micro-services will go far in addressing the customers high expectations and delivering our future vision."

# Zain fintech subsidiary receives first consumer micro-financing license in region



Zain Group, a leading mobile telecom innovator in seven markets across the Middle East and North Africa announces that Tamam Financing Company (Tamam), the financial technology (fintech) subsidiary of its operation in Saudi Arabia has been officially licensed by the Saudi Central Bank (SAMA) to provide micro-financing services to consumers across the Kingdom.

This makes Tamam the first entity in the Kingdom and the region to be licensed by a regulator to offer consumer micro-loans via a fully digital customer experience, through a mobile app.

The licensing follows the completion of an eighteen-months testing period within SAMA's Regulatory Sandbox. The rigorous process saw the app and the service vetted for functionality, security, and compatibility with customer user profiles in Saudi Arabia, in line with the Sandbox's guidelines. The platform displayed high product viability and strong demand throughout testing and obtained PCI-DSS accreditation which protects the security of the digital infrastructure and data.

Established in 2019, Tamam aims to increase financial inclusion in the Kingdom in line with the Financial Sector Development Plan, which forms part of Saudi Arabia's Vision 2030. The platform provides individuals requiring financing the opportunity to immediately avail a Shari'a-compliant consumer micro-finance. The end to-end Shari'a approved process takes less than 5 minutes from downloading the app to receiving the financing amount based on the user credit profile.

# Telecom Egypt sets ambitious goals for 2021



Telecom Egypt announced its 2021 guidance, in line with three main KPIs: Mid-to-high single digit revenue growth, EBITDA margin in the early thirties and in-service CapEx-to-sales ratio in the late twenties, excluding spectrum.
Adel Hamed, managing director and chief executive officer, commented, "Our 2021 guidance reflects our expectations of another year of outstanding operational and financial performance, which will continue to support the company in its vision of becoming the leading ICT provider in the market, and transforming Egypt into a premium digital hub.

"The year 2020 was challenging for companies all over the world, in light of the exceptional circumstances imposed by the pandemic. The new norm amplified the need for strong and secure data connectivity, and vividly illustrated the importance of digitization."

In terms of plans and goals for the new year, Telecom Egypt CEO said, "In 2021, we aim to further enhance our service portfolio, and capitalize on the unprecedented demand for telecom services, with emphasis on data and connectivity services, by offering innovative, best-value-for-money products to our home and enterprise customers. We will also diversify our revenue streams by further expanding into the application layer through fortifying our network infrastructure, and building internationally certified data center facilities. We will also continue to support local MNOs and ISPs with enhanced infrastructure services, in addition to expanding our international presence.

"We strongly believe that our strategic direction and business model will support the attainment of robust financial results, and efficient cash flow management."

**Erik Dudman Nielsen,**
Group CEO, Virgin Mobile
Middle East and Africa

# Virgin Mobile MEA delivering a world class digital experience

Virgin Mobile MEA has established a stellar reputation ever since its inception in 2006 and serves now millions of customers across five markets. In order to know more about the MVNO's latest activities and achievements, Telecom Review spoke to Erik Dudman Nielsen, Group CEO, Virgin Mobile Middle East and Africa.

**Virgin Mobile MEA has been at the forefront of enriching customer experiences with its digitized services and customer-centric approach. How do your available initiatives actually enrich the customer experience and, in your opinion, what more could be done to optimize them even more?**

We're proud to have made a meaningful impact on the industry, launching the region's first mobile virtual network operator (MVNO) with the FRiENDi brand in Oman, followed by bringing the first, fully digital service with the launch of our Virgin Mobile brand in UAE and KSA, now serving more than 3 million customers across the three markets.

Our core objective has always been to provide our customers with an outstanding experience, and to achieve this, Virgin Mobile is dedicated to driving two core focuses on our business — segmentation and digitalization: dedicated target segmentation to drive customer insights and create propositions to address the needs of specific market segments, delivered with an unwavering focus on customer experience through our unique digital platforms.

Segmentation enables us to develop marketing strategies and service offerings that target sub-segments of the telecom market, thereby reaching out to a wide scale of different customer segments - proven by our own dual brand strategy with FRiENDi Mobile and Virgin Mobile, which allows Virgin Mobile Middle East & Africa to deliver bespoke services and experiences targeted at different customer groups, thereby meeting the specific needs of those audiences to create high customer satisfaction.

We are continually looking at new ways we can innovate to provide the very best product and customer experience for our users and to achieve this, we actively listen to our customers to ensure that the Virgin Mobile app and

services are carefully designed to cater to the needs of our customers. For example, we have recently launched a brand loyalty program in the UAE to reward loyal customers, as well as introducing a digital payments option in Oman for our FRiENDi customers, in response to demand for non-physical recharge options during the Covid-19 pandemic.

We have also expanded our fully digital proposition even further with the launch of some exciting new services, aimed at promoting the use of eSIM to give a 100% end-to-end digital service. For example, in KSA we have just launched a partnership with launching eSIM with Absher, a smartphone application which allows citizens and residents in Saudi Arabia to use a variety of governmental services, including ID services. This partnership means that the entire sign-up process can now be done 100% digitally via the Virgin Mobile app when using an eSIM, as Absher digitally verifies the customers ID.

### What has Virgin Mobile MEA been working on recently?

We are now turning our attention to helping other operators develop their own portfolio of digital services across the region.

As an MVNO operating in multiple countries, we are expert in systems integration and have the agility to move quickly to address consumer trends. By connecting with existing mobile networks, we bring new innovations and features to the market much faster than traditional telcos, enabling us to complement operator offerings by developing marketing strategies and service offerings that target sub-segments of the telecom market.

With the ability and expertise to commercially deploy our digital platform – not only have we built a digital platform to deliver a world class digital experience that can be quickly and easily replicated for other markets, but we also have the experience and learnings too, which translates into a knowledge of running a digital commercial operation, reducing the

risk for MNOs looking to going digital, and allowing us to deliver a digital platform with speed and efficiency. The cost of building a digital proposition from scratch is not insignificant, and often such programmes can face major challenges both in securing resources and in integrating these platforms with inflexible legacy systems. These are some of the headaches we are trying to remove.

As an MVNO, we have always had to focus on our internal efficiencies to manage costs and improve speed to market. So, when we built a digital platform to deliver a world class digital experience, we built it with the intention of having it quickly and easily replicable for other markets, with the ability to deploy within a few months depending on the level of integration complexity.

We are very excited that, following a call for application in November 2019, we have been awarded a license to launch both our Virgin Mobile and FRiENDi mobile brands in Kuwait. We were the only successful MVNO to obtain the new telecommunications license and this is the first new MVNO license to be granted to any operator in the Middle East region since our own game changing entry into the UAE, with our innovative B-Brand partnership with EITC.

### Given the current climate, what does the future look like for telcos in the region?

Undoubtedly, the Covid 19 pandemic has sharpened consumers' appetites for digital services. Likewise, it has highlighted the importance of telcos continuing with their own digitalisation efforts. Connectivity has been the very lifeblood that has enabled people to live full, remote, digital lives during the pandemic. Consumers will continue to demand similar interactions in the post-pandemic world and, as a result, telcos across the region are looking to fast track their own digitalisation initiatives.

Operators clearly understand the need to deliver superior digital experience. However, they also acknowledge the challenges of legacy systems & lack of

relevant skills, besides any innovation & culture limitations, which is where B-Brand models and Virgin Mobile's digital expertise come into play.

We have seen across all sectors that customers rate digital experience. Digital experience drives higher NPS over a traditional experience, resulting in higher recommendation and revenues – indeed digital service NPS scores are on average four times higher than standard mobile operator NPS scores. This increase in customer satisfaction stems from giving customers genuine convenience, genuine simplicity.

2021 will be a true turning point for the telco industry as it chooses to seize the unlimited opportunities presented by the shift towards digitalisation. Going forward, a critical success factor for mobile operators will be in the way in which they embrace the new digital world and adapt from traditional model and instead move towards an agile, digital business model. **TR**

> We are now turning our attention to helping other operators develop their own portfolio of digital services

# Do what's counter intuitive

**2020 has seen us rely on being digitally connected more than any other time. But while our online time has accelerated, almost doubled since the onset of Covid-19, we've relied on our service provider more than ever, there still remains a lack of love for the sector.**

**Ayesha Rashid,**
**leading regional telecoms expert**

Some of our familiar operators are stuck in a time warp - struggling to break their traditional approach. At the same time customers remain in the uncomfortable position of having different aspirations but with no one to support them.

### Legacy thinking: the 12 month contract

Globally, telecoms operators quickly stepped up when the pandemic hit. As our connectivity needs took off, operators rapidly expanded capacity and deployed no touch digital service models. Apart from these business continuity efforts — fundamental strategies remained the same.

Throughout the MENA region, many telecoms operators continue to sell plans where customers are locked into a "contract" for 12 months or more. T-Mobile US removed contracts as a major component of their "Un-Carrier" strategy, and used this as a springboard for further disruption and growth.

The forced loyalty approach demonstrates where operators haven't moved forward and so use these controls to protect their revenues from the negative effects of irrelevant brand experience or poor service delivery.

The bigger challenge for the sector as a whole is that consumers have moved on in what they consider to be normal and the telecoms industry is not providing a credible alternative choice. I believe there's an opportunity to ignite growth in the sector by doing the opposite of what is still being done today.

### 2020 - a pivotal turning point. YOU can have more.

The success of OTT players in the last 10+ years turned the telecoms operators into pipes. The dream of value-added services growth disappeared when the social networks and other Internet players out manoeuvred them at every turn.

Companies like Netflix and DAZN have completely revolutionised the way consumers expect to engage. Seduced by limited time free trials, customers were delighted to sign up for recurring charging knowing that they weren't committed and could cancel at any time. But then, Netflix and DAZN turned their flood of free trial users into a loyal, profitable fans by using data science and algorithms to create personalised recommendation engines that ensured users were always engaged. Pricing was set at levels which traditional PayTV couldn't compete with because of the unique digital-only model and the flywheel turned faster and faster.

Giving stuff away for free and charging less than the maximum the market will bear is not the type of behaviour we're used to from MENA operators, and maybe even global players. But it clearly works, as the huge customer bases and stock market valuations of the OTT companies demonstrate. Disney+ added 20 million customers worldwide in just March and April 2020.

### Be an outward looking brand

2020 has also seen a rapid change in the types of brands, we as end users want to do business with. Before the start of the pandemic, 83% of millennials stated they'd only buy brands that aligned with their values (5WPR's 2020 Consumer Culture Report). The events of this year have made relevant brand purpose vital for much wider audiences as communities have pulled together.

Telecom brands have stuck traditionally to talking about themselves — as opposed to positively serving the world. This lack of brand relevance diminishes trust and advocacy further. The opportunity is to adopt an outward-looking position and refocus brand purpose to move in a direction that is genuinely benefitting the wider audience. Whilst stc has recently updated its brand identity, they have stuck quite rigidly to today's digital world delivering services as opposed to looking in a more positive direction to where they could add value to humanity.

### Being bold enough to embrace counter-intuitive behaviours

During my time in the MENA region, I've met strong leadership, committed to taking risks to create sustainable businesses in fast-growing economies. Now is the time to recognise and embrace the structural shifts in consumer expectation and the technology possibility, to make the bold moves required to ignite growth.

Incumbent players need to make the biggest strategic and cultural changes to use a counter-intuitive approach. Leadership teams need to focus on cultural change to build the right behaviours to enable the business to take a radical new course. Simple digital transformation is a single (albeit) major step along the road. However, major surgery is necessary to ensure relevant brand purpose, create flywheel propositions and put experience at the core of operations. The rapid turnaround of Nextel Brazil with these principles transformed the struggling loss maker into a worthy challenger that became the subject of a bidding war as larger competitors drove consolidation.

Challenger telecoms need to be the very antithesis of their incumbent competition. Executives in these businesses shouldn't be dreaming that they can achieve the same returns as their larger competitors. The brand, the infrastructure and customer inertia barriers are too high to scale in one leap.

The objective should be to target a mid-point in performance between the two, significantly enriching their own business, whilst daring its conservative competitor to cannibalise itself. By creating as much value for customers as possible and then adopting data science to build and deliver the relationship management strategy to keep and grow their base. Challengers need to be bolder, thinking and acting like MVNOs (Virgin Mobile is a great brand, with flexible propositions and quality yet light touch service) forcing their incumbent competitors into value segments they cannot afford to go after. Executing this strategy at scale would cause major disruption in the market.

### Could 5G be a reset for the industry?

With 15 5G launches in 7 countries across MENA so far; governments, regulators and operators are serious about using telecoms infrastructure to drive economic growth across the region – Ericsson is talking up a potential $619 billion opportunity globally by 2026.

The opportunity with 5G is game changing, with the technology shift enabling much more than (smart) phones to be connected to the network. It's been well documented that self-driving cars, eHealth, workplace automation and beyond will be brought to life by 5G in the coming years. But this incredible breadth of potential cannot be realised by going it alone. A fundamental shift to an open partner model to create the services of the future, giving up 100% control of brand exposure and revenue to ensure an environment exists where new ideas can be rapidly prototyped and launched in the market.

The successful 5G telecoms players will place themselves at the centre of an ecosystem and open their assets and capabilities to a diverse set of partners. Again this represents a major shift in thinking and requires a U-turn in approach for many operators. From a MENA perspective this is an opportunity with regional players starting to embrace this strategy. However, the deep capital investment in 5G rollout has the power to change traditional thinking and we're encouraged to see this as an inflection point for the industry. TR

> There's an opportunity to ignite growth in the sector by doing the opposite of what is still being done today

# Colt boosts connectivity for Japanese enterprises



Colt Technology Services has announced that it provides connectivity to Oracle Cloud in Tokyo and Osaka for Fullenergy Limited, a Cloud Integrator that owns a group of engineers specialized for Oracle Cloud.

Since May 2019, Colt has been offering dedicated access to Oracle Cloud Infrastructure FastConnect in Tokyo. The relationship was extended this year, by Colt adding hosted and on-demand access to Oracle Cloud in Tokyo and Osaka. Colt On Demand for Oracle Cloud Infrastructure allows customers to self provision secure, high bandwidth connectivity to Oracle Cloud Infrastructure in a matter of minutes, allowing them to dynamically scale bandwidth up or down in near real time.

Colt On Demand for Oracle Cloud Infrastructure is controlled by an online customer portal and purchased through a flexible, pay as you use commercial model. Founded in 2007, Fullenergy Limited provides one-stop service from design and construction of cloud environments, to migration and operational support.

According to Fullenergy Limited, the number of inquiries and consultations for Oracle Cloud increases daily. Since the launch in Tokyo last year, they've provided Oracle Cloud to circa 30 companies and have already acquired customers in Osaka. This was triggered by an increase in awareness from existing customers that have adopted Oracle Cloud.

Akishi Matsumoto, Director of Multi-Cloud Integration Division said, "Most of our customers consider Oracle Cloud as their first cloud choice. The transfer from domestic clouds or other private clouds, is the second most common factor for customers seeking Oracle Cloud. The key reasons why our customers choose Oracle Cloud is its reliability and stability in the migration and operation of core systems, including the whole technology stack. In addition, costs advantages, the specification, security and SLAs compared with other cloud providers is a key differentiator when selecting Oracle Cloud. With Oracle Cloud there is no separate fee for outbound data transfers on a closed network, this is all included in the Oracle Cloud Infrastructure FastConnect commericals. Customers using other public clouds found Oracle Cloud more cost effective, removing hidden costs."

"Colt's low latency network, excellent cost performance and the technological support offered by Colt's engineering team are the main reasons why we recommend Colt. We have been delighted by Colt's strength in planning and proposal and also extremely satisfied their focus on customer service." Mr. Matsumoto continued.

Since 2019, Colt and Fullenergy Limited have been working together to provide IT solutions, significantly improving our customers infrastructure environments. The introduction of Oracle Cloud underpinned with Colt's connectivity, has provided endusers a variety of benefits such as increased productivity due to an improved business environment, leading to cost reductions in overtime and other costs. Colt's flexibility and capability, including the on-demand solution, played an important role in realising the smooth transition to work from home due to Covid-19.

In August 2020, Fullenergy introduced an On Demand service in their environment. With their own experience of using the service, they will continue proposing both fixed and On Demand type depending on the situation and aim to maximize customer satisfaction.

# Sparkle and TIM Brasil to combat fraud on application to person messages

Sparkle, the first international service provider in Italy and among the top ten global operators, and TIM Brasil, one of the main TLC players in the Brazilian market, have successfully started a collaboration aimed at protecting the Application to Person (A2P) SMS network from fraudulent routing and illicit bypass attempts. Through a customized solution powered by Vox Technologies, all A2P messages to TIM Brasil's customers are delivered and monetized effectively.

Banking, travel, transportation, healthcare and other verticals are increasingly using A2P SMS to send notice, authentication and confirmation messages to their customers. The growth of A2P traffic opens significant revenue opportunities for mobile operators who must protect their networks from fraudulent routing and illicit bypass phenomena to guarantee a reliable, high quality and secure delivery.

Sparkle SMS Booster is the most comprehensive A2P protection solution available on the market, enabling mobile operators to detect and block spam and fraudulent traffic before they impact the end user and thus monetize their networks optimally.

Thanks to the collaboration between the two TIM Group companies, TIM

Brasil's A2P SMS network is protected and monitored by Sparkle through Vox Technologies' VOX360 anti-fraud platform which uses sophisticated data analytics, business intelligence and AI technologies to mitigate and prevent fraudulent activities. Billions of SMS are analysed each month to ensure that all messages are delivered to TIM Brasil's end users through official channels and in total security.

Leveraging on its SMS Booster solution and on the capillarity of its network, Sparkle sets itself as the reference A2P SMS antifraud partner for companies and organisations worldwide.

# Groundbreaking Maldives-Sri Lanka Cable to power region's telecoms network

The Maldives-Sri Lanka Cable (MSC), has successfully landed in the Maldives, connecting the coastal areas of Colombo to Hulhumale'. This cable is a system composed of a Wavelength Division Multiplexing (WDM) subsystem and 863-kilometer fibre optic cable.

The MSC is being deployed as per a tripartite agreement between Dhiraagu Plc, Ooredoo Maldives Plc and Dialog AXIATA Plc, for the transport of international traffic and to further enhance the telecommunication infrastructure of the region.

It is equipped with Huawei Marine Networks' high-output titanium housing repeaters deployed to a water depth of 3,700m to provide a reliable regional telecommunications network. Interconnected to domestic networks, the increased capacity would greatly strengthen the digital ecosystem within the country and support the growing digital transformation needs of people and businesses.

"I would like to thank both Internet Service Providers for their continuous commitment in strengthening the digital eco-system of the country. As we mark an important milestone, I am confident that with the successful completion of this project we are paving way to further strengthen the digital infrastructure of our island nation and increase diversity" stated Minister of Communication, Science and Technology Mr. Mohamed Maleeh Jameel.

Since the development of the ongoing pandemic, communities and businesses are digitising their services to create a safer environment and continue everyday lives, which has increased the need and demand for even higher quality internet services.

This USD 22 million project aims to support the growing need of local communities and businesses to realize the benefits of this digital age. The project will also support and increase the network readiness to provide revolutionary 5G services throughout the nation, which will connect the people of the Maldives to ground-breaking new technologies and pave the way for innovation, ultimately building the foundation for socioeconomic development across the nation.

# Telecom Egypt provides Google with a TransEgypt meshed solution and Mediterranean capacity to Europe



Telecom Egypt, Egypt's first integrated telecom operator and one of the largest subsea cables operators in the region, signed an agreement with Google to provide Google with the first of its kind layer three meshed solution on multiple Telecom Egypt's redundant and resilient Egypt crossing network infrastructure. As part of the agreement, Google will also be provided capacity on Telecom Egypt's Mediterranean submarine cable, TE North. The project is expected to go live in the first half of 2021.

This mesh project connects several cable landing stations in the Red and Mediterranean Seas over diverse routes and will increase the reliability of Google's international transit traffic, providing an elevated level of robustness. Telecom Egypt's network can reroute traffic as needed in less than 50 milliseconds, and will also offer high quality availability features with an SLA portal.

Adel Hamed, TE's Managing Director and Chief Executive Officer, commented: "It is our sincere pleasure to work with Google and support its mission to increase the reliability of its traffic regionally. This agreement comes in line with our strategy to solidify Egypt's position as an eminent digital hub that connects continents using Telecom Egypt's resilient, multi-routed, and low-latency mesh network that spans the Mediterranean Sea, crosses Egypt, and extends to Singapore."

Seif Mounib, TE's VP for International & Wholesale, commented, "We are delighted with our cooperation with Google that came in result of our continuous efforts to upgrade our network. Despite the hardships brought about by the global pandemic in 2020, we succeeded to enhance our international IP transit infrastructure, to better serve our global customers. This year, we built two landing stations connected over diverse terrestrial routes, bringing the total to 10 stations in the Red and Mediterranean Seas, and 10 terrestrial crossing routes across Egypt."

Mark Sokol, Senior Director of EMEA Infrastructure at Google Cloud, said, "We are pleased to have signed this agreement with Telecom Egypt, as it will enhance Google's global network resilience via Egypt and we look forward to a continued mutually beneficial engagement."

Hisham El Nazer, Google Egypt's Country Manager, said, "With internet penetration accelerating rapidly in Egypt, enhancing the capacity of transit traffic will unlock significant usage potential. We thrive to offer our users a better experience through improved connectivity in Egypt, and across the globe."

Telecom Egypt offers the global telecom community access to abundant international capacities with the lowest latency and the shortest, most efficient protected path from Africa and Asia to Europe, building on Egypt's distinctive geography at the heart of the world, and Telecom Egypt's continuous and extensive network revamps. The company's advanced infrastructure and its capabilities has led it to become the partner-of-choice for many international telecom players over the years.

# Telecom Review hosts insightful panel on cloud's role in accelerating digital transformation

Telecom Review held a virtual panel, entitled 'Role of cloud in accelerating businesses' digital transformation' which was attended by hundreds of virtual participants, featuring industry leaders from across the world, to discuss the need for digital transformation in this space.

**T**elecom Review, yet again, managed to mobilize some of the global telecom industry's top figures for the panel discussion. The panel was moderated by Founder of Telecom Review and CEO of Trace Media, Toni Eid and the panelists included: Haithem Al Faraj, SVP of Technology and Operations, stc; Hatem Bamatraf, CTO, Etisalat; Omar Akar, VP and Managing Director of Cloud and AI Business Group in the Middle East, Huawei; George Jaber, VP Wholesale Business Development and Bid management, at ITC KSA; and Annette L. Geuther, VP Market Development at Colt Technology Services.

The panelists shed light on the role that cloud technologies played in today's post-COVID world. With the rise of remote work, e-health and distance learning, it is no doubt that business will need to adjust accordingly in order to survive in this reformed ecosystem.

The panelists shared their insights on some other pertinent topics, including the ways in which cloud could boost business growth, its role in aiding the success of digital transformation, as well as network and business readiness for cloud adoption- among many others.

The link between cloud and digital transformation

The discussion touched upon the importance of cloud in digital transformation strategies and its role in generating business role.

Haithem, Al Faraj SVP of Technology and Operations, stc said, "Cloud is a core element that defines the success or failure of businesses. It plays a major role throughout the whole industry ecosystem whether in terms of time to market, customer experience or innovation, among others."

According to Huawei's Omar Akar, cloud technology coupled with major emerging technologies can generate new revenue streams. He also emphasized the role that Huawei Cloud is currently playing in terms of accelerating the digital transformation of various industries through cloud adoption in the region.

"Cloud is a solid foundation of digital transformation. Couples with AI, machine learning and analytics, it allows organizations to generate new revenue streams. Cloud enables organizations to maintain leadership in their industry by enabling hyper automation of IT and business services", he said.

George Jaber, VP Wholesale Business Development and Bid management, ITC KSA believes that digital transformation is about customer understanding and customer journey

which are enabled by technology alignment.

"The availability, flexibility, cost-effectiveness, and security of cloud can allow digitization. As service providers, we aim to provide the adequate tools and enable digital transformation through the cloud and access technologies we offer to our B2B customers."

Global cloud adoption and the importance of network readiness
This part of the discussion focused on global and regional cloud adoption, as well as the importance of network and business readiness in this space.

Al Faraj, "stc started its cloud adoption and migration journey back in 2018, when we built our decoupled cloud environments and were able to enforce our strategy to migrate our existing telecom network functions onto the cloud."

"Today, we are able to have around 60% of our network functions already migrated to the cloud and have managed to reach around 30% efficiency and a massive reduction in our time to market. Reducing network functions on the cloud, compared to legacy infrastructure, has helped us mitigate a lot of security issues and helped us achieve lots of resilience and stability to the environments that we have developed on the cloud," he added.

Geuther then stated: "There is a significant aspect which is the pool effect from some of the mandatory software upgrades in applications. For example, the move from SAP to SAP Hanna is a cloud based system. They have strongly recommended to migrate workloads into the cloud and this is a significant aspect in Europe that is driving cloud adoption. There are now more applications which are being hosted in the cloud. We see that there is an interest in edge use cases here in Europe but I think we can all agree that we are still trying to identify the real killer use case. We talk a lot about latency-sensitive applications which create a balance in the workload, in terms of what needs to be done locally or in the cloud, but we have not necessarily seen those applications already create an increase in demand for cloud."

Akar stated, "When we look at the priority, it is to accelerate digital transformation. For service providers, digital transformation resembles the human body. The peripherals are the intelligent edge and devices. The arms and legs are 5G, WiFi 6 and other technologies that provide connectivity. The core is the cloud, while the brain is AI and analytics. These are the key pillars that are the top priority for enterprises nowadays."

Jaber said, "We're seeing big cloud players now in the region like Oracle, SAP, AWS and others. The question is about the network, it's very crucial; this is driving the demand for international connectivity."

Bamatraf, "We don't have a fully-fledged telco that built a network over a cloud, so there is not much references. The maturity of the network function to sit on the cloud, we still have some challenges with the vendors."

The criteria that enable the cloud to accelerate digital transformation Focusing on the required criteria that could enable the acceleration of cloud and digital transformation, Toni Eid asked Hatem Bamatraf to expand on this from the point of view of an operator.

To which Bamatraf said, "As a topic, digital transformation is a very important strategic direction for so many telecom companies. In order to accelerate digital transformation, there are a number of things that have to be ready and prepared for. One part of it is the cloud infrastructure that you sue whether the cloud is being used in your IT environment, your customer BSS functions, operation functions, or the network part.

He added, "We are now seeing a lot of moves from the industry towards being a network that sits on the cloud. This means a lot of things for us. In addition to flexibility and agility and quick time to market, the cost and the efficiency we believe that cloud will bring also efficiency and will save costs in terms of operations."

When it comes to accelerating cloud deployment, one part of the criteria is that the technology itself, from a standardization perspective and the ecosystem around procurement and supply chain, needs to be mature enough.

Building on this point, Bamatraf said, "What we need, as companies and end users, is to have the right culture in place to deploy and some acceptance in taking risks. When you discuss the adoption of cloud solutions, you are faced with difficulties of some people and cultural challenges because lots of people prefer to go with the legacy because this is what they know and what they want."

Geuther echoed his sentiment and said, "To build on what Hatem [Bamatraf] said earlier, the criteria is mainly also around security, feeling, perception and cultural transformation. We saw that as a result of the first wave of the pandemic, there were a lot of our clients asking for cloud-based voice solutions.

Addressing the security aspect of cloud adoption, Geuther added, "The feeling of security is not only about securing data in the cloud but also that there are secure ways to get to the cloud this is an important aspect I believe that will accelerate cloud

adoption. Cultural transformation and a change of mindset are key."

"A very important aspect here is to be able to deliver next-generation, industry-specific digital services. We are no longer talking about traditional cloud. We are talking about the ability to build a horizontal digital platform to become the next generation DevOps platform, in an effort to accelerate and simplify the development of AI application models," said Akar.

Al Faraj commented: "When we look at what 5G is promising in the future, there are a lot of potential use cases. We have to deal with 5G differently-there will be much more collaboration with the customers and there's no predefined services we can estimate in the future.

Jaber stated: "The most important technologies right now are 5G and cloud computing. As an operator, we are now investing more and more in cloud computing capabilities." **TR**

> What we need, as companies and end users, is to have the right culture in place to deploy cloud and some acceptance in taking risks

# Huawei hosts another successful TrustInTech Summit



Huawei hosted its second annual TrustInTech Summit, which was attended by ICT industry experts, academia and economists from around the world.

Speakers included Huawei's Executive Director of the Board and President of the Carrier Business Group, Ryan Ding, international investor Jim Rogers, GSMA CMO Stephanie Lynch-Habib, and others. Focusing on the new challenges the world faced in 2020, the Summit highlighted ICT's critical role as the key digital infrastructure to support societal wellbeing and economic recovery.

Given the rising trend of technology decoupling, the Summit emphasized the need to embrace open collaboration, as well as the call to defeat the unnecessary fear of adopting new technologies.

In 2020, ICT played a vital role in resuming work and production during the pandemic. Meanwhile, 2020 has witnessed the exponential growth of 5G business applications. Global consultancy firm STL Partners estimated that 5G-enabled scenarios will raise the global GDP by US$1.4 trillion by 2030.

At the Summit, STL Partners co-founder Chris Barraclough stressed the transformative role of 5G in manufacturing, energy, and healthcare sectors. Huawei Enterprise's digital transformation expert Edwin Diender also concurred, explaining the role of how 5G, AI, big data, and cloud computing pushed for faster drug screening and diagnosis, intelligent monitoring, and remote working and education during the pandemic.

GSMA CMO Stephanie Lynch-Habib shared that 5G's rollout in 2020 brought over 100 5G networks in 47 countries, and some regions are leading in making 5G a mature application. 5G will influence consumer-oriented industries such as e-commerce, as well as boosting innovative services like virtual reality and augmented reality. Standard network slicing models and edge computing will provide high reliability, low latency, high throughput, and service customization. "Our working groups are continually supporting and enhancing global standards," stressed Lynch-Habib.

Several guests at the event commented on early adoption and major technological breakthroughs by saying there has always been a mistrust and fear of new things. For example, during the Industrial Revolution in the 19th century, as there was fear for automated production, factories were destroyed. As the events in 2020 led to more isolation and nationalism, there's been a rise against transnational cooperation, and more countries are closing their doors and decoupling from each other over technology.

# Nokia and Zain KSA deliver fastest indoor 5G speeds in the Middle East

Nokia announced that it has achieved a record 5G speed of 1.9 Gbps during a successful trial of its next-generation AirScale Indoor Radio System (ASiR) at the headquarters of mobile operator, Zain KSA in Jeddah in the Kingdom of Saudi Arabia. Nokia's dedicated indoor 5G solution delivers ultra-fast 5G speeds and also counters high penetration coverage losses.

The trial leveraged the Nokia 5G AirScale, which is an enhanced indoor solution with a centralized and scalable architecture. The trial's high-speeds were achieved at 3.5GHz including multi-band ASiR-pRRH and with E-UTRAN New Radio – Dual Connectivity (EN-DC).

Nokia's ASiR solution supports all major network technologies and is designed to easily upgrade from 4G to 5G NR with minimal on-site disruption. It includes indoor small cells that deliver a consistent 5G user experience with high data rates across multiple floors, including open and partitioned office spaces, as well as meeting rooms. It also provides an enhanced SFN (Single Frequency Network) indoor solution addressing requirements such as low cost of ownership, small product form factor and comprehensive indoor coverage.

Zain KSA launched commercial 5G services in October 2019 in Saudi Arabia and now covers 50 cities across the kingdom enabled by more than 4,600 towers. It is through these endeavors and others that Zain KSA is considered as a major enabler, driving forward the digital transformation in Saudi, as part of Saudi Vision 2030.

Eng. Abdul Rahman AlMufadda, Zain KSA CTO, said: "In line with Zain KSA achieving a pioneering position in the regional and global telecoms map by rolling out the largest 5G network in the Middle East, Europe, and Africa and fourth largest in the world, it is imperative for us to provide first class coverage for both indoor and outdoor environments. Nokia deployed its 5G indoor solution quickly, with minimal disruption and achieved incredibly high-speeds during this trial."

Tommi Uitto, President of Mobile Networks at Nokia, said: "We are delighted to support Zain by providing 5G indoor coverage at its premises in Jeddah. Indoor coverage is an important piece in the 5G puzzle due to high penetration losses, especially in high profile venues and locations."

# Nokia wins Asiacell Telecom's end-to-end multi-vendor optimization project in Iraq



Nokia has announced that Asiacell Telecom, Iraq's leading telecommunications services provider, has chosen Nokia to provide nationwide network optimization for two years starting January 2021.

This partnership will leverage Nokia's global capabilities in network planning and optimization technology to boost Asiacell's competitive edge and transform its operational platforms for the next phase of its development.

Nokia will provide Asiacell Telecom with a multi-vendor optimization service that includes deployment of its Network Planning and Optimization (NPO) Services for RAN, Transmission, IP, and Core network elements across 7,000 sites in Iraq. With Nokia's fully customizable service concept, Asiacell Telecom is able to exploit the full potential of the network and maintain quality.

The network assurance service provided by Nokia will focus on improving end user services and making the most out of the network investments, by optimizing network performance and capacity. The service will leverage analytics and machine learning to increase the automation of traditional processes, helping Asiacell to fulfil the needs of its end users. In addition, Nokia will provide knowledge transfer to Asiacell Technology team.

With this partnership, Nokia is helping Asiacell with its ambition to become the top mobile network operator in Iraq. This is achieved by maximising Asiacell's network and service performance using automation and tools that serve Asiacell customers round the clock, thus enhancing its network coverage and overall end user experience.

By leveraging Nokia's global scale, tools and its wealth of expertise in network planning and optimization, Asiacell will be able to simplify its operations and overcome challenges created by shifting customer demands and increasing network complexity. Nokia will transform Asiacell's network operations by continuously improving its processes, increasing the use of automation and applying the right people and skills to every task, thus allowing the operator to focus on its strategic goals.

Amer Sunna, CEO and Managing Director of Asiacell, said, "Strengthening our partnership with Nokia is in line with our strategy to focus on improving network performance and quality of service to our customers and enhancing the end-user experience. For us, Nokia's network optimization capabilities has been one of the key strategic investments and we are pleased to expand this partnership further for two more years."

Rima Manna, Head of the Middle East Market Unit at Nokia, said, "The Iraq mobile market is relatively young and highly competitive, so it makes sense that Asiacell has turned to us to help optimize its network and reduce its operational costs. We look forward to bringing together global expertise with local insights to fully meet the needs of Asiacell Telecom."

Nokia is a global service market leader with more than 200 mobile and fixed managed services contracts across the world. Two out of three of these contracts consist of multi-vendor networks. With more than 20 years of experience, 75+ patents and 2000+ successful NPO projects annually, Nokia has proven capabilities in managing and operating multi-vendor and multi technology networks.

# Ericsson files lawsuit against Samsung over royalty payments
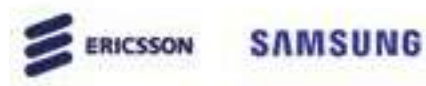


Ericsson has filed a lawsuit against Samsung in the US, for their alleged violation of commitments related to royalty payments and patent licenses.

According to the Swedish vendor, Samsung was sued for breaches of Fair, Reasonable and Non-Discriminatory (FRAND) licensing terms and conditions. This system enables access to IP under global mobile standards. It also rewards contributors for investment in R&D.

According to an official statement issued by Ericsson, "several license renewal negotiations" may cause delays in the payment of IP royalties and that "once renewed, unpaid royalties are expected to be recovered and recognized as revenue at the time of renewal".

"The actual financial impact will depend on the timing, and terms and conditions of new agreements," said Ericsson.

In addition to delayed royalty payments and legal costs, Ericsson has disclosed that kits operating income could potentially be impact by around $117.8 million from Q1 of FY 2021.

The two companies were previously in a royalty dispute back in 2012, which ended in Samsung having to pay $650 million to resolve the conflict.

# Nokia announces group collaboration to enhance enterprise industry solutions

Nokia announced the 'Nokia Local 5G Technology Partnership', a new strategic alliance involving Conexio, Hitachi Kokusai, NS (Nippon Steel) Solutions, Omron and Sharp to accelerate adoption of 5G-based enterprise industry solutions in Japan.

Working in close collaboration, alliance partners will combine their collective industry, device, applications, cloud and 5G expertise to create new industry-specific solutions for use cases that include remote control, artificial intelligence, automation, robotics and automatic guided vehicles.

The alliance will enable participating companies to speed development and deployment of new, industry-based use cases with customers. Integrating Nokia 5G private wireless at the concept and design phase will ease solution development, speed implementation and contribute to faster returns on investment for the customer.

Donny Janssens, Head of Nokia Enterprise Japan, said, "This new alliance boosts the local 5G private wireless ecosystem, bringing together many of the key players who are central to driving Industry 4.0 adoption in Japan. It recognizes that hyper-fast, highly reliable and secure 5G connectivity has a crucial role to play in enabling the digital transformation necessary for Industry 4.0 use cases."

Industry solutions will be developed on Nokia's industrial-grade 5G private wireless networking platforms. Nokia will provide both Nokia Digital Automation Cloud – a compact, plug-and-play system with automation enablers – and Nokia Modular Private Wireless as part of solution development.

Janssens added, "When customers implement 5G private wireless with Nokia, they do so to deploy a solution that transforms how they operate, construct or manufacture. By building private wireless into the design phase, and creating field-tested industry solutions, customers can be assured that integration work is already done – both easing and speeding solution deployment."

In December 2019, Nokia introduced a strategic partnership ecosystem to bring 5G and IoT to enterprises in Japan. Spectrum designated for local 5G enterprise use in Japan was released at the end of 2019.

# Nokia handpicked by Thai operator to power 5G network performance and services



Nokia announced that it has been selected by Thai mobile operator, dtac, part of Telenor Group, as its first 5G RAN partner in a three-year deal covering the North and North Eastern regions of Thailand. With this deal, Nokia plays a key role in ensuring that dtac's network performance is fully 5G-ready and enabling a faster rollout of new 5G services as demand grows.

Nokia has been in Thailand for over 30 years with the deployment of 2G, 3G and 4G networks and will now provide 5G connectivity that will support the country's efforts to digitize as part of its 'Thailand 4.0' economic strategy. The deployment is expected to begin later this year with completion expected in 2022.

The deal, which is an extension of Nokia's existing partnership with dtac, will see an accelerated large-scale deployment of 5G on low-band spectrum (700-900Mhz) and high-capacity mmWave technology (26GHz), as well as enhancements of the existing networks utilizing 2300MHz, 2100MHz and 1800MHz spectrum. This combination will provide superior coverage and faster data speeds to subscribers.

Nokia will provide its AirScale Radio Access solutions for 4G and 5G networks that will improve overall network performance while enabling dtac to deliver 5G experience with ultra-low latency and extreme capacity. AirScale Radio Access is an industry-first commercial 5G solution enabling operators to capitalize early on 5G. The deal includes digital deployment for faster time to market, as well as optimization services.

dtac will also deploy Nokia Software's NetAct Cloud network management system, which delivers cloud-agnostic, best-in-class tools for troubleshooting, administration, software management and configuration management.

Nokia is a long-standing partner of dtac and has previously provided its first commercial 4G TDD network in Thailand. Nokia has also provided solutions from its IP/Optical portfolio to bolster its network including a software-defined network (SDN)-ready IP/Optical network.

Prathet Tankuranun, Chief Technology Officer at dtac, said, "We never stop improving our network and delivering better data experiences across a broad range of devices. Our current deployment leverages 5G-enhanced mobile broadband and 5G-ready Massive MIMO technology to bring improved coverage and higher data capacity to our customers nationwide."

Tommi Uitto, President of Mobile Networks at Nokia, said, "We are delighted to extend our long-standing partnership with dtac in Thailand and be the first vendor to partner with the operator in the 5G era. Our AirScale portfolio offers a clear migration path to 5G and we look forward to supporting dtac with its efforts to deliver compelling 5G experiences to subscribers."

# Join Telecom Review's upcoming virtual panel

**Telecom Review is organizing a virtual panel entitled "The opportunities of 5G fixed wireless access" on January 14th at 4 pm Riyadh time.**

The panel will discuss the importance of 5G fixed wireless access in serving digital transformation goals in KSA, how can end users benefit from 5G fixed wireless access and the main 5G fixed wireless access offerings and solutions. Abdulrahman Almufadda, CTO, Zain KSA and Ali Jitawi, Customer Business Team Head Zain, Nokia will tackle those topics and explain more about the opportunities offered by this technology nowadays. Amer Mdanat, General Manager (KSA), NXN will be the moderator of the panel discussion. This topic has been trending given the need for such a technology now more than ever. The two experts in the field will shed light on the importance of 5G FWA and its relevance in the digital era.

To hear all about it, registration is open through the following link: https://zoom.us/webinar/register/WN_q2SiO0rPR6ijXkdOr0VqSg

# Exhibitors showcase newest technologies at GITEX 2020

His Highness Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai and Chairman of Dubai Executive Council, officially opened the landmark 40th edition of GITEX Technology Week, hosted at Dubai World Trade Center from December 6-10, 2020.

Announcing the launch of GITEX Technology Week, His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai, said: "GITEX will be the most important technology event in 2020 ... The UAE will be the fastest country in the world to recover and our institutions have proven their ability to adapt," Sheikh Mohammed tweeted.

GITEX hosted over 1,200 exhibitors from over 60 countries, as well as a conference lineup of over 350 in-person speakers who flew into Dubai from 30 countries and discussed the latest developments in deep-tech areas such as 5G, artificial intelligence, data analytics, cybersecurity, cloud and edge computing, digital economies, future mobility and blockchain.

GITEX Technology Week served as an umbrella event for the region's leading technology shows, including GITEX Future Stars, the region's largest tech startup event; the Gulf Information Security Expo and Conference (GISEC), the region's largest cybersecurity conference and exhibition; Future Blockchain Summit, the leading Blockchain festival, as well as the inaugural edition of Marketing Mania, the new platform dedicated to brand tech marketers.

The world's biggest names in technology gathered at GITEX, including Avaya, Etisalat, Huawei, Nokia, du, and more.

**Operators**

Etisalat successfully concluded its participation at GITEX Technology Week 2020 which saw the convergence of 5G, AI, big data and IoT - under the theme 'Empowering the Digital Future and Beyond'.

Visitors experienced the future of mobility, retail, healthcare and use of technologies such as robotics, AI, virtual reality, analytics across these verticals with a profound and positive impact on the different segments of the society.

The event also witnessed several strategic partnerships of Etisalat with world-famous industry names and government entities, and the launch of EtisalatAtGitex Live, a virtual channel which enabled tech enthusiasts to explore all the digital innovations on the stand, hear from Etisalat experts and get first-hand experience of the technologies reshaping key industries.

Making their debut on Etisalat's stand this year were demonstrations on transport, retail, healthcare, education, fashion and entertainment.  In 'Future Transport', Etisalat took visitors on a journey and the possibilities of the future mobility with 5G connectivity in commercial and regional as well as inter-regional aerial transport. The all-electric, highly automated and fully connected BMW Vision iNEXT, and BMW Vision DC Roadster, a futuristic electric motorcycle a major step into the full-size electric two-wheel segment, were an instant hit.

Certified showstoppers were the taxi SA-1, an electric flying taxi developed by Hyundai with Uber; AirCar, an autonomous all-electric human carrying flying car; the world's fastest autonomous delivery drone by German drone maker Wingcopter; Rinspeed's MetroSnap, an innovative autonomous driving concept; and the Park Rover, an autonomous pod designed to be part of a complete mobility system ecosystem integrated with a mobile app and a cloud service.

Healthcare and assistive technologies on the stand provided insights into how technology can transform this sector with cloud, IoT, M2M, AI, blockchain and state-of-the-art connectivity including 5G, with innovative and cutting-edge healthcare solutions from all around the globe.

'Technology for Good' demonstrations featuring transformative technologies included a self-driving electric wheelchair; the world's first medically approved 3D-printed prosthetic arm called Hero Arm; and NuEyes E2, a removable visual prosthetic that helps the visually impaired see again while keeping their hands free. Other showcases included the Sound Shirt that allows the deaf to "feel" music on their skin; frictionless retail solutions for the smart pharmacy store; and 3D medically approved technologies.

Just like previous years, Etisalat brought the best in the world of robotics to its stand. Humanoids Adran and Jen spoke and interacted with visitors, while innovative robots from MELTIN − MELTIN Arm and MELTIN-Z performed power-varied actions.

Etisalat's stand also featured advanced solutions and services to support education during COVID times such as a demo-tutoring platform, an AI-based access control and students' attendance system, an AI-powered solution measures and tracks students' attention, focus and mental performance. Two industry-related COVID-19 solutions on display were the Connected Jobsite using wearables and AR-VR powered-solutions for predictive maintenance and remote operations.

Other technology showcases were smart retail highlighting checkout solutions, the F&B section, connected fashion, and a retail dashboard. At the LG ThinQ Smart Home on Etisalat's stand, attendees witnessed firsthand how a seamless, connected smart home can be achieved − harnessing the power of Etisalat's Wi-Fi technology.

Du, from Emirates Integrated Telecommunications Company (EITC), showcased its latest next-generation solutions and technologies during the region's premier consumer computer and electronics trade show at Dubai World Trade Centre.

The operator presented its latest digital platforms and innovations and announced new data centers and initiatives such as the two new purpose-built data centers which will be introduced in Q1 2021− Dubai Silicon Oasis (DXB2 DSO) and Kizad Abu Dhabi (AUH2).

### Vendors

During this year's GITEX Technology Week 2020, Huawei has announced that it will be collaborating with partners from around the world to showcase how public and private enterprises in the Middle East can create greater value through synergy across five tech domains.

As this year's 5G Innovation Partner, Huawei has strengthened its commitment to the region's technology ecosystem by confirming its largest ever GITEX Technology Week presence at the 40th anniversary edition of the event.

As 5G has been rolled out at scale in the region and worldwide, Huawei believes that connectivity, cloud, AI, computing, and industry applications are now truly coming together to create unprecedented opportunities for society. Huawei is thus focusing on applying ICT technologies to more industries through scenario-specific solutions that help enterprises to enhance their business, and governments to achieve strategic goals related to domestic productivity and improving overall governance.

Charles Yang, President of Huawei Middle East, noted, "This year's GITEX Technology Week comes at a time when the true value of ICT has become increasingly clear. Keeping people, businesses, and communities connected even when physically apart is more essential than ever. Through open collaboration, the ICT sector can accelerate the development of the digital economy, in turn contributing to sustainable growth and supporting national transformation agendas in a post-pandemic world."

GITEX visitors not only saw a demonstration of new technologies, but current and future-oriented applications that Huawei has developed with its global partners for customers in government, energy, transportation, finance, and more.

Nokia showcased several transformational technologies and use cases, including Industry 4.0, SD-WAN and private wireless hosted at Dubai World Trade Center from December 6-10, 2020.

Nokia's subject matter experts also participated in several panels during the event to share their insights on using cutting-edge technologies to enhance operational efficiency of enterprises. The demos were in line with the Vision 2021 of the UAE Government, which promotes the use of innovative technologies to build a knowledge economy. **TR**

# Innovation's impact on communication technologies

**The rate at which technology is created and then commercialized has been nothing short of dizzying. At the turn of the century in 1999, people envisioned a future characterized by huge evolutionary strides in technology such as autonomous cars, a huge uptake in artificial intelligence and drones, among many others.**

**T**echnology has completely and absolutely changed the ecosystem of communication. Communication has long been the basis of relationship building, from the dawn of time. We have seen technology completely transform this space in terms of the speed at and manner in which we communicate with one another. From the introduction of the early version of the internet and emails in 1971, to the world-wide web in 1996, to social media, we have seen a tremendous shift in communication and the importance it serves society. Technology currently runs our lives. From smartphones, to tablets, to computers, we rely on all these gadgets to add a layer of convenience to our lives and to help us with our essential everyday things. From the turn of the century until 2020, technology became central to our existence and we really cannot seem to function without it.

Human relations and communication have certainly evolved and propelled the further development of new inventions and discoveries that may seem quite revolutionary right now,

hence pushing it forward from one level to the next.

## Wired communication

The first telegraph message was sent in 1844 and it traveled 40 miles which was revolutionary for that time. The telegraph message system sent electrical signals over wires and in turn, the certified clerk would interpret the message and deliver the result to the intended recipient. Based on this, the first landline telephones were building in 1876. Prior to this, people communicated over the phone through wires which were buried underground and held on tall pole.

## Wireless communication

The first cellphone for private use was developed in 1973 and was measured 9x5x1.75 inches; this is indeed a far cry from the mobile devices we have available to us today.

Getting signal during those times was done via antenna or long wire. Once dial-up internet was introduced, an online connection was then established through landline in 1981. Following this, email became a very popular form of communication.

## The internet

While these inventions led to the development of communication, it could be argued that the greatest contribution to its development, throughout the entirety of time (in the civilized world), was and still is the discovery of the internet. Without the internet, the telecommunications industry as we know it today would have been completely different. The telecoms industry's modern technology would have been impossible without it.

The introduction of the internet meant that communication would become cheaper, faster and easier. Lower costs and increased speed of communication services have enabled us to communicate at a new quality level via perhaps some of the most widely consumer services across the world- social media.

## Devices

With the growing abundance of state-of-the-art technologies, staying connected has never been easier. In the past, the computer was the only device to communicate on electronically but now there are tablets, laptops, smartphones and other wearable IoT devices through which we can seamlessly communicate with others.

Over the past two decades, we saw connectivity become more and more prominent to our society, with rapid innovation taking place. From 2G all the way to 4G and 5G, the world has become more connected than ever before. Our connected devices have changed the ways in which we communicate. With mobile data packages becoming more affordable and accessible to all, it is no doubt that this shift has taken place and helped us work, learn and keep in touch remotely.

Given the current climate of the world, these devices have become especially crucial to the ways in which we all lead our daily lives as modern day consumers. Indeed, if it were not for these technologies and well-connected devices, navigating the pandemic would have been extremely difficult.

## Cloud

The introduction of cloud computing, a network which distributes processing power, large systems and applications among a huge number of computers, has also revolutionized communication. Cloud computing can function on a single application, an infrastructure within which several applications can run and a set of services which offer an immense amount of computing resources as well as the ability to store huge amounts of data remotely.

During the pandemic, many enterprises and educational institutions were beginning to deploy this technology and reap the benefits of cloud-based applications that have previously required site licensing, installation and maintenance.

Cloud computing has made great strides in video conferencing, allowing for more effective collaboration sessions and online conferences/meetings. It has also enabled better document sharing and more effective messaging on social media platforms. This revolutionized the way things are done in businesses and enabled education to be taken to a space within which innovation is at the core of communication and learning.

## Beyond 2020

The innovations in this space have been many and truly unprecedented. The future of the industry holds great promise in the communication space. With technology becoming more advanced and more efficient by the day, it is no doubt that communication will go through several revolutions. With the advent of 5G, the future of communication will be more seamless, accessible and efficient. **TR**

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Human relations and communication have certainly evolved and propelled the further development of new inventions and discoveries that may seem quite revolutionary right now

# Quebec establishes innovation council

Quebec's minister of economy and innovation Pierre Fitzgibbon announced the establishment of the council of innovation with Luc Sirois as director general and chief innovator of Quebec. The mission of the council and chief innovator is to boost innovation in Quebec's businesses and enterprises.

The members will work on:
- Multiplying the economic and social outcomes of innovation and entrepreneurial ecosystems in key sector;
- Strengthening the performance of enterprises as well as research players by sharing know-how and best practices;
- Measuring the performance of Quebec in terms of innovation through comparative studies and analytics to learn from the best practices around the world.

Through the creation of the innovation council, Quebec City is thus federating the innovation ecosystem in Quebec and establishing links between the various public and private organizations. QuébecInnove's activities will be integrated into the Innovation Council.

The council will be made up of Québec stakeholders, from both the public and private sectors, recognized for their strategic vision and their ability to stimulate innovation in Québec. It will be chaired by Sophie D'Amours, Rector of Université Laval.

Over the next year, Sirois and the council will work with the ministry to lead the consultation process related to the update of the Québec Research and Innovation Strategy (SQRI), which expires in 2022. Their work will continue beyond the filing of the future SQRI in order to update it on an ongoing basis.

# Australian consumer watchdog investigates concerns over Google acquisition



The Australian Competition and Consumer Commission (ACCC) announced that it would be delaying the approval of Google's proposed acquisition of Fitbit, after competition concerns surfaced in November of last year following Google's purchase.

The Australian consumer watchdog expressed its concerns over the Fitbit rivals being pushed out of the competition, making it an exclusive race between Google and Apple. According to ACCC Chairman Rod Simms, "The ACCC continues to have concerns that Google's acquisition of Fitbit may result in Fitbit's rivals, other than Apple, being squeezed out of the wearables market, as they are reliant on Google's Android system and other Google services to make their devices work effectively."

He added, "We recognise we are a smaller jurisdiction and that a relatively small percentage of Fitbit and Google's business takes place here, however the ACCC must reach its own view in relation to the proposed acquisition given the importance of both companies to commerce in Australia."

The ACCC said that investigations are still ongoing and a decision on the matter will most likely be announced on the 25th of March, 2021.

# ICASA receives 6 5G spectrum applications



The ICASA (Independent Communications Authority of South Africa) has received six applications for 5G spectrum, in response to its Invitation to Apply for the International Mobile Telecommunications (IMT) spectrum.

The submissions that were successfully submitted before the deadline came from South Africa's six major telecommunications providers: Cell C, Rain Network, Vodacom, Telkom, Liquid Telecoms and MTN.

In terms of the ITA, ICASA has made available the international mobile telecommunications (IMT) spectrum bands in the 700MHz, 800MHz, 2600MHz and 3500MHz bands, which will allow the operators to roll out both 4G and 5G services more efficiently and cost-effectively. However, it is regarded as the beginning of the full roll-out of 5G services.

ICASA chairperson Dr Keabetswe Modimoeng said, "The Council of the Authority is indeed grateful to all applicants who responded to this call for the licensing of high demand spectrum. We are ready and committed in ensuring that we take the necessary care; and that the release of the spectrum and this process in general is indeed procedurally fair and non-discriminatory.

ICASA says it intends to conduct an auction for the licensing of high demand spectrum by no later than 31 March 2021.

# Mavenir to provide end-to-end solutions for multi-generation mobile networks for Africa

Mavenir, the industry's only end-to-end cloud-native Network Software Provider for Communications Service Providers (CSPs) is geared up to provide end-to-end solutions for mobile networks in the African Continent. Mavenir's multigeneration solutions (2G through 5G) deliver a cost effective and technology advanced supplier alternative to transform the mobile infrastructure in the region and to expand coverage even in the most remote rural areas.

In the Mobile Core, Mavenir brings its market leading, virtualized software for core networks, providing basic and advanced services, as well as its legendary messaging capabilities, based on IP Multimedia Systems (IMS), as well as its Converged Packet Core solution, capable of scaling both up and down, and providing a very solid and reliable infrastructure across all the mobile generations. Mavenir's Mobile Core includes the 5G Core with ability to slice network services and relies on Mavenir's Web-Scale Platform that brings the latest container technologies to reality and provides agility and speed to market.

In addition, Mavenir's Access and Edge offers its OpenRAN solution to increase coverage and to quickly and cost effectively deploy, especially for African rural areas. With the recent acquisition of ip.access, already deployed in Africa, Mavenir now offers Multi Radio Access Technology (MRAT) particularly suitable for countries where 2G and 3G are still dominant as mobile technologies. The Mavenir OpenRAN solution increases flexibility, agility, speed of rollout, and helps to decrease costs by using commercial off-the-shelf (COTS) hardware and new innovative virtualized and open solutions.

"We are proud to be able to provide such flexible solutions specifically targeted to African countries and to provide innovative software that transforms the mobile network economics, all while deploying technology with greater flexibility, greater efficiencies, and more agility as a full end-to-end Network Software Provider." said Pardeep Kohli, President and CEO at Mavenir. "Mavenir has been and will continue to be committed to bringing transformative innovation and technology to the telecommunications space leveraging our long history and experience in virtualized network solutions."

# Zimbabwe keen to connect all districts to the internet

The Zimbabwe Post and Telecommunications Regulatory Authority (Potraz) expressed its ambition to connect all districts in the country to the Internet. For this matter, the government requires $123 million to invest in optical fiber.

In the national broadband plan, Potraz clarifies that it wants to provide 1 Mbps connectivity to all districts in Zimbabwe over the next 10 years. In order to do so, the telecom regulator has several steps planed: install several additional kilometers of optical fiber across the territory, deploy complementary backhaul transmission systems to power the access nodes and improve network reliability, and provide a more stable power source to keep the network in operation.

The development of national connectivity will begin in 2021. On Thursday 26 November, during the presentation of the 2021 national budget to Parliament, Finance Minister Mthuli Ncube said part of the $89 million allocated for the telecom and ICT sector would go to the deployment of broadband telecom infrastructure.

## Ooredoo, CK Hutchison union eyes joint business venture to boost Indonesian operations



Ooredoo and CK Hutchison Holdings Limited ("CK Hutchison") have entered into an exclusive and non-legally binding Memorandum of Understanding (MoU) in relation to a potential transaction to combine their respective telecommunications businesses in Indonesia, PT Indosat Tbk and PT Hutchison 3 Indonesia.

The exclusivity period for the MoU is valid until 30th April 2021. Ooredoo is in the early stages of assessing the merits of such a potential transaction.

As part of their corporate strategy, Ooredoo regularly reviews their strategic priorities and market position across all operations, and their contribution to the Ooredoo Group.

Ooredoo would like to emphasize that no binding agreement in relation to the possible combination has been entered into as at the date of this announcement.

The Company will make a further announcement as and when appropriate.

## MEF Infinite Edge Series

Get the edge on your digital transformation journey with insights and expertise from the MEF Infinite Edge Series. ICT industry luminaries, executives & subject matter experts to share their vision, experience and expertise on networking, automation and digital services in an immersive, fully interactive digital environment.

**Place:** Virtual (online)

**13 JANUARY**



MEF Infinite Edge Series

## Telecom Review virtual panel

Telecom Review is organizing a virtual panel entitled "The opportunities of 5G fixed wireless access". The panel will discuss the importance of 5G fixed wireless access in serving digital transformation goals in KSA, how can end users benefit from 5G fixed wireless access and the main 5G fixed wireless access offerings and solutions.

**Place:** Virtual (online)

**14 JANAURY**



TELECOM Review virtual panels

January 14th at 4 pm (Riyadh time)

Panel discussion: Opportunities of the 5G fixed wireless access

## Infoblox SP Summit

Experts from Infoblox and leading telcos will highlight the trends affecting service providers and how Infoblox can help generate incremental revenue.

**Place:** Virtual (online)



Infoblox
NEXT LEVEL NETWORKING

**Latest updates on:** www.telecomreview.com

TELECOM Review

# TELECOM Review
## virtual panels

# Telecom Review's virtual panels' series continues in 2021

In light of the huge success achieved in 2020, *Telecom Review announces that the series of virtual panels will continue in 2021* with new and updated topics.

The 2020 series saw the participation of top notch speakers representing the industry's leading brands and registered a record number of online viewers.

The 2021 series is set to cover the topics of:

5G deployment, user growth
Capacity
Satellite, Content & Broadcasting
Cloud, Enterprise business
Digital Transformation
Cyber Security
Fiber, FTTH

# Leading global ICT
# media platforms

## Middle East



## Africa



## North America



## Asia