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SAMENA Leaders' Summit 2020 to highlight the concept of 5G+X

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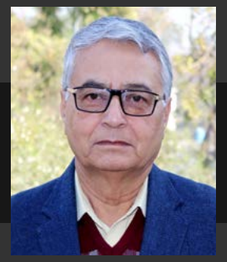

Dear Reader,

Welcome to the latest edition of Teletimes International!

First of all, I would like to congratulate the ICT industry for playing a much-needed positive role during these difficult times. The various initiatives taken by the ICT industry to support businesses, to help governments deal with the pandemic, to help people have better experiences whilst staying at home, all while keeping the cycle of innovation moving forward, deserves a big round of applause.

Whilst almost all of our attention in the last couple of months has been towards dealing with the pandemic, as we start returning to a new normal, it is time we start looking at some of the major developments of the industry. The most important thing for the telecommunications sector at this point is to keep the 5G momentum going forward.

SAMENA Telecommunications Council is organizing its annual flagship Telecom Leaders Summit in the beginning of July (virtual this year). The theme for this year is "5G + X: Harnessing 5G across Industries for Investment Revival" and the event is set to shed light on some of the most important developments on the subject by key industry leaders; the discussions will also delve into experiences and latest findings on how 5G has provided support to worldwide efforts in combating COVID-19. You will find in this edition a detailed interview with CEO SAMENA Council, Bocar Ba.

Featured in this edition is an editorial from Charles Yang, the President of Huawei Middle East, titled "How Collaboration will Revitalize the Digital Economy". Charles talks about 5G, the Digital Economy and a stronger ICT ecosystem in the editorial; definitely a must-read for all.

As always, this edition includes the latest insights, news and opinions from major players across the industry. Your feedback is welcome on khalidathar@teletimesinternational.com

Enjoy Reading!

Khalid Athar
Chief Editor

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5G as a Leased Line: Use Cases and Benefits

Saurabh Verma, Business Head, ICT and
Gourab Banik, Senior Research Analyst, ICT at Frost & Sullivan

The use of mobile technology is getting wider, and along with it the need for faster and reliable connectivity. 5G, the next generation of wireless technology has been designed to cater the evolving requirements of wireless network connectivity. It has capabilities like very high transmission speeds (more than 1Gbps), reliable network availability and low latency communications (1millisecond), which provides superior service experience when compared to its predecessor 4G networks. 5G also features technologies like wider radio spectrum, massive MIMO antenna arrays, ultra-dense networking, software-defined networking (SDN), network functions virtualization (NFV), edge computing, network slicing, etc.

5G technology is witnessing a large scale deployment and adoption around the world and the Middle East region especially GCC has been on the forefront. Enhanced mobile broadband (eMBB) have emerged as one of the initial 5G service that provides high data transmission rates; previously available only through fiber connectivity. Another common 5G based service is fixed wireless access (FWA), which allows the deployment of fiber-like connectivity speeds in underserved areas, where business prospect of fiber based connectivity is not viable. Unlike the previous generations of wireless network, 5G has a significant potential beyond the traditional consumer voice and data services. It is expected to propel wide range of industrial uses cases on the back of its enhanced bandwidth and reliability to support several mission-critical applications. Also, 5G is expected to underpin digital transformation across several industries and support development of completely new and diverse mix of digital services leveraging artificial intelligence, virtual reality, industrial Internet of Things (IIoT), analytics, and drones among others.

5G based leased line and dedicated network for enterprises:

A leased line is an exclusive connection between users' premise to the local exchange and is not subjected to contention by other users. It guarantees symmetric download and upload speeds as well as provides users with complete control. Broadly there are two types of leased lines – internet access leased line and point to point leased line. A point to point leased line allows enterprises to connect two or more of its locations together over a dedicated line. While, internet access leased line helps enterprises connect to the network, instead of connecting two dedicated points. In terms of the underlying technology, it can be segmented into fiber, DSL, MPLS and microwave leased lines.

5G connectivity is capable of facilitating enterprise with leased lines deployment while ensuring an uninterrupted and enhanced experience. The major benefit offered by 5G technology is the ability to run multiple dedicated virtual networks on the same physical network infrastructure using end-to-end network slicing. Each network slice has their own unique properties – protocols, network architecture, and security settings. Moreover, each partitioned logical/virtual networks can be customize and configured easily, which allows enterprises to have their own private mobile network tailored according to their needs and requirements. This, in turn, allows 5G private lines to enhance agility and at the same time offer greater end-to-end (E2E) assurance.

While leased line connectivity in most of the enterprises is majorly dependent on fixed-line technologies, 5G can provide a superior alternative solution offering enhanced speed and greater mobility.

5G technology is witnessing a large scale deployment and adoption around the world and the Middle East region especially GCC has been on the forefront.

The 5G standard – 3GPP release 16 aims to facilitate 5G for substituting private wired Ethernet, LTE, and Wi-Fi networks and also utilizing 5G capabilities especially for application in the industrial environment. 5G's ultra-reliable low-latency communication (uRLLC) is able to connect controllers, actuators, switches, and sensors, at latency and reliability levels corresponding to wired connections. While, the massive machine-type communications (mMTC) of 5G is enabling industrial-scale IoT and provides extremely high densities; connecting as many as million IoT sensors and devices per square kilometer.

Comparing with microwave and fiber private line, 5G FWA have less cost, fast deployment time, and better latency. 5G FWA based private line for businesses can be used as a new branch line for connecting locations with no fiber coverage and also in remote areas where construction and cabling is difficult. It can also be useful in mobility application cases and in scenarios where faster service provisioning is required. Upgrading from low-speed private line and replacing existing microwave and fiber based back-up links are other important areas where 5G FWA can offer a superior service experience.

Prerequisite of leased lines and advantage of 5G:

- ***Availability***: 5G network provides significantly high availability; enabling end user with the access of leased line connectivity all the time. Network slicing through 5G can help prioritize a particular application and minimize the downtime. Also, ensuring controlled maintenance and redundancy of critical elements is important.

- ***Cost saving and ease of deployment:*** 5G leased lines reduce the cost of engineering as compared to microwave and fiber based leased lines. It also enables faster service provisioning or delivery, through plug-and-play support in the customer premise equipment.

- ***One network for all services:*** 5G leased lines are easily scalable and can cover different scenarios through one network, leveraging network slicing, SDN, and NFV. It also enables operator with the ease of offering integrated service and tariff package to improve revenue.

ensuring information and infrastructure are protected from cyber threats or manipulation. Creation of multiple 5G sub-networks can separate different group of users and further enhance network security.

Network as a service:

Scaling computing servers along with seamless interconnections are persistence challenges for MNOs and data centers providers. This, in turn, has resulted increased demand for additional network capacity as well as improved and robust network solutions. 5G network along with SDN, NFV functionalities have given rise to Network-as-a-Service (NaaS). It is capable of addressing specialized and on-demand connectivity requirements for factory floors, autonomous vehicles, IoT, and connecting remote branches and sites among other. It facilitates enterprises to

5G network along with SDN, NFV functionalities have given rise to Network-as-a-Service (NaaS). It is capable of addressing specialized and on-demand connectivity requirements for factory floors, autonomous vehicles, IoT, and connecting remote branches and sites among other.

- ***Reliability:*** 5G improves the reliability of leased lines drastically. 5G's ample network coverage along with high capacity has the capability to transmit data or traffic with high success rate and within a stipulated time period.

- ***Quality of service:*** Leased line quality of service (QoS) parameters mainly includes throughput, jitter, latency, packet drop, etc. 5G leased lines on dedicated spectrum are capable of controlling each of these parameters, ensuring tailored system performance and better QoS.

- ***Security:*** 5G based dedicated leased line connectivity and private network provides full end-to-end security,

manage their costs efficiently as they have to pay only for the consumed networking services. Also, enterprises can substantial benefits from reliability, availability, recovery and ease of management through the outsourcing of network infrastructure.

Potential use cases and opportunity for industries:

Industry 4.0 has been introducing wide spectrum of technologies and use cases. The focus is on improving the agility and efficiency of production processes through connected ecosystem, automation, and data exchange. This in turn is providing significant opportunity for 5G to provide

seamless connectivity requirements across industry verticals. Along with enhanced service experience in terms of capacity, speed, latency, and more; implementation of 5G leased lines will also be helpful in reducing the use of wired connections, and hence drive mobility. 5G based leased lines and virtual private network, combined with cloud services has the potential to develop new use cases across industry verticals. Transportation and logistics hubs like shipping ports, airports, and warehouses, manufacturing facilities, oil & gas sites, and smart campuses like hospitals, universities, stadiums and others are expected to garner the benefits of 5G based leased lines at the early stage. Advanced use cases include and are not limited to: 5G CCTV, cloud gaming, cloud VR for collaboration and training, VR/AR for remote assistance, digital twins, autonomous driving, connectivity to remote branches and drones. Few uses cases are discussed below:

- ***Autonomous ground vehicles (AGVs)*** are extensively used in logistic hubs for transporting goods. These vehicles are controlled and operated remotely due to the hazardous or accident prone environment of these sites. Any delay in sending a command or receiving a response from control center can lead to injuries or significant damage to assets. 5G's ultralow latency leased line communication can ensure precision control of these vehicles.

- ***Remote diagnosis*** is increasingly being explored by hospitals as complementary services to existing diagnostic system. Healthcare monitoring enables remote detection of patients' health conditions. Powered by high-bandwidth and low-latency of 5G leased lines, remote diagnosis can help provide real-time data for doctors. Also, hospitals can also facilitate from virtual reality based coaching and knowledge sharing by leveraging 5G network.

- ***Industrial robots*** are gradually substituting human labor for performing repetitive tasks in industries and thus reducing the risk of injury. A massive amount of intelligence is required for proper functioning of these industrial robots. Control systems for robots in industrial environment are gradually moving to the cloud due to ease of implementation. Dedicated access empowered by 5G can facilitate connectivity between cloud based system to the robots and their controllers.

- ***Drones*** are capable of integrating various payloads, sensors, and imaging technologies. They have become imperative for several industries like oil and gas, ports, etc. with the emergence of various innovative use cases like remote inspection. High-speed internet connectivity and dedicated network slice of 5G can support efficient function of drones without any disruption.

- ***Intelligent building systems*** are mainly connected through fixed network. 5G based leased lines can empower existing intelligent building systems and improve the efficacy of video surveillance and sensing devices. Also it facilitates deployment, expansion of capacity, and adjustment more flexible.

- ***Security surveillance systems*** are being pushed by governments as mandatory requirement in many places like malls, stadiums, etc.; in order to improve safety. CCTV surveillance system needs the highest level of availability, reliability, and speed. As a result, the key enabler of intelligent remote video surveillance systems is high bandwidth and ultra-low latency 5G leased line networks. Moreover, 5G, facilitating implementation of edge computing and AI in video surveillance systems, is further transforming them into a more intelligent security monitoring solution.

- ***3D visualization using AR/VR*** facilitates design, optimization and validation of critical processes across industries. Immersive experience provided by AR/VR systems facilitate better understanding of construction plans, building layouts, and other machine installations. While, AR/VR equipments are connected to a central application server and 5G networks using a dedicated network slice can provide a high data throughput, enabling fast delivery of pictures as well as video feeds.

- ***Mega events*** attract large number of visitors and needs additional networking infrastructure to cater the heavy traffic volume and massive demand for connectivity. 5G based leased lines could be used during such short-term requirements. 5G leased lines can also ensure secure data transmission on dedicated networks.

Opportunity for regional telcos:

5G is aggressively getting adopted across consumer as well as the business segments. MNOs have been driving the 5G adoption by rolling out 5G sites across the region. While, monetization potential of 5G is significant, MNOs will have to figure out ways to charge a premium on the back of differentiated experiences that 5G is capable of offering. Majority of the regional telcos are currently engaged in expanding their consumer 5G services portfolio. However, ongoing developments of several real-life enterprises use cases are paving new opportunities for the 5G network in the B2B space. Telcos now need to steer from consumer to enterprise centric 5G service portfolio. stc Kuwait became the first operator in the Middle East to launch a 5G connectivity service, exclusive for enterprises. Key solutions provided by the operator include dedicated data access, dedicated internet access, and on-demand services such as CCTV and Cloud PBX. While, stc in Saudi Arabia have successfully deployed the first 5G smart campus solution in the region in February 2020.

Conclusion:

The currently available connectivity solutions are struggling to cope with the market demand for more reliable and ultra-high speed connectivity. In the era of Industry 4.0, and myriads of emerging technologies, organizations will have to eventually look for alternate sources of internet that can support their business and IT requirements. The existing leased line networks aren't efficient, scalable, and competent to deliver the aggressive demands of new use cases. 5G leased lines can facilitate enterprises to connect diversified and remote infrastructure and resolve challenges related to coverage, capacity, density, security, complex management and high operational cost. Also, additional revenue stream for operator exists in meeting demand from the end users' customized needs in terms of data isolation and management by leveraging network slicing.

How Collaboration will Revitalize the Digital Economy

Author: Charles Yang,
President of Huawei Middle East

Every day we see the further emergence of the Middle East's digital economy. The information and communications technology (ICT) sector in the region has grown by leaps and bounds, with many nations now progressing strongly towards establishing more connected, digitally-enabled, smart cities as part of their national transformation agendas.

Today, ICT leaders have a critical role to play in the evolution of digital economies working alongside governments, NGOs, and local communities to harness technologies like 5G to spur industrial innovation and investment. This is now referred to as the '5G+X' era. As the deployment of 5G ramps up across the region, the adoption of AI and cloud-enabled applications—when powered by 5G—can drive a wide range of industries forward and create countless opportunities.

This priority is all the more important today as the world continues to contain the COVID-19 pandemic, and countries begin to reopen and revive local industry. The reality is that everyone from telecom carriers to organizations in oil and gas, transportation, healthcare, and others are all being affected by COVID-19. Their longevity requires new tools for success. Many of those are founded on digital platforms that not only enable work to be done as people are physically separated, but which enable faster, more intelligent decision making.

Today, ICT leaders have a critical role to play in the evolution of digital economies working alongside governments, NGOs, and local communities to harness technologies like 5G to spur industrial innovation and investment.

This is the central theme of the SAMENA Leaders' Summit. The event welcomes decision-makers within the region's ICT sector and will help determine next steps in supporting digitalization in all areas.

The digital economy—as a concept—is actually broader than its name suggests. It is a borderless economy and refers to a broad range of economic activities underpinned by data and knowledge as key factors of production. In this reality, modern information networks are a vital activity space for economic development. The effective use of ICT is thus an important driver of productivity, growth, and economic structural optimization. Experts such as IDC have acknowledged this in recent forecasts which estimate that global spending on the digital transformation (DX) of business practices, products, and organizations will continue at a solid pace despite the challenges presented by the COVID-19 pandemic, growing 10.4% in 2020 to $1.3 trillion.

Moreover, there are myriad benefits to all verticals in a digital economy. Today's technologies have the capacity to enhance and drive both the productivity and efficiency of traditional industries, resulting in stronger outputs that contribute towards national development. They also enable new industries to thrive, such as online entertainment portals like Netflix or similar content streaming sites, e-retailers, app-based services such as Careem and Deliveroo, and so much more. Again, these digital-first businesses have become all the more important to us during a period impacted by COVID-19.

This monumental change showcases the in-depth integration of the ICT industry and traditional industries. In fact, there are ever more blurred boundaries between the two, as well as a growing realization in the Middle East and beyond that digital is not just a 'nice to have', but an essential component to ensuring traditional industrial players can remain viable.

In terms of developing a digital economy within the Middle East, there are many countries that are well on their way towards digital empowerment. Governments are spearheading the transformational process, with the understanding that unleashing the potential of the digital economy will contribute significantly towards their ambitions to shift away from economies based on petrochemicals towards more diversified industries.

As a result, more countries in the region are advancing digital infrastructure, especially in terms of 5G. This will be a major factor in industrial digitalization. 5G will unlock benefits that simply cannot be realized on legacy networks – particularly in terms of data.

Data will soon be at the core of the region's digital economy. According to the latest Huawei Global Industry Vision (GIV) report, there will be an increase in global volume of data from 32.5 zettabytes in 2018 to a massive 180 zettabytes in 2025. This growth will be enabled by 5G, which accelerates production and mobility. It also enables the Internet of Things (IoT), and provides more opportunities for people to connect with the world around them, therefore generating more data at every possible point of connection. From digital pipelines to smart toll gates, telemedicine, and virtual classrooms – every connected device, transaction, or interaction will result in generated data.

Naturally, this raises concerns about data collection, privacy, and security, especially considering that the number of connected devices will grow exponentially in the digital economy. The truth is that 5G offers levels of user security that go beyond what even 4G could offer. Huawei has invested heavily in 5G research and development – investments of $4 billion in 5G research specifically between 2009 - 2019. This has led to breakthroughs in security and privacy measures, which create a significantly more secure environment for all 5G users. These technological advancements will contribute to the growth of the digital economy by giving users increased confidence in the online world around them, and therefore more encouragement to invest further in living a more connected life.

As the SAMENA Telecommunications Council's Telecom Leaders' Summit convenes, representatives from the public and private sectors from the Middle East, South Asia, North Africa, Asia, Europe, and beyond are coming together to discuss how best to implement this robust, scalable telecommunications infrastructure that will enable the digital economy to grow sustainably throughout the region. The event is again attended by top-level executives of leading telecommunications service providers, heads of regulatory authorities, ministers, and the professionals who drive digital development both regionally and globally.

> SAMENA Leaders' Summit welcomes decision-makers within the region's ICT sector and will help determine next steps in supporting digitalization in all areas.

The SAMENA Telecom Leaders' Summit is also the ideal platform to spark dialogue between all players within the ICT field. It supports the development of an ecosystem that will enable us to bring digital to every person, home and organization for a fully connected, intelligent world. In other words, this collaboration helps to usher us well and truly into a revival of the digital economy.

> The continued evolution of industrial applications in the 5G+X era, contributing to the wider ICT ecosystem, and fostering local talent throughout the region are just some of the issues we are progressing at this year's SAMENA Leader's Summit.

Developing this shared ICT ecosystem is a pivotal component to the vitality of digital economies. We must continue to encourage greater collaboration between everyone involved, creating opportunities to exchange commercial, policy, and regulatory-related perspectives and views, as well as enabling knowledge exchange opportunities. Even before the COVID-19 pandemic, too often we saw that people worked in silos with regards to technology development. This is something that must change in order for us to reap the plethora of opportunities that will be presented by a digitally-empowered, 5G-enabled economy.

A strong ICT ecosystem will, however, require more than just the leaders of today directing and fostering its development. While today's leaders set the pace of transition, it is essential that we consider who will continue to build the region's digital legacy. The digital economy must be inherited by a new generation of leaders who are not only capable of continuing the work that has already begun, but who can expand upon it—setting new boundaries through a constant commitment to innovation and discovery. Innovation and discovery are quintessential human qualities that represent our unending desire to explore, and have led us to achieve beyond society's wildest imagination merely a decade ago. Imagine where we will go in 10, 30, 100 years from now, when we focus on developing digitally-minded talent who are hungry to pursue the limitless potential of technology.

Developing talent is a core focus of Huawei and one we intend to discuss at length during the SAMENA Leaders' Summit. We recognize the need to build a new generation of ICT talent who can contribute to the growth of the Middle East's digital economy. This is what will, ultimately, enable economic growth and societal development in the region, and it is something that we consider to be as important as developing technology itself.

The continued evolution of industrial applications in the 5G+X era, contributing to the wider ICT ecosystem, and fostering local talent throughout the region are just some of the issues we are progressing at this year's SAMENA Leader's Summit. Huawei welcomes dialogue and is keen to participate in such opportunities with our peers from throughout the industry. In the end, collaboration is the best foundation for building a stronger, digitally-driven tomorrow.

SAMENA Telecom Leaders' Summit 2020

to highlight the concept of 5G+X

The discussions will also delve into experiences and latest findings on how 5G has provided support to worldwide efforts in combating COVID-19

Bocar A. BA. CEO SAMENA Council speaks to Teletimes

What are SAMENA Council's plans for holding its annual private and public-sector leaders' congregation, the Leaders' Summit, this year?

SAMENA Council's Leaders' Summit 2020 will be held on July 9th in collaboration with the TRA-UAE and Huawei Middle East, and, virtually, will bring together ICT leaders and decision-makers from across regions, including policy-makers, heads of regulatory authorities and premier global ICT development bodies, CEOs of large telecom operator groups, top-level executives from telecommunications service providers, professionals, experts from vertical ICT segments and more from South Asia, the Middle East, North Africa, Asia, Europe, and beyond.

What is significant about the Leaders' Summit 2020's agenda?

Firstly, Leaders' Summit 2020 will be held quite differently in terms of our arrangements to bring leaders' together under a very complex agenda, and we will be relying heavily on available digital communications technologies to make our discussions possible. Secondly, the aim of the Leaders' Summit this year is to highlight the concept of 5G+X, with specific focus on building momentum to accelerate 5G adoption across the region by involving the telecom and other industries in a synergistic manner, and materialize real-life use cases that can leverage 5G along with allied technologies.

The complexities of the 5G ecosystem necessitate cross-industry collaboration and it is crucial that we exploit advanced technologies such as AI, cloud and big data analytics, in order to

Eng. Nasser Al Nasser
stc Group CEO and Chairman of SAMENA Council

drive meaningful connectivity and overcome challenges to revitalize socio-economic development and new investments both within the ICT industries as well as in those sectors that are leveraging advanced mobile broadband technologies and ICTs, in general.

The discussions of the SAMENA Council Leaders' Summit 2020 will also delve into experiences and latest findings on how 5G has provided support to worldwide efforts in combating COVID-19, and what to expect in the middle-to-long term with respect to global economic outlook and meeting objectives of the Connect 2030 Agenda.

Apart from your role as CEO of SAMENA Council, and as Broadband Commissioner, are you satisfied with the Industry's response to challenges posed by the pandemic and "Agenda for Action"?

You have raised an important question, as it concerns one of the most timely and well-defined blue-prints issued by the UN Broadband Commission for Sustainable Development, and it serves the SAMENA Council's membership well that the Council is highly active in the Commission.

Overall, Telecom Operators have played a tremendous role in combating the very many challenges posed by the current pandemic, and this role of Operators has been both promoted by SAMENA Council, by virtue of its presence in all leading international industry bodies as an advocate for Operators, and has also been globally acknowledged. However, in accordance with the Agenda for Action defined by the Commission, a leading example among Operators that demonstrated leadership and reacted expertly to ensuing challenges posed by the pandemic, includes stc Group of Saudi Arabia. Eng. Nasser Al Nasser, stc Group CEO and Chairman of SAMENA Council, has drawn great parallels between what stc carried out during COVID-19 and the imperatives identified by the Commission in the wake of the pandemic, demonstrating that digital infrastructure and the private sector's readiness are fundamental to succeeding in the digital world during and in the aftermath of COVID-19. Under Eng. Nasser's leadership, stc Group continues to engage actively with the society to complement government's efforts, and to fulfill the objectives set forth as global imperatives, including those identified by the Broadband Commission.

As a highly active member of the international ICT community, how do you define success in the post COVID-19 era and for the next decade?

Our success in the post COVID-19 era, during which we have many challenges to overcome including successfully exiting the pandemic and bringing the world's economy back on track, will be determined by, first, our real progress made in leveraging digital communications technologies and their meaningful application in accordance with newest human life experiences during recent crisis situations witnessed all around the world; second, our commitment to collaborating and synergistically involving all economic sectors and stakeholders of the economy in fulfilling the vision of a sustainable future; and, third, by our ability to create an equilibrium between the technological capabilities and the right to prosperity for all, so to leave no one behind. It all, however, rests on new collaboration-

> ***"In the post COVID-19 era, we have many challenges to overcome including successfully exiting the pandemic and bringing the world's economy back on track."***

minded approaches and revamped decision-making approaches that need to be adopted, and through which objectives such as resilient connectivity, affordable access, and safe use of online services may be achieved. New collaboration mechanisms and decision-making approaches, which are also essential to devising new infrastructure funding models, are essential for bringing the world's 2.7 billion still-unconnected citizens to participate in sustainable future-making.

In relation to 5G, what trends should we be mindful of and where should the private and public sectors' focus be?

As the latest data consumptions trend indicate, the coming years will witness exponential rise in the multi-faceted use of the Internet, AI and robotics-driven automation, continued urbanization and smart-city management, a new world-economic order, new life styles and healthcare expectations, new modes of educational delivery, digitization of public services and digital identity implementation, digital immersive experiences and entertainment, advancements in food technologies, advanced manufacturing through industrial IoT, and a host of other anticipated advancements.

The Industry's focus during this time should be on technology development but equally so on reassessing policy, regulatory, and governance approaches. SAMENA Council believes it is time to ignite policy and regulatory culture change. Some immediate needs of the Industry include making spectrum resources available in a timely and cost-effective manner, incentivizing new investments including on fiber infrastructure, granting right-of-way and access to civil infrastructure, reducing taxation and industry fees, promoting cross-border data flows, fostering digital trust-building through secure networks and data privacy practices, protecting the growing number of young digital users, and encouraging non-telecom industries' engagement with the telecom industry.

What are your thoughts about the imperative of having cybersecurity measures put in place across the Industry?

Lately, remote working and remote learning have become the new norms, but there is a major challenge that this approach has made clear: Businesses, organizations, as well as the employees, and students, must learn to safeguard information and data; both their own and of the organizations. Everything in the name of Coronavirus, causing both panic, opportunistically distracting end-users and exploiting the unwary users online, is possible.

Exploitative acts range from phishing emails and more malicious acts, including harvesting user log-in information, exploitation of children and young people (CYP) online, to direct network attacks.

Cybersecurity measures, if taken coherently, have the power to sustain positivity and hope, and both curtail and fight false information that feeds negativity and hopelessness in the wake of real-life challenges, such as the new Coronavirus. With our ripening 5G capabilities and technologies, including Artificial Intelligence, we certainly have sufficient means and tools available to us but we need to work toward speedily implementing (and not just discussing) identifiable and practicable cybersecurity measures. The Internet's information pathways, just like our respiratory pathways, must be kept clean for their intended, positive purpose of developing and sustaining the nascent digital economy.

How would you define define digital trust-building in the era of 5G?

5G's potential of helping to create a sustainable digital society in the long run in collaboration with other industries and economic sectors, requires, among other things, ensuring integrity of data, protecting it against all imaginable misuse and irrelevant access. While Telecom Operators are relatively new to realizing the ever-more-complex challenge of protecting and reacting to security threats on their networks, and threats that can both physically and

emotionally threaten the well-being of network users, the challenge of security has a direct bearing on our ability to create and foster trust-building in the digital space, fulfill both ICT and health policy and regulatory demands, for example, and conduct business and investment planning in a sustainable manner, while justifying further investments. The notion of trust-building is also highly important for addressing critical societal issues, such as Child Online Protection (COP), and for which COP guidelines by the ITU and recommendations by the UN Broadband Commission are most pertinent.

In contrast to the obvious and very debilitating effects of COVID-19, are there any positive sides to this health crisis for the Industry?

In my opinion, within the Digital Communications Industry, a change in mindsets and approaches has been catalyzed by COVID-19. This change would later prove to be an essential ingredient for not only managing future challenges of pandemic scale, but also for accelerating digital cooperation necessary for meeting globally defined goals for the next decade. Despite posing a myriad of socio-economic challenges, the Corona-virus crisis of 2020 has steered our direction on the use of ICTs for provisioning healthcare services, delivering education, and how the world's private and public-sectors co-operate, to help synergize collaboration in digital transformation through broadband connectivity, digitization, and innovation at an accelerated pace.

In so doing, a foundation has been created for a 5G cultural shift, and we have observed over the past several months that Regulators and Operators, together, can achieve major milestones effectively and efficiently if larger goals of the scale of SDGs are visible on the horizon.

In the Leaders' Summit 2020, SAMENA Council anticipates a prolific exchange of expert views and insights, not only covering experiences during the COVID-19 crisis, but also on the future of the ICT Industry and how our collective efforts could help accelerate the realization of the vision for a better-connected world. T

5G for Good: Making Limitless Possibilities for Consumers, Businesses and Industries

Etisalat solutions enable mobility, flexibility and scalability increasing efficiency in businesses

Dr. Ahmed Bin Ali
SVP, Corporate Communication, Etisalat Group

SAMENA's Leaders Summit's theme this year focuses on '5G+X' shedding light on all the possibilities with 5G technologies across industries. 5G+X is enabling a smart new era with the collaboration of 5G, AI, big data, IoT, robotics bringing people, devices and systems even closer together. With the pandemic this year, companies today are resorting to 5G, AR, VR and remote control solutions to keep operations running with employees working from home.

5G presents immense possibilities to bring mobility, flexibility and scalability to the business. Industry 4.0 journey is creating significant potential and next-generation cellular wireless communication (5G) accelerates the flexibility, efficiency and innovation in industries.

At Etisalat, we are looking forward to being part of this global conversation to share our experiences during the pandemic with peers and technology leaders as well as exchange experiences in innovation that is set to transform every industry that uses mobile technologies from manufacturing, retail and healthcare, to automotive, utilities and entertainment. Etisalat has become a key regional and international player in 5G especially with one of the biggest world expo powered by 5G to be held next year.

5G and the new normal

The pandemic has changed the way businesses and individuals prioritise things and as we towards a new normal in the not-too-distant future, it looks like 5G

5G accelerates flexibility, efficiency and innovation in industries during the pandemic.

plays a significant role in every aspect of life penetrating different market segments.

As a telco, managing remote workforces, concerns about supply chain disruptions and managing our networks was key priority to linking with our global customers.

The pandemic has highlighted the need for the kind of high-speed, high-bandwidth connections 5G promises. The capability to enable technologies like automated factories and remote augmented reality, all of which become even more apparent in an age of social distancing and working from home.

Etisalat telecom infrastructure is the backbone of its success

Today we have made global achievements in 5G setting benchmarks for the industry. This was backed by the infrastructure accomplishments made in the past that have complemented the 5G network.

With 5G gaining momentum, 4G LTE network coverage reached 99.56 percent and 3G covers 99.82 percent. FTTH has reached 95.7 percent of homes across the UAE, maintaining the UAE's position as a global leader in FTTH for the third consecutive year.

5G networks and fiber optic networks complement each other, offering a more cohesive experience across fixed and mobile applications. This synergy also has a great impact on emerging technologies like autonomous vehicles where vast amounts of data have to be transmitted and this is where the high-speed fiber-based network helps in distributing terabytes of information around the world via 5G.

In fixed telecom services, Etisalat in UAE set a major benchmark by upgrading home and business speeds for free pushing the country to the top ranking in terms fastest internet speeds. Within a span of less than 10 months, Etisalat increased its entry-level speeds for home and business segment resulting in Etisalat UAE's network being crowned as the fastest fixed broadband network last year in GCC, Africa and Arabian region. In mobile, Etisalat was ranked as the fastest network in MENA region and in UAE among the top five fastest countries in the world.

During the pandemic with more families working and studying at home, Etisalat had special promotions to enhance TV viewing for everyone at home with higher speeds on the home network.

5G and emerging technologies making an impact on businesses and the societies at large

5G and disruptive technologies are at the forefront of transition bringing new opportunities to the industry and the country. UAE has also displayed a clear commitment towards embracing this change as it offers great economic potential by making processes faster, effective, providing insights and efficiencies while creating incredible new experiences.

It is estimated that telecom operators in the UAE would realise incremental revenue of $3.3 billion by 2026 from the digitisation of industries through 5G, with manufacturing, energy & utilities and public safety showing the greatest growth potential. *4

Etisalat's 5G network amplifies the use of these futuristic services, targets new opportunities, and implements 5G use cases across verticals.

During this period companies aim to capture opportunities and deploy services that enable remote monitoring and working by incorporating emerging technologies such as IoT, cloud, big data, AI, robotics,

autonomous, AR/VR. This is only possible by becoming their trusted partner that supports transformation in a digitally disrupted and fully connected world. Technologies like AR and VR are expected to contribute significantly to UAE's GDP mainly $3 billion and $1.3 billion by 2030 respectively. *5

Our IoT platform connected over 1 million SIMs with renowned entities like Emirates Transport and Xtramix for fleet solutions and Ministry of Interior for Hassantuk Smart Fire Alarm solution, which have a massive impact on saving lives and enhancing the state of security for the country.

Etisalat cloud computing services are the foundation for customer's digital transformation enabling services that will bring flexibility and availability for business critical applications. Here next generation capabilities like quantum computing play a critical role for its large set of possibilities that a classical system cannot process transforming business operating models, value chains and revolutionise entire industries. To enable these hyper and distributed cloud-computing capabilities, Etisalat has made significant partnerships with global players to provide best-in-class solutions.

Our safe city platform is another value addition to Etisalat's Smart solutions portfolio, which comprises of a video cloud platform, AI for behavior analysis, facial and vehicle recognition with a big data platform to correlate events in real time. Etisalat foresees massive growth from cloud services, we are expanding data center capacity with the construction of two new facilities in Dubai and Al Ain by the end of this year.

Etisalat has explored new innovative opportunities for consumers like the joint venture with Noor Bank to offer eWallet services aimed at empowering customers with safe, convenient and flexible payment solutions using mobile devices. In the light of the current global situation, people are increasingly choosing to send money digitally from the comfort and safety of their homes. As people work to support their family and loved ones across the globe eWallet aims to enable them to safely and instantly remit money to over 200 countries and territories worldwide.

Changes 5G bring to our lives and development opportunities for industry customers

5G technology is way beyond connectivity, it is a revolution that puts mobile at the heart of the digital continent enabling futuristic services. The true potential of 5G is realising mid-to-long term the evolution of the network and technology with the increased availability of affordable 5G devices and implementation of 5G use cases across verticals.

The combination of 5G, Big Data, AI, AR/VR, cloud and edge computing and IoT forms an 'Intelligent Connectivity' landscape to enrich individual experiences, transform industries and maximize productivity.

5G harnesses technologies to accelerate adoption of a digital lifestyle providing a connected consumer experience by unifying real-time data and taking advantage of AI-powered insights.

5G, AR, VR and remote control solutions keep operations running with staff working from home.

Consumer use cases:

- Transform consumers' entertainment experience e.g. by enabling AR/VR cloud gaming and delivery of 8K content on multiple devices, live streaming for sports and other events
- 5G-connected home robots, autonomous driving cars, virtual shopping and drone delivery will transform consumer digital lifestyle
- Transform learning with use of AR/VR for the next generation
- 5G enabled wearables particularly health devices and remote medicine/surgery will significantly improve QoS for patients
- The opportunity is to enhance the consumer experience through the 5G network and hence driving incremental revenue
- This largely depends on linking 5G commercial propositions to content and application developments in immersive reality, eSports and enhanced in-venue digital entertainment (stadium, music venues)

5G opportunities for the industry:

5G drives 4th industrial revolution by transforming various industries and enabling enterprises to improve productivity & efficiency, enhance time to market, increase reliability and better security and thus creating new business opportunities for industries.

Overall, enterprise opportunities exist but ecosystem requires maturity. Service providers address the opportunities that 5G provides across industries in different ways or roles. They may do this differently per industry or opportunity and the role descriptions indicate where in the value chain.

The service creator role is most attractive to digital service providers as Etisalat encompasses the creation of new digital services and collaborates beyond telecoms to establish digital value systems, in addition to providing digital platforms and infrastructure services. It includes service provisioning, service delivery and end-user applications

It is estimated that telecom operators in the UAE would realise incremental revenue of $3.3 billion (AED12.1 billion) by 2026 from the digitisation of industries through 5G, with manufacturing, energy & utilities and public safety showing the greatest growth potential (Source: Ericsson)

Industry Use cases:

- Energy & Utilities:
o Remote Control of fully automated offshore platforms o Digital Twins providing enhanced insights into physical plants and precise indoor positioning for assets and resources in critical infrastructure
o Drones for infrastructure and pipe inspections is a well proven use case

- Health Industry:
o HD remote doctor consultation
o Remote patient monitoring
o Connected ambulance

- Ports & Logistics:
Today UAE is a global logistics hub and 5G revolutionises supply chains around the world. Nearly 90 percent of logistics and shipping providers feel that the lack of supply chain visibility is one of the biggest challenges in the industry today (Source: Moor Insights & Strategy)

o The wide range of low-energy benefits of 5G paves the way for new globally dense tracking and condition monitoring capabilities for parcels and devices in real time
o The location and condition of the goods, temperature, humidity, light, shock, reporting acts of tampering, theft throughout the entire supply chain and eliminating information 'black holes'
o Autonomous Driving trucks changes the way freight is implemented at airports, ports and roads, marking the shift from labor-intensive processes to a lean and efficient operation.

Industries to benefit from the development opportunities created by 5G

5G along with other new technologies transforms industries like port & shipping, transport, manufacturing, public safety, health, oil & gas, utilities, agriculture, entertainment and media. However, the scale and the timing may vary subject to the maturity of emerging uses cases

- By 2030, globally, manufacturing, energy, media, sports and entertainment, transport & distribution will be the main industries to see the highest contribution from 5G (Source: STL)

- Operators have to identify and prioritise industries having highest potential to benefit from 5G enabled digital solutions based on their capabilities, market dynamics and the overall macro-economic conditions

- Operators can provide range of services across the value chain like basic and/or differentiated connectivity, 3rd party's services as a platform enabler and delivering innovative customised solutions

- Operators need to define a comprehensive strategy aligned with their ambition to target enterprise opportunities, mainly focusing on the below factors
o Cross industry collaboration
o Investments in R&D and innovation
o Exploring and testing use cases for specific industries
o Stakeholders engagement
o Developing partner ecosystem
o Managing regulatory landscape
o Efficient operating and business models

- At Etisalat, we are also taking specific steps to enhance and complement 5G propositions, such as:
o Deployment of mobile edge computing capabilities
o Network slicing
o Expanding IoT propositions
o Enterprise networks capabilities to complement 5G enabled solutions
o Ensuring to provide business partners with security, reliability and efficiency. T

*Source *4 Ericsson*
Ericsson Report: USD 3.3 Billion Digitalization Revenues in UAE by 2026
https://www.ericsson.com/en/press-releases/1/ericsson-report-usd-3.3-billion-digitalization-revenues-in-uae-by-2026
*Source *5 PWC*
https://www.pwc.com/m1/en/services/consulting/documents/ar-vr-seeing-is-believing-uae.pdf

Huawei to emphasize 5G's role in post-pandemic economic growth and the ME's digital transformation journey as host of the SAMENA Leaders' Summit 2020

Huawei will host this year's SAMENA Council Leaders' Summit for the seventh consecutive year. The 2020 event, which is organized by SAMENA Telecommunications Council, is set to take place on 9th July, with leaders from multiple country clusters to participate virtually. The agenda of the Leaders' Summit 2020 has been defined under the theme, "5G+X: Harnessing 5G across Industries for Investment Revival".

The annual SAMENA Telecommunications Council Leaders' Summit brings together ICT leaders and decision-makers, including policy-makers, heads of regulatory authorities and premier global ICT development bodies, CEOs of large telecom operator groups, top-level executives from telecommunications service providers, professionals, experts from vertical ICT segments and more from South Asia, the Middle East, North Africa, Asia, Europe, and beyond. Discussions during the Summit will focus on driving digital development throughout the region, learning from leading experiences across the world especially in the 5G and other advanced technologies such as AI, cloud and big data, to take stock of the rising complexities arising within the digital ecosystem in order to overcome challenges and seize new business opportunities in the ME region.

5G, a key driver of business, industry and social value in the pandemic, is also a key pillar in supporting governments' strategies to boost economy. At this year's event, Huawei will focus on "5G+X" for carriers as the main beneficiary, work together with their customers and partners to realize the full value of 5G in post-pandemic era, and provide impetus to harness the 5G technology across industries for reviving investment throughout the evolving digital ecosystem. Huawei's latest 5G innovations are destined to contribute to the growing 5G ecosystem, which represents a golden opportunity for societal, business, and economic development, especially when combined with complementary technologies such as cloud, artificial intelligence (AI), and big data – collectively substantiating the


Charles Yang


Bocar BA

notion of "5G+X". The discussions of the SAMENA Council Leaders' Summit 2020 will focus on the exchange of experiences and latest findings on how 5G has provided support to the efforts in combating COVID-19, as has been demonstrated in several instances around the world, and how governments can build on the pandemic experience technology use-case to boost post-pandemic economic revival across all economic spheres by leveraging 5G.

Charles Yang, President of Huawei Middle East, said: "5G is one of the most transformative technologies of our time, especially when used alongside AI, big data, and cloud. Huawei firmly believes in the ability for custom 5G solutions to instigate economic prowess that will benefit businesses, governments, and national economies, by creating a more seamless and streamlined digital ecosystem in which connectivity empowers every member of society. This is something that we will emphasize on at this year's SAMENA Council Leaders' Summit 2020. Given the global impact of the COVID-19 pandemic, there has never been a better time to take advantage of the benefits of technology, especially 5G, AI and cloud in driving the path to building the digital economies in the Middle East region."

Bocar BA, CEO SAMENA Telecommunications Council, added ahead of the Summit: "The COVID-19 pandemic has made it very clear that broadband networks and services are essential for our society, especially in terms of addressing the world's health and safety, but also to meet socioeconomic and environmental sustainability needs. As a long-term supporter of the Leaders' Summit, Huawei is a key contributor to the Leaders' Summit, not only to shape the conversation, but to develop the technology that is redefining connectivity in the world around us. It is more important than ever for leaders from the ICT, public and private sectors to collaborate in order to take full advantage of the potential for 5G to address society's most pressing issues. The Leaders' Summit 2020 will focus in particular on the benefits of 5G+X solutions, encompassing practical deployment possibilities, the involvement of multiple stakeholders, and collaborative cross-industry initiatives that will lead to strategic advantages on a commercial and human scale."

Huawei senior experts will participate in the Summit's panel discussions which will be discussing 5G for the 4th Industrial Revolution and for enabling cross-industry synergies post COVID-19 in terms of shifting to cloud, massive Internet of Things, integration of AI, big data and other technologies for smart service delivery. Experts will also be discussing maximizing efficiency and productivity in the 5G-powered hyper-connected, secure and sustainable World and showcasing technology use cases which will be broadcasted live from one of Huawei's most advanced 5G exhibitions in Shenzhen.

The earth is breathing again: Let's keep it so

Hamad Obaid Al Mansoori, Director General of UAE TRA

As countries slowly ease movement restrictions, environmentalists affirm that the ozone layer has also healed to a large extent, giving a new ray of hope for a bright future for life on earth.

While there might be other reasons behind this unexpected environmental recovery, one of them for sure is the urgent measure of functioning from home to contain the spread of Covid-19. From China to Europe and the Americas, as people searched for means to survive the crisis, digital solutions became the means for continuity of life. As soon as countries were hit by the pandemic, people stayed at home and continued their work, education, communications, and business through the Internet. As vehicles stopped running and polluting the environment, nature bounced back. Ozone layer started getting repaired.

This achievement calls upon the governments to move, more than ever before, towards a new lifestyle that can be described as a digital lifestyle. After all, it is about conserving the environment that will affect our lives and the future of our children. According to estimates by the Food and Agriculture Organization (FAO), seven million hectares of forests are cleared each year for many purposes such as the production of paper used in the publishing industry and those that are circulated in organisations.

The production of one tonne of paper releases 1.5 tonnes of carbon dioxide into the earth's atmosphere. Additionally, waste from paper-related industries produces harmful gases. Thus, the returns

of providing paperless services are vital.

Locally, there are not a lot of studies on the benefits of digital transformation. However, launching the 'Dubai Paperless Strategy' in early 2018 saved 130,000 trees and enough money to feed four million hungry children every year.

I invite academic and research institutions to conduct more similar studies and provide convincing evidence to all those concerned that the path of digitisation is not complementary, but an essential one for securing our lives and our future.

Preserving the environment is the responsibility of everyone; governments, companies, and academic institutions. Of course, individuals are included too and they have a rather bigger role to play in these efforts. We must educate them and convince them that the digital lifestyle is directly beneficial to them. It will help them save money and effort and also enjoy the quality of the air they breathe.

Nexign has an extensive track record of cooperating with different types of operators

"We will continue to diversify our client portfolio"

Andrey Gulidin, CCO at Nexign speaks to Teletimes International

Exclusive Interview: Khalid Athar

"We offer telecom operators partner integration mechanisms that help the CSPs to provide their subscribers with digital services and generate new sources of revenue."

Khalid Athar: Congratulations on becoming the new CCO of Nexign. Would you like to share the vision that you have for Nexign's commercial strategy?

Andrey Gulidin: Thank you, Khalid. Back in 2018 we've kicked off the international markets expansion strategy for Nexign with a particular focus on the Middle East, Africa and Southeast Asia regions. Looking back now I can confirm with confidence that it was a smart bet from our leadership team side. And today we will continue to excel what we have started three years ago focusing on expanding Nexign's footprint in the telco industry globally.

Nexign has an extensive track record of cooperating with different types of operators. The company's strong product portfolio and experience accumulated over 28 years of successful operations mean that we are able to implement business support systems (BSS) transformation projects in diverse market segments, meeting the needs both of major mobile and fixed network operators and of smaller operators and MVNOs in regional markets. So we will continue to diversify our client portfolio. We will also consolidate our existing partnerships to strengthen our regional presence and offer a wider range of services to telco operators.

KA: How has 2020 been going so far for Nexign? What measures did you take to deal with the pandemic from a business point of view?

AG: Nexign had to guarantee both business continuity for its customers and the health and safety of its employees. Mobile and digital services have become more important than ever in supporting interaction between people, and we consider it our primary duty to ensure that these services are fully operational and always available.

"The Middle East, especially the GCC, takes pride in leading on the technology front. The Middle East telco market is aggressively deploying 5G and generates many leads where CSPs are looking for innovation and future-proof BSS platforms."

From the side of business operations, there have been no substantive changes to our processes, though all our employees have been working remotely since March. We have even introduced the "Nexign FreeDom" programme, under which our staff can choose whether they would prefer to work from home or the office. I am proud to say that the pandemic has not affected Nexign's performance. We have demonstrated that our team works equally effectively from customers' offices or remotely.

As for the importance of the business continuity for our customers – telecom operators of all sizes - during these pandemic time, we are helping our customers to manage pandemic-induced

"The African market has even bigger potential. It is highly diversified and I foresee a lot of inquiries driven by technology upgrades. At the moment, we are in close discussions with a number of swap projects."

heavy congestion on networks across the world, using the RAN congestion awareness function (RCAF). This is a BSS component that keeps mobile networks elastic and optimises the UX for all subscribers. RCAF supports dynamic content adjustment and prioritised plans, introduces speed limits for heavy users and application control, and enables CSPs to set up top-priority plans for emergency workers, guaranteeing reliable service for their communications and smart equipment even in the most congested spots and at the busiest times. Implementing technologies like RCAF will help to build customer loyalty and open up new monetisation models, which will be widely adopted in the 5G era.

Even before CSPs introduce full 5G support, however, they can leverage their mobile networks to provide reliable service to those who are experiencing difficulties working and studying from home at this time.

Nexign is also doing everything it can to support contactless services. We offer telecom operators partner integration mechanisms that help the CSPs to provide their subscribers with digital services and generate new sources of revenue. Nexign supports the eSIM technology that delivers a mechanism for attracting new subscribers without physical shops, and helps operators to fine-tune their policies on keeping subscribers connected whether they have paid or not.

KA: Have you been able to make a good forecast around how things will go during the rest of 2020 for Nexign? What are some of the key partnerships/projects that will be your focus in the coming months?

AG: COVID-19 has unfortunately led to an unprecedented situation across the entire world, and we have to accept that some processes have slowed down. Nonetheless, we expect that CSPs will start to fast track their activities. Nexign has a strong customer portfolio, so the company will continue to steer a stable course. We will be going ahead with several BSS implementation projects for major Russian operators and will focus on developing a number of exciting BSS opportunities in the MEA region.

KA: How would you compare the Middle Eastern and African telecom markets? On a regional level, which markets and verticals do you see as having the most potential for growth?

AG: The Middle East, especially the GCC, takes pride in leading on the technology front. The Middle East telco market is aggressively deploying 5G and generates many leads where CSPs are looking for innovation and future-proof BSS platforms.

The African market has even bigger potential. It is highly diversified and I foresee a lot of inquiries driven by technology upgrades. At the moment, we are in close discussions with a number of swap projects.

As for the verticals, telecommunications market stays at the core of our business. We've been known for our solid product portfolio and top-notch level of services for over 28 years by now and we'll continue to capitalize on that.

KA: The introduction of "connected" devices in every area of life have revamped the telecommunications and ICT landscape. What is Nexign doing to enable this "Internet of Things in the region?

AG: Last year, Nexign and Gazprom Neft, one of the three largest oil producers and refiners in Russia, set up a joint venture to develop digital products for the oil and gas industry and roll them out to the Russian and global markets. We see huge potential in IoT solutions for the oil and gas industry and we are in the process of discussing pilot projects with several market players. We anticipate a great future here.

KA: How do you see the long-term future of the company. Where do you see things heading during 2021?

AG: With the pandemic whipping up interest in digital transformation among telco operators, I expect the following trends to strengthen:

1. The importance of owning and managing distribution channels
2. Increasing demand for convergence as digital and additional services develop
3. A priority focus on integrating external products into telco operators' offers
4. A need for contactless technologies and services

Nexign is ready to meet these demands with its Nexign Digital BSS solution, which is ready for 5G and IoT monetisation, MVNE and analytical intelligence, while keeping the principles of overall system optimisation, cloud-based scalability, and cost reduction front and centre. We anticipate a surge of interest from the Middle Eastern and African markets. T

Huawei, Ken Hu:
Driving Equity and Quality in Education with Technology

Huawei's Deputy Chairman Ken Hu outlined its vision and action plan for education under its digital inclusion initiative TECH4ALL at the Global Education Webinar entitled "Driving Equity and Quality with Technology", emphasizing that "connecting schools and skills development are two key ways for Huawei to improve equitable and quality education." The webinar was joined by leaders and experts from UNESCO, GSMA, the Ministry of National Education of Senegal, universities and educational institutions, as well as the private sector.

Improving Equitable and Quality in Education through Technology

Digital technology plays an important role in education. However, 50% of the world's population still does not have Internet access, and many people lack the skills needed to use digital devices. As a result, the digital divide in education continues to widen. Ken Hu said: "We believe that everyone, everywhere has the right to education and the equality of opportunity it brings. As a technology company, Huawei wants to help with connectivity, applications and skills by focusing on two important areas of connecting schools and developing digital skills respectively."

In terms of connecting schools, Huawei will help to provide access to high-quality educational resources such as digital curriculums and e-learning applications, and teacher and student training by connecting school to the Internet with partners. In South Africa, Huawei recently launched the DigiSchool project in partnership with operator Rain and educational non-profit organization Click Foundation, aiming to connect 100 urban and rural primary schools over the next year, in addition to the 12 already connected through 5G technology. "Through digital education, we not only address the literacy crisis in the country, but also provide young children with the digital skills needed for future success," Nicola Harris, CEO, Click Foundation added at the webinar.

In terms of digital skills development, Huawei plans to provide digital skills training for vulnerable groups in remote areas, especially female students, through projects such as DigiTruck in a program called 'Skills on Wheels.' Since the launch of DigiTruck in Kenya at the end of last year, it has provided training for more than 1,500 young adults and teachers in rural areas. Huawei hopes to replicate the program in France, the Philippines and other countries in the next two years. "These all solar-powered, mobile classrooms with wireless broadband access can reach even the most remote communities." Olivier Vanden Eynde, CEO of Close the Gap, key partner of DigiTruck, said.

Stepping up efforts in response to Covid-19

Huawei has stepped up its efforts through its TECH4ALL initiative in support of UNESCO's Global Education Coalition, set up to tackle the global challenges impacting education due to the COVID-19 pandemic. For instance, the company has joined forces with the UNESCO Coalition and the Ministry of National Education of Senegal to support the country to carry out distance learning during the outbreak. Local teachers are provided with connectivity, digital devices and skills training which will benefit more than 100,000 students. "This crisis has changed the face and future of education. It has demonstrated how fast change can happen through partnership, when expertise and resources are matched up with local needs to ensure learning continuity, especially for the most marginalized students," said Stefania Giannini, UNESCO Assistant Director-General for Education.

At the same time, the Huawei ICT Academy launched its "Learn ON" program in early April, aiming to address the educational needs of University-based ICT talent affected by the epidemic. The program brings together global university partners and offers college cooperation incentive funds, which can be used for online courses and examinations, online experiments, etc., and provides more than 130 Massively Open Online Courses (MOOC) resources, covering cutting-edge technology fields such as artificial intelligence, big data, 5G, and the Internet of Things.

Public-private cooperation accelerating the resolution of education issues

The Global Education Webinar focused on the two topics of "Distance Learning for Better Education Continuity" and "ICT Innovation for Inclusive Learning". The best practices and experience of China, France, Luxembourg, Senegal, South Africa and other countries were shared and discussed and Borhene Chakroun, Director of UNESCO's Policy and Lifelong Learning Systems, reiterated that "with at least 63 million primary and secondary teachers affected, the COVID-19 pandemic has highlighted the need for developing teachers' capacity to effectively engage in distance learning, which will become part of the education and training provision in the future".

In addition, participants reached a consensus that public-private cooperation is the key to promoting inclusive education by digital technology. "Many lessons have been learnt this year in low- and middle-income countries, adapting services to address the needs of users and responding to the impact of the global pandemic by evolving business and critical partnerships. The GSMA and the mobile industry are supporting the current situation, and committed to long-term support of the SDGs (the United Nations Sustainable Development Goal) in the era of ethical leadership." added by Stephanie Lynch-Habib, Chief Marketing Officer, GSMA. To achieve greater digital inclusion in the education field, it requires cross-sector efforts by governments, industry organizations, educational institutions, and technology companies to contribute their respective experiences and resources. This will ultimately accelerate the achievement of SDG 4 ("Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all") by 2030. T

Huawei: Unlock 5G potential and strengthen 5G for business

The second session of Huawei's online 5G+, Better World Summit was held. Through live video streams, analysts, and representatives of operators and industry partners shared their thoughts on how innovative 5G applications could improve industry efficiency and security and bring value to industries such as port, agriculture, healthcare, and iron and steel. Bob Cai, the Chief Marketing Officer of Huawei Carrier BG, delivered the opening speech, calling for unlocking the potential of 5G and solidly strengthening 5G for business.

"5G development has entered a new phase," Mr. Cai said, "With over 80 5G networks commercially available worldwide, determining how to leverage 5G to create more value is currently a topic of great interest within the industry. Currently, 5G for business is still more of a branding concept, and more solid work needs to be done. To build a positive business cycle, work should be done in four aspects: technology, ecosystem, standards, and business model.

Technology readiness: We must continuously innovate 5G technology and products to address the pain points of industries. For example, the 5G Super Uplink solution addresses various industries' needs for optimal and always-available uplinks.

Mature ecosystem: 5G industrial modules have been widely commercialized, and devices such as 5G cameras, 5G industrial CPE, and 5G industrial routers are now available in the market. Looking ahead, more commercial 5G devices are required for different industries in order to ensure the prosperity of the 5G ecosystem and lower the costs for industries to adopt 5G. Unified standards: In terms of 5G services for business, development from zero to one requires innovation, but further growth beyond one requires unified industry standards. Industries should take the lead to set 5G industry standards that allow 5G to be rapidly applied to industries.

Shared commercial success: We must keep exploring business models of 5G services for business that can benefit all industry partners and help them grow together."

Other guest speakers who attended the summit included Mr. Xu Mengqiang, General Manager of China Mobile Ningbo, Mr. Zhao Jie, Director of National Engineering Laboratory for Internet Medical Systems and Applications, Dr. Thomas Anken, Director of Digital Transformation Program of Swiss Federal Department of Economic Affairs, Education and Research, Mr. Guo Lihong, Deputy Director of Engineering Equipment Dept of Hunan Valin Xiangtan Iron and Steel Co., Ltd., and Mr. Dimitris Mavrakis, Research Director of ABI Research. Each of them delivered a wonderful keynote speech.

Global tech community recognizes Huawei's research and development gains

Huawei announced that its innovative products and solutions have won eight awards, including five grand awards, at the iconic 'Best of Show Awards' held during Interop Tokyo 2020, the largest and most prestigious ICT exhibition in Japan and overall ICT industry. The awards received at Interop Tokyo in 2020, and in the years preceding it, show the industry's recognition of Huawei's emphasis on innovation and quality, and is a reflection of its long-term strategic investment in R&D to provide customers with competitive, innovative, unique ICT products and solutions through core technological innovation.

Demonstrating its "open, collaborative, and mutually beneficial" cooperation with partners, Huawei also showcased a brand new digital intelligent ecosystem and its relevant application cases, including 14 products and solutions at Interop Tokyo 2020. These cutting-edge offerings ably illustrated Huawei's capabilities to comprehensively promote rapid digital and intelligent development in the ICT field.

Huawei received the following awards at Interop Tokyo 2020:
Grand Prize in Network Infrastructure: OptiXtrans OSN 9800 M12, the industry's first super C-band transmission product.
Grand ***Prize in Cloud Infrastructure:*** CloudEngine 16800 data center switch, the industry's highest-density 400 GE line card for data centers in the AI era.
Grand Prize in Server and Storage: Huawei's next-generation all-flash storage OceanStor Dorado 8000/18000 V6, oriented to core production and transaction scenarios, and continuously setting performance, reliability, and intelligence benchmarks.
Grand Prize in IoT: Huawei edge computing gateway AR502H.
Grand Prize in Facility: The eMIMO edge computing facility solution.
In the AI category, the industry-leading Atlas 900 AI cluster is the only award-winning product.
Special Prize in Enterprise IT: Huawei 5G AR NetEngine AR6000.
Special Prize in Network Infrastructure: Huawei OptiXtrans DC908, an intelligent Data Center Interconnect (DCI) product with a single-fiber capacity of 88 Tbit/s and AI-enabled O&M.

'COVID-19: City Experience Resilience and Impact Report'

Smart Dubai has published a report titled 'COVID-19: City Experience Resilience And Impact Report', which offers a holistic view of the impact caused by the COVID-19 outbreak and outlines its effects on smart services.

The report is an initiative from Smart Dubai and aims to facilitate the formulation of a post-COVID-19 strategy, as per the directions of the wise leadership. It was compiled by the Happiness Agenda team at Smart Dubai, in collaboration with Smart City Specialists represented by both the Smart City Experience (focusing on city services) and Work Environment Specialists (focusing on human resources). They represented 20 government, semi-government, and private sector entities. The study focused on three different subjects: employees, corporate operations, and services provided to customers and employees alike.

The Dubai Government demonstrated a high level of resilience in response to the COVID-19 pandemic, the report revealed, which has helped the emirate avoid any reduction in the quality of experiences and services being offered to residents and visitors. On the contrary, some of these services saw marked improvement. The study went on to highlight the challenges and opportunities brought about by these exceptional circumstances.

Her Excellency Dr Aisha bint Butti bin Bishr, Director General of Smart Dubai, asserted that the COVID-19 outbreak has led everyone to view challenges differently and to think of ways to transform them into opportunities, building a brighter future for the UAE. H.E. quoted His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE, and Ruler of Dubai, who said: "Anyone who thinks that the world after COVID-19 will be the same as the one before it is mistaken."

Dr Aisha bin Bishr

"The pandemic had confined people to their homes at very short notice," Dr Aisha explained. "Educational training for students and work across the city, both at government and private sector entities, were conducted remotely and world governments found themselves facing unprecedented challenges. Dubai and the UAE were no exception. All entities in Dubai immediately sprang to action to preserve the government system that has allowed the UAE to earn its leading international status over the years."

"This report constitutes of a collection of inputs from Smart Dubai and its partners in the public and private sectors," H.E. Dr Aisha continued. "Our objective from this project is to implement the directives of our wise leadership, abiding by the words of H.H. Sheikh Mohammed bin Rashid Al Maktoum, who said, 'the new reality compels us to develop a proactive and comprehensive approach that understands our current reality, forecasts other challenges and offers solutions to address them.'"

"As restrictions on movement in Dubai and the UAE are gradually eased, we sought to examine the impact this unprecedented crisis has had on the experiences of customers and employees in the emirate of Dubai," H.E. Dr Aisha said. "Given that the impact of the crisis is still at a very dynamic stage, we evaluated its effects through accurate studies into the methods that cities employ to cope with global changes. We have released this report, complete with 34 takeaways and eight clear recommendations that we hope will support policymaking in the post COVID-19 era to improve quality of life, and happiness of Dubai's residents and visitors."

The report concluded that the disruption caused by the COVID-19 outbreak on services in Dubai was limited, where numerous organisations reported that their infrastructure and services were effective and adequately prepared for digital operations and providing services online, while others managed to digitise any remaining offline services quickly and provided them for immediate use online.

In the 'Remote Work' section, the report revealed that the safety of employees was a top priority for introducing such systems. Meanwhile, the positive outcomes of remote work included the added flexibility that employees found in their new working conditions, as well as increased productivity and concentration. Furthermore, remote work has created new opportunities in terms of office space designs, which means that future office plans are bound to change, allowing for more flexibility and efficient use of space. Meanwhile, call centres were able to immediately absorb the large volume of calls from customers.

Overall, a new, online work culture has emerged within institutions, one where

call centres bridge the gap and tend to people who need someone to help them. Digital transformation was seen as a challenge, but urgent demand prompted organizations to accelerate innovation in order to provide all services over the Internet. This rapid response was manifested through the speed at which officials collaborated and adapted to the changes as the pandemic accelerated in pace.

Participants in the report identified new opportunities brought about by recent transformations, including more flexible work options for mothers and women in general, in addition to time and cost-saving processes. These opportunities have emerged as a direct result of the recent developments in infrastructure, and of the digital services provided by government, semi-government, and private sector entities in Dubai. The city-wide digitization of services over the past 20 years has enabled the emirate to respond to such global crises with strength and flexibility, guided by the UAE's wise leadership and its vision to maintain control and prosperity even during the COVID-19 outbreak.

The report offered a set of key recommendations that underlined Dubai's preparedness to shift from a traditional work environment to working remotely, seamlessly and for an indefinite period of time. The New Work Culture section of the report reveals that entities' focus is now placed on productivity and output, whilst also ensuring their employees lead a balanced life, both physically and psychologically.

The report concluded that adopting empowering technologies is fundamental for a resilient smart city (such as UAE PASS, the national digital identity). As for Digital Transformation, the study stressed the importance of working on sustaining and improving digital services and infrastructure. The section on Information Clarity called for spreading awareness and common knowledge about currently prevailing circumstances, while Design Quality serves to enhance the long-term efficiency of systems. Last but not least, the report highlights the concept of a resilient city, which relies on a sustainable and holistic vision to overcome any future crises.

Etisalat expands 'SmartHub' presence with two new locations in UAE

Etisalat has announced the expansion of its SmartHub in UAE with a state-of-the-art Tier 3 data centre facility at two new locations growing its presence in the region enabling global partners to bring digitalisation, implement cloud transformation initiatives, accelerate connectivity and capacity reach across Europe, US, Asia, Middle East and Africa.

The opening of the new facilities in Fujairah and Dubai is in line with UAE's vision to become an ICT and data hub for the region addressing the diverse requirements of global data centres and technology companies. With the launch of the new facilities Etisalat's Carrier & Wholesale Services (C&WS) have set a benchmark in the region and is also a testimony to the company's strategy of 'Driving the digital future to empower societies'.

Ali Amiri, Group Chief Carrier & Wholesale Officer, Etisalat said: "During this unprecedented period that has challenged both health and economy, global markets are looking at enhancing interconnectivity and adding new capacities for businesses and the entire community. As the biggest neutral carrier hotels, Etisalat's SmartHub data centres will be an ICT bridge between continents always supporting business critical activities of global customers.

"Thanks to the UAE vision and Etisalat's goal of enabling digital transformation, our network has always been one of the most robust and digitally equipped to address the unique requirements during this period making it possible for businesses to work remotely, millions of students to enjoy distance learning and all citizens having access to vital services.

"The launch and expansion of infrastructure, power and space of our data centres in such a short time frame is a testimony to our efforts to meet the growing demand from existing global customers. We are committed to making 'SmartHub' a preferred location for carriers, cloud service providers, Internet exchanges and companies looking for carrier grade data centres."

The addition of the space and high power capacity in Fujairah and Dubai will bring the overall power capacity to more than 10MW with diversified power grid supply complemented with backup systems (N+N power redundancy).

SmartHub, a trusted digital partner is strategically located for global customers across industry verticals such as financial services and gaming. In the financial services industry, SmartHub's secure digital capabilities support interconnected clouds and low latency environments directly connected to global networks and ecosystems. The gaming industry is estimated at 2.3 billion active gamers globally with more than half of them located in the Asia-Pacific region, in this scenario SmartHub's location presents a massive opportunity for gaming platforms.

SmartHub supports several route independent carriers offering direct access to multiple independent subsea cable systems interconnecting Europe, US, Asia, Middle East and Africa. Currently, SmartHub has the potential to offer diversified and low latency route connectivity to more than 2 billion people with 30 milliseconds latency. SmartHub currently hosts more than 60 providers including major carriers, content providers, mobile and satellite services and industry sectors like financial services and digital cloud platforms.

ITU guidelines on COP respond to new challenges and significant shifts in the digital landscape

The International Telecommunication Union (ITU) launched its new 2020 Guidelines on Child Online Protection (COP), a comprehensive set of recommendations for children, parents and educators, industry and policymakers on how to contribute to the development of a safe and empowering online environment for children and young people.

The Internet and related digital technologies have opened new ways for children to communicate, learn and play, enjoy music, and engage in a vast array of cultural, educational and skill-enhancing activities. Yet, they have also exposed them to a range of content, contact and harmful conduct online.

"The question of how to ensure children's online safety in the age of COVID-19 is now more pressing than ever before," said ITU Secretary-General Houlin Zhao. "ITU's new Guidelines on Child Online Protection are a very timely tool to safeguard the well-being, integrity, and safety of our children, our most precious gift."

The new guidelines were re-designed from the ground up to reflect the significant shifts in the digital landscape in which children find themselves, such as the Internet of Things, connected toys, online gaming, robotics, machine learning and artificial intelligence.

In addition, this new edition addresses an important lacuna: the situation faced by children with disabilities, for whom the online world offers a particularly crucial lifeline to full and fulfilling social participation. Consideration of the special needs of migrant children and other vulnerable groups has also been included.

"The behavior of offenders and criminal networks is constantly evolving, as seen during the COVID-19 pandemic, with offenders taking advantage of the new reality of many children being online far more than usual. It is therefore imperative that child protection systems evolve as fast


Houlin Zhao
Secretary-General of ITU

or even faster," said Dr. Najat Maalla M'jid, United Nations Special Representative of the Secretary-General on Violence Against Children. "A worldwide and cross-border problem requires a multi-stakeholder, multi-sectoral and child-rights centered approach that brings all key actors, including children, together to ensure a stronger and proactive child protection online."

The new COP Guidelines are designed to serve as a blueprint that can be adapted and used by different countries and stakeholders in a way that is consistent with national and local customs and laws," said Doreen Bogdan-Martin, Director of the ITU Telecommunication Development Bureau. "They can be considered as an initial step in engaging all relevant stakeholders – governments, the private sector, parents and teachers' associations, and children themselves – in discussions around targeted measures and actions to create a safer online environment."

The 2020 Guidelines consist of four parts tailored to key audiences: children, parents and educators, industry and policymakers.

The guidelines for children are available in a child-friendly format and they consist of three resources: a story book for children under nine, a workbook for children aged 9 to 11, and a social media campaign and microsite for children and young people aged 12 to 18. These resources help children learn how to manage risks online, while at the same time empowering them to exercise their rights online and engage in opportunities that the Internet presents to them.

The guidelines for parents and educators serve as a practical tool to help them to effectively support children and young people's interaction with the online world, to sensitize families to the potential risks and threats and help cultivate a healthy and empowering online environment at home and in the classroom. They emphasize the importance of open communication and ongoing dialogue with children, to create a safe space where young users feel empowered to raise concerns.

The guidelines for industry aim at supporting industry players in the development of their internal COP policies. They highlight key areas, such as integrating child rights considerations into all appropriate corporate policies and management processes; developing standard processes to handle child sexual abuse material; creating a safer and age-appropriate online environment; educating children, carers and educators about children's safety and the responsible use of information and communication technologies (ICTs); and promoting digital technology as a mode for increasing civic engagement.

The guidelines for policymakers serve as a solid foundation on which to develop inclusive, multi-stakeholder national strategies, through open consultations and dialogues with children, to develop better-targeted measures and more efficient actions. ITU and its partners sought to create a highly usable, flexible and adaptable framework firmly based on international standards and shared goals, particularly the Convention on the Rights of the Child and the United Nations Sustainable Development Goals.

stc uses Nokia PSE-3 to address soaring regional 5G traffic

stc has used Nokia's PSE-3 chipset with Probabilistic Constellation Shaping (PCS) technology to conduct the Middle East and Africa's first 200G long-haul transmission and 300G regional reach field trial. Once deployed, end users will experience superior network performance, and stc will be able to better address the surge in video, cloud and 5G traffic.

stc trialled Nokia's PSE-3 towards enhancing the efficiency of its Dense Wavelength Division Multiplexing (DWDM) long-haul network to reduce complexity and provide better services to its subscribers. The PSE-3 is capable of helping Stcincrease bandwidth efficiency on its long-haul network by exploiting 200G channels between Riyadh and Jeddah via diverse routes. Similarly, 300G channels were demonstrated on a regional network between Khobar and Riyadh. This approach allows operators to provide a superior network experience while raising the available bandwidth per user. Nokia services ensured the seamless and timely execution of the trial with STC. Nokia's PSE-3 is the first coherent digital signal processor to implement PCS, a technology pioneered by Nokia Bell Labs that helps extract the maximum capacity theoretically possible over an optical channel. Nokia's PSE-3 helps provide unprecedented spectral efficiency, maximizes the performance and capacity of every link in the optical network, and enables 400G for metro distances. It leads to much improved network performance and significantly brings down operational complexity.

Khaled Ibrahim Aldharrab, Vice President of Infrastructure, STC, said: "We are committed to providing a world-class end user experience that aligns with the Saudi administration's Vision 2030. This successful field trial will help us optimize our network resources and reduce our operational expenses."

stc Bahrain partners with China Telecom Global for global connectivity services

stc Bahrain signed partnership with China Telecom Global (CTG), a global ICT services provider for the Seamless global connectivity services, which will be vital to augment fast-growing economies in the Middle East and North Africa (MENA) region.

Under this new partnership, stc Bahrain's customers in the region—particularly those looking to expand in Asia Pacific will have an opportunity to enjoy more convenient and reliable connections that support their business growth. The MENA market plays a critical role in CTG's global expansion and hence, will further boost CTG's network support to its customers in the MENA market, and empower Chinese companies to further explore global markets and actively embrace the digital economy.

"Through this partnership, China Telecom is able to extend its services to its clients in the Middle East while utilizing stc Bahrain's reliable and robust infrastructure," said Eng. Nezar Banabeela, CEO of stc Bahrain. "We are also delighted to consolidate our presence in Asia Pacific and are looking forward to a long-term partnership with China Telecom."

Commenting on this partnership, Mr. Changhai Liu, Managing Director of China Telecom Africa & Middle East Limited explained that: "This new collaboration with stc Bahrain further allows China Telecom to strengthen its service capabilities in the Middle East and North Africa region. We look forward to this long-term partnership with stc Bahrain and hope to unlock potential and create new value for our users."

Evident through stc Bahrain's self-healing national backhaul network and border-crossing terrestrial fiber cables, the Middle East is at a significant growth stage where the region is increasingly considered a connectivity hub, and the future of peering. The agreement allows stc Bahrain and CTG to expand their service coverage with tremendous resources to maintain a consistently high level of services and improved accessibility in the key gateway between the East and the West.

This partnership also comes at a time where stc Bahrain has been actively establishing a strong reputation in the wholesale industry, enabling it to own one of the largest wholesale market shares while promoting Bahrain as the GCC ICT hub.

5G no longer important to COVID-19 recovery, cyber security and data privacy increases in importance

The 2nd Global Business Barometer shows marked reductions in the importance of 5G to executives

There are three broad stages to recovery from the kind of crisis we are experiencing now: survival, adaptation and recovery. The latest Global Business Barometer, conducted by The Economist Intelligence Unit and supported by SAS, shows that as of late May executives believe we are still in the survival phase, although many have made adaptations to their operations, some of which may become permanent.

44% of respondents see cyber security as becoming "much more important," followed by the related areas of data privacy at 42.5% and risk management at 39.9%. Cloud computing was tied with risk management at 39.9%.

Cyber security drives recovery: Teleconferencing platforms have arguably received the most attention as a tool for businesses to adapt to the changes brought on by covid-19, but firms are also using other technologies and approaches. In terms of technologies, much of executives' current focus is clearly on security and risk.

Given a slate of options to choose from, forty-four percent of respondents see cyber security as becoming "much more important" followed by the related areas of data privacy at 42.5% and risk management at 39.9%. Cloud computing was tied with risk management at 39.9%.

At the bottom of the list were a few technologies being hyped before the pandemic. 5G, the latest generation of cellular technology, was only deemed to be "much more important" by 5.8% of executives surveyed and 41.6% answered that it was "somewhat less important" to their firm's recovery. The rollout of 5G networks has been greeted with controversies linked to geopolitical concerns and, after the COVID-19 outbreak, conspiracies linking it to the pandemic itself. One or both may have dimmed enthusiasm for the technology. Or, more likely, faster wireless connections are a nice-to-have at the moment given that current 4G networks have so far proven sufficient for keeping the lights on.

Less pessimistic: The barometer reading for the 3-month outlook for the global economy rose 11.5 points from -39.2 to -27.7, a marked improvement from the first GBB in April but indicative of a recovery that could remain a long way off. Sentiment in Europe increased the most (from -40.4 to -27.3), followed closely by the Asia-Pacific and North America. Sentiment about the global economy among executives in the Middle East and Africa region, while still up, increased by only 6.6 points, the least among the five regions covered by the barometer.

41.6% of executives surveyed feel that 5G is "somewhat less important" to their firm's recovery and only 5.8% deem it to be "much more important.

Sentiment in China falls: The biggest single swing in the barometer from April to May came in China, where the 3-month outlook for the economy fell by 21.9 points. At the time of the first GBB in April, China looked to be over the worst of COVID-19 (or at least the worst of the first wave). That has clearly since changed, with the mood souring considerably on widespread downgrades to China forecasts and the Chinese government abandoning its annual GDP target for the first time in decades.

Coming to grips: There was an uptick in the percentage of GBB survey respondents answering that the global economic recovery will take "3 to 5 years." In April, the figure stood at 30.8%. In May it was at 37.2%. All other options more or less held steady.

Pandemic reveals a need for new connectivity solutions at the Sea

Connectivity at sea has never been more important than during these difficult times. New regulations can be introduced at any moment and it is of great importance to ensure that this information is communicated to all marine sectors.

While large vessels are equipped with multiple channels of communication, including circuit-switch terminals and VoIP applications powered by VSAT, smaller vessels, like those used in fishing industry, are hardly reachable.

MarineStar is an easy-to-install terminal with built-in handset and small antenna, that operates using Thuraya's extensive satellite network, providing dependable voice communications.

Nabil Ben Soussia, CEO Middle East, Asia & Turkey of IEC Telecom Group, said: "In the past crew communication has not been a high priority for many fishing vessels. Often the crew make use of one corporate satellite handset and switch sim cards in order to use it. This approach can be problematic – the phone can be lost, stolen, run out of charge, or be stored in areas with no signal, and therefore shore offices may not be able to call it. In light of fast-changing COVID-19 regulations, it is important for crews to remain reachable at all times – and with MarineStar you have a robust handset providing reliable always-on communication."

Today the global fishing fleet is estimated to include some 4.6 million vessels, the majority of which are small boats with crew daily away from their loved ones. Such boats have neither the budget nor room for a costly satellite set up, but this does not mean that the crew has no other option but to stay disconnected.

"This pandemic has taught us to care more and stay in touch. The shipping sector has increased bandwidth allowance for their welfare programs, and fishing is now able to use MarineStar as a cost-effective gateway for its crew communication. This fixed terminal can operate similar to a public phone with access provided over scratch cards that can be purchased in the port or from the captain," explained Mr Ben Soussia.

Marine fisheries provide a livelihood for some 260 million people and, like all other businesses, it is facing survival problems during the pandemic. The global 'lockdown' has significantly impacted the demand for marine products, pushing vessel owners to seek new ways to optimise their operations.
Smart applications, such as push weather notifications and fish catch reporting which are available through MarineStar, can offer enormous upsides for fishing businesses leading to greater efficiency and cost savings. With accurate meteorological updates and timely instructions received from shore, crew would use time at sea more efficiently leading to less labour hours and decreased fuel consumption.

Even on vessels with electronic monitoring systems, accurate catch information and data collected onboard is usually only shared months after a voyage is completed. Thuraya MarineStar's catch reporting, tracking and monitoring capabilities are able to transfer data immediately – thereby helping maintain regulatory compliance and aiding sustainability goals.

Mr Ben Soussia said: "In modern fishing we see an increasing push towards sustainability, catch traceability, and other forms of compliance. At present, unlike in other vessel sectors, the fishing industry is largely not taking advantage of the latest technological advances which could enable the collecting and utilising of vital information on fishing activity and catch levels. Installing MarineStar means vessels are able to benefit from the advances in technology now and are positioned ready to comply with any such future regulation."

SCT Oman selects SpaceBridge to supply multiple spot beams HTS, multi service broadband satellite network


Salim Al Alawi


David Gelerman

SpaceBridge Inc., a privately held Canadian corporation and manufacturer of High Throughput Satellite (HTS)/VHTS Broadband VSAT Satellite Network Platforms, Terminals and network solutions, has been selected by Space Communication Technologies – "SCT", Sultanate of Oman to supply an HTS Multiple Spot Beam (MSB) Broadband VSAT Network. The network to be supplied incorporates SpaceBridge's unique ASAT™ System including its turnkey WaveSwitch™, Point-to-MultiPoint Satellite Broadband Platform technology.

"SpaceBridge was selected following careful evaluation of a public tender and showed a high level of performance with the ability to provide its solution that addresses perfectly SCT's challenges using advanced MSB platform to serve various types of customers" said Salim Al Alawi – SCT Executive Director and CEO.

The SpaceBridge ASATTM Platform, sized to support SCT growth to thousands of Remote Terminals, will deliver services enabling enterprises, mobile network operators and homeland security entities to transmit real time applications data under the Arabsat Satellite coverage in the Sultanate of Oman and it's economical water . Operating multiple high throughput DVB-S2X beams in the forward channel, coupled with SpaceBridge's advanced QoS and Performance Enhancement Proxy (PEP), SCT will provide high speed and spectrally efficient bandwidth to their customers. On the returns, SCT benefits from dynamic MF-TDMA return channels delivering industry leading reaction time and bandwidth delivery based on customer demands. Additionally, WaveSwitchTM enables SCT to dynamically switch customers with higher bandwidth demands from MF-TDMA dynamic SCPC, providing SCT with benefits from high performance, improved spectral efficiency on the returns and increasing the overall satellite data throughput.

"We are very pleased to have been chosen by SCT for this vital network. SpaceBridge's technology offers unique and innovative advanced performance in the market by implementing the latest industry standards allowing our customers to provide a quality telecommunication solutions in a cost-effective manner." said David Gelerman – President & CEO of SpaceBridge Inc.

"By introducing the latest Satellite Technologies to the Omani market; SCT is aiming to provide "All in One" platform which supports several verticals, and satisfy the needs to the end user levels. In addition to introduce a cost effective managed solutions among the Sultanate of Oman. SpaceBridge was the choice to serve the low end user application all the way to the Mobile Backhauling and IP-Trunking" said Mohammad Abu Hmaidan – General Manager Commercial of SCT

"The SpaceBridge's system is fundamentally designed to be scalable and efficient for SCT as a long-standing and important partner to our business and we are happy to deploy the most effective HTS satellite network solution available in the marketplace to meet SCT current needs, we are confident in our ability to support SCT as the network grows in capacity and reach," added Jamil Joseph, VP Sales – EMEA.

Intelsat and Liquid Telecom partnered to deliver internet services to Africa

Intelsat has extended its partnership with Liquid Telecom. The two companies have collaborated for four years to deliver Liquid Telecom's multi-award-winning very-small-aperture terminal (VSAT) service over Intelsat's high-throughput satellite fleet, providing a robust, secure and reliable communications network to communities, schools and businesses in 20 countries across the continent.

Through the partnership extension, Liquid Telecom will be able to connect more than 2,000 additional VSAT terminals across the continent. This will ensure the continuity of high-speed, reliable satellite connectivity to mobile operators, carriers, enterprise, media, content companies and retail customers across Africa, and it will also help Liquid Telecom better serve the growing demand for improved connectivity in its rural service areas.

"Extending our partnership with Intelsat will enable us to continue developing VSAT products with high- efficiency models and ubiquitous coverage; in fact, Liquid Telecom has just added three new high-performance VSAT service offerings to our portfolio, each with a range of data volume options. Liquid Telecom is continuing to drive increased demand and improve service levels across the continent, and this continuation of our partnership with Intelsat is a significant boost in that regard," said Liquid Telecom Satellite Services CEO Scott Mumford.

"We are pleased to extend our longstanding partnership with Liquid Telecom, helping to connect more people, communities and businesses throughout the continent," said Intelsat Regional Vice President of Africa Brian Jakins. "Working together, we're enabling critical educational opportunities, local business growth and game-changing consumer finance solutions to reach increasing numbers of people."

Intelsat and Liquid Telecom have collaborated since 2016 to bring broadband and other critical communications services to people throughout Eastern, Central and Southern Africa. Intelsat has been an integral part of Africa's communications fabric since 1965; it was the first operator to introduce satellite services on the continent, sparking the growth of critical communications infrastructure.

ThinKom IFC Antennas interoperable with LEO, MEO and GEO satellites

ThinKom Solutions Ku3030 aero satellite antennas have been installed on more than 1,550 commercial aircraft of 16 major airlines. The antennas have accrued over 17 million flight hours and have achieved in excess of 100,000 hours mean-time-before-failure (MTBF) while supporting industry-leading 98 percent end-to-end system availability.
The Ku3030, underpinned by ThinKom's patented VICTS flat-panel phased array technology, is the core antenna subsystem employed by industry-leader Gogo in its 2Ku in-flight connectivity (IFC) systems.

"While we're proud of our impressive record of best-in-class performance and reliability metrics for our patented VICTS antenna technology to date, we're not resting on our laurels. We continue making operational software enhancements to further improve reliability and the network efficiency of our systems," said Bill Milroy, chief technology officer of ThinKom Solutions, who added that the software updates can easily be uploaded to existing aircraft installations.

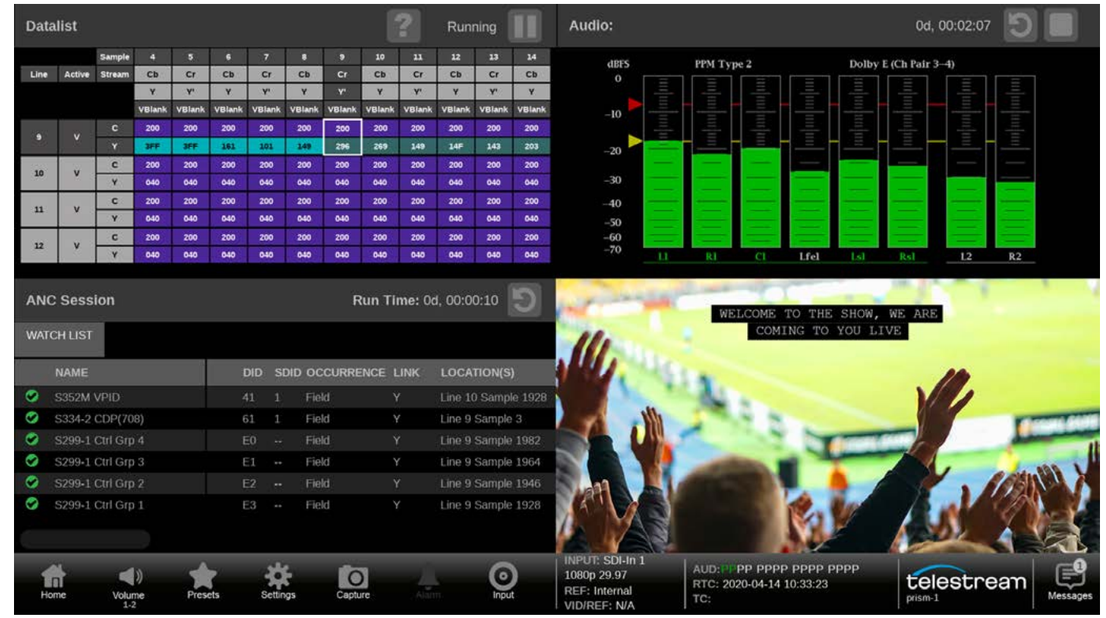
ThinKom's Ka-band IFC antennas, using the same VICTS technology, are now in production. The Ka2517 antennas are fully operational on a fleet of U.S. government aircraft and are nearing introduction on several commercial airline fleets. Multiple supplemental type certificates (STCs) are in process and are expected to be awarded this year.

ThinKom has worked closely with Gogo to develop an economical and efficient process to convert 2Ku systems to Ka-band for airlines seeking to transition to a Ka IFC solution. This offering is a very cost-effective procedure which can be completed during an overnight service.

On-Air Tests Confirm Multi-Constellation Interoperability

"We're looking to a future that will be characterized by multiple frequency bands and satellite constellations, and we're actively working to ensure our IFC solutions provide the required rapid switching speeds and agility to track and switch seamlessly and reliably between beams, satellites and constellations. The ability of ThinKom's VICTS antennas to effectively operate between satellite networks is the key enabler for IFC systems being able to operate globally and benefit from the lowest latency available," Milroy said.

In recent months, ThinKom's Ku- and Ka-band IFC antennas completed multiple ground and in-flight tests demonstrating seamless interoperability across low-Earth orbit (LEO), medium-Earth orbit (MEO) and high-throughput geostationary (GEO) satellite constellations. The live on-air testbeds included OneWeb LEO, Telesat LEO 1 and SES' GEO and O3b MEO satellites.



Telestream enhances PRISM Waveform Monitor for next gen SDI & IP Workflow applications

Telestream has announced major new functionality and software-based feature sets for its PRISM Waveform Monitor. Telestream has developed its market-leading PRISM Waveform Monitor into a single next-generation solution that is equally well suited to SDI and IP workflow applications.

With this major new version, PRISM can be optioned for all the traditional SDI Waveform Monitoring tools required in operations, compliance, quality control and post production workflows up to 8K resolution. Simultaneously, the same product offers a comprehensive suite of IP-based Waveform Monitoring tools up to 4K resolution on 25G Ethernet. PRISM includes enhanced High Dynamic Range (HDR) and Wide Color Gamut (WCG) reports and tools to increase efficiency in both SDI and IP environments.

"Whether your core business is live production, OB trucks, post production or quality control, this new version of PRISM meets your needs for today and is ready for tomorrow," commented Charlie Dunn, Senior Vice President of the Tek Video Business Unit at Telestream. "If you're looking to upgrade existing SDI infrastructures to support HDR/4K workflows, or planning an IP-based migration, you need a Waveform Monitor that meets all your needs today and future-proofs your investment."

PRISM is a software-based solution, which means one physical device can be optioned to support a complete range of applications and features. It is faster, more intuitive and better suited to today's waveform monitor demands.

Remote work capable

The PRISM user interface and API are remotely accessible, enabling remote work and social distancing production environments, which are especially relevant in the current pandemic. PRISM enables multi-user flexibility, where the operators do not need to be at the same physical location as the device. The PRISM user interface can be accessed remotely for testing, so in today's COVID-restricted world, projects can be kept on track by remote socially distanced staff.

In addition to remote working, touchscreen and dual-screen options are supported, enabling the user to adapt to their preferred working environment. Through software options, the system can easily be featured for production, engineering, quality control, IP measurement, IP generator, 4K, 8K and more. All functionality is available on the same user interface whether working remotely or using a touch screen.

Adding more than 20 new analysis tools over 8 major releases, PRISM is now one of the market's best established IP and SDI waveform monitor solutions, deployed by a large installed base of users that rely on PRISM to keep pace with industry changes, including technical updates such as NMOS or market drivers for remote work environments.

5G estimated to reach 80 million subscriptions in MENA by 2025

Ericsson Mobility Report

5G is expected to reach 80 million subscriptions in the Middle East and North Africa (MENA) region by 2025, representing 10% of total mobile subscriptions. These forecasts are included in the June 2020 edition of the Ericsson Mobility Report, along with projections for data traffic growth, and regional subscriptions.

The spread of COVID-19 during the first part of 2020 has impacted all parts of society, including the telecommunications sector. While 5G subscription growth in some markets has slowed as a result of the pandemic, this is outweighed by other markets where it is accelerating. Commercial 5G deployments launched in the region in 2019 and 5G subscriptions have already surpassed 500,000, mainly in the Gulf countries.

Fadi Pharaon, President of Ericsson Middle East and Africa, says: "As consumers and enterprises adopt new digital behaviors imposed by COVID-19 lockdowns, an increased focus has emerged for mobile and fixed networks as central components of critical national infrastructure. The latest edition of Ericsson's Mobility Report reiterates the importance of new technologies such as 5G, not just in the evolution of communication but in terms of support for businesses and societies during remote work times."

In the MENA region, around 23% of mobile subscriptions were for LTE at the end of 2019. The MENA is anticipated to evolve over the forecast period, and by 2025, 77% of mobile subscriptions are expected to be for mobile broadband. In fact, the region is expected to have one of the highest growth rates in mobile data usage during the forecast period, increasing total mobile data traffic by a factor of almost nine between 2019 and 2025. The average data per smartphone is expected to reach 23GB per month in 2025.

Value of Digital Infrastructure

The report also takes an incisive look at the role of networks and digital infrastructure in keeping societies running, and families connected during the COVID-19 pandemic.

The COVID-19 pandemic has had a substantial impact on people in many countries and their daily lives, but consumers see resilient networks as a vital help in coping with everyday's life. In a recent study conducted by Ericsson Consumer Lab, 83% of the respondents from 11 countries state that ICT has helped them to cope with the lockdown. The results show an increased adoption and usage of ICT services, such as e-learning and wellness apps, that have helped consumers adapt to new realities, underpinned by connectivity.

There is a higher than average degree of feeling supported by ICT among career millennials, parents with children at home and those living in centers of larger cities. Looking ahead, while 57% say they will save money for financial security, one-third plan to invest in 5G and an improved broadband at home to be better prepared for a potential second wave of COVID-19.

Consumers' Expectations of 5G Networks

In times of crisis, when connectivity is important for consumers to carry out work- and leisure-related activities, expectations for better network experiences become higher. Six in 10 smartphone users have a clear positive attitude towards the role 5G could have played during the crisis, and about half of them strongly agree that 5G could have offered both better network capacity and higher speeds compared to 4G. They also believe that society overall could have benefited from 5G.

There was a similar level of agreement related to 5G's role from a medical perspective. For example, medical specialists could have used 5G to control medical equipment via remote centers or 5G-enabled robots could have carried out

Fadi Pharaon, President of Ericsson MEA

tests, reducing the time medical staff need to spend in infectious spaces.

FWA takes an expanded role

FWA connections are forecast to reach nearly 160 million by end of 2025 – generating about 25 percent of global mobile network data traffic. At the end of 2019, global FWA data traffic was estimated to have been around 15 percent of the global total. It is now projected to grow nearly 8 fold to reach 53 exabytes in 2025, representing 25 percent of the global total mobile network data traffic.

FWA delivered over 4G or 5G is an increasingly cost-efficient alternative for providing broadband and several factors are driving the FWA market: demand from consumers and businesses for digital services along with government-sponsored programs and subsidies.

The report also includes forecasts on data traffic growth, regional subscriptions plus insights into cloud-based gaming as well as in-depth articles on private dedicated networks and Verizon's millimeter wave strategy for targeted metropolitan areas.

Investments in telecoms and health system pay dividends as KSA eyes economic turnaround

Oxford Business Group COVID-19 Response Report

The key part that sustained investments in Saudi Arabia's digital infrastructure have played in helping to successfully contain the spread of the coronavirus and keep the Kingdom's economic diversification plans on track is analysed in a new ICT-focused COVID-19 Response Report (CRR) by Oxford Business Group.

The global research and advisory company's report gives details of the measures implemented by the country's telecoms sector, led by (stc), which ensured business continuity throughout lockdown, facilitating the implementation of seamless work-from-home and remote education practices, alongside the implementation of digital health initiatives.

With its focus on the telecoms sector, the report provides wide-ranging coverage of the digital infrastructure upgrades introduced in 2019, which have taken mobile internet speeds up to 10th fastest in world and enabled stc to accommodate the huge increase in demand fuelled by Saudis migrating online during lockdown. It also charts the shift towards digital commerce and remote payments which accelerated during lockdown, buoyed by the Saudi Arabian Monetary Authority's decisions to raise the maximum allowed recharge limit for electronic wallets to SAR 20,000 per month. As a result, stcPay – the country's largest e-wallet – witnessed 30% growth in revenues in Q1 2020 compared to the corresponding period the previous year.

Divided into sections, the CRR provides detailed analysis of the Kingdom's resilience ahead of the pandemic and its preparedness to withstand an unexpected shock, the speed with which policies were implemented and their effectiveness in response to the outbreak, alongside the direct impact on

public health and the wider economy. It also examines the country's promising prospects for economic recovery, given its sound macro-economic indicators, while considering which sectors are likely to drive a rebound. In addition, OBG considers the opportunities for post-COVID-19 reinvention, with economic policy expected to target the industries of the future and digital growth under the national Vision 2030.

Commenting, Andrew Jeffreys, OBG's CEO, said that Saudi Arabia's multi-faceted approach to tackling the COVID-19 pandemic had helped the country to limit community transmission, while also cushioning its impact on both businesses and households, and setting the scene for a speedy economic recovery. "Prudent decisions to invest in the health system and digital infrastructure have paid dividends in these challenging times and helped the Kingdom to maintain a consistently low case-fatality rate throughout the pandemic," he said. "Our report also indicates that Saudi Arabia's efforts to enhance its investment environment, which saw the country rise 30 places on the World Bank's Ease of Doing Business index in 2020, will serve it well as it looks to bounce back in the coming months."

The COVID-19 Response Report (CRR) was produced in collaboration with stc. It forms part of a series of tailored reports which the global research and advisory company is currently producing with its partners, alongside other highly relevant, go-to research tools, including a range of country-specific COVID-19 Economic Impact Assessment articles and interviews.

Digitalisation is no longer a nice to have, it is a means for survival

Miljan Stamenkovic, Regional Director, Mambu

COVID-19 is having a transformative effect across societies, economics and offices. The tremors of this crisis have been felt in every aspect of life, highlighting the need to be able to adapt rapidly.

The impact of the Coronavirus has been a shock reverberating across every aspect of our lives and in every business. In the financial sector, the current global pandemic is forcing the hands of both fintechs and established financial institutions to prepare for a post-COVID-19 world.

As many countries are beginning to relax, or look at relaxing, measures imposed as a result of the crisis, institutions need to be ready to rapidly evolve to address a very different world and a possible recession. The future of financial services is a moving target, and institutions must streamline their operations and be able to cost-effectively bring the right products to the right customers.

It is important that companies are able to adapt in order to ensure a smooth reopening of financial markets and the economy, whether that be digital or physical.

Being agile won't just save us, it will sustain us

To succeed in a market that keeps changing, you need to be able to move quickly and be agile, composing new products and services faster.

Even with restrictions relaxing in many countries, the expectation is that many employees will continue to work from home and that face-to-face interactions will continue to be limited. The value of enabling an agile workforce through digitalisation has increased even more. Simply put, new solutions are needed across many industries, and the push for digital remains a top priority. There are also millions unable to work who are receiving support from governments backed by banks and financial institutions by implementing measures like payment holidays and delayed interest payments. This is where the ability to be agile and flexible, and work in a dynamic environment is vital.

Investing in digitalisation and putting it at the center of the business strategy provides a competitive edge and longevity. To build the best experience, financial institutions need to start changing with the market, instead of hoping the market will stop changing.

Enter composable banking

Today, even the simplest banking service involves a complex orchestration of core systems, transaction processing, decision-making, reporting, analytics, authentication, security and more. Monolithic platforms make it harder to incorporate the latest capabilities and tools, and the opportunity for financial institutions today is to replace any component whenever needed without embracing new technical risk.

Composable banking is a new approach to building banks and lending businesses that treats change as a constant. It is about having the control to use fit-for-purpose technologies to compose precisely the right design and delivery of financial services infrastructure.

With fintechs coming in and attracting customers with digital offerings, it becomes increasingly important for the established ones, like the big banks, to work on retaining their customers by digitising, and fast. To serve an agile market, financial institutions need to compose new products and features faster than everyone else to predict demand and to serve existing customers better.

Composable banking offers innovative solutions for organisations to create their own architecture for new products and services faster. It helps financial institutions create modern customer experiences to compete in the fintech era — and constantly evolve them to respond to change.

Embracing the fintech era

COVID-19 has had a transformative effect across societies, economics and offices. As market dynamics keep on changing, both fintech and established financial institutions have a chance to make a positive impact on their customers.

There is one thing in common for organisations, regardless of how far they have come with digitalisation. The COVID-19 pandemic has made it clear that you can no longer manage your business the same way as before.

In the long-term, companies can choose to embrace the new world based on rapid evolution and modern ways of working, or continue on the old paths which will see them unable to adapt when needed most.

For many businesses, adopting new and agile ways of operating based on composable banking will help guide their path and prepare them for the very different time that lies ahead of us.

Africa Data Centres acquires world-class data centre in Johannesburg

Africa Data Centres, part of the Liquid Telecom Group, has completed the acquisition of a state-of-the-art Tier IV data centre in Johannesburg from Standard Bank. The acquisition, which has been unconditionally approved by the South African Competition Commission, will prove highly disruptive to the South African data centre and co-location market and consolidates Africa Data Centres' position as the largest pan-African provider of interconnected, carrier and cloud-neutral data centres. The facility is widely recognised as the most prestigious and highly specified data centre anywhere in Africa, offering world-leading levels of security, resilience and capacity. It is also available on an open-access basis, giving every modern technology-driven enterprise the confidence to innovate and grow.

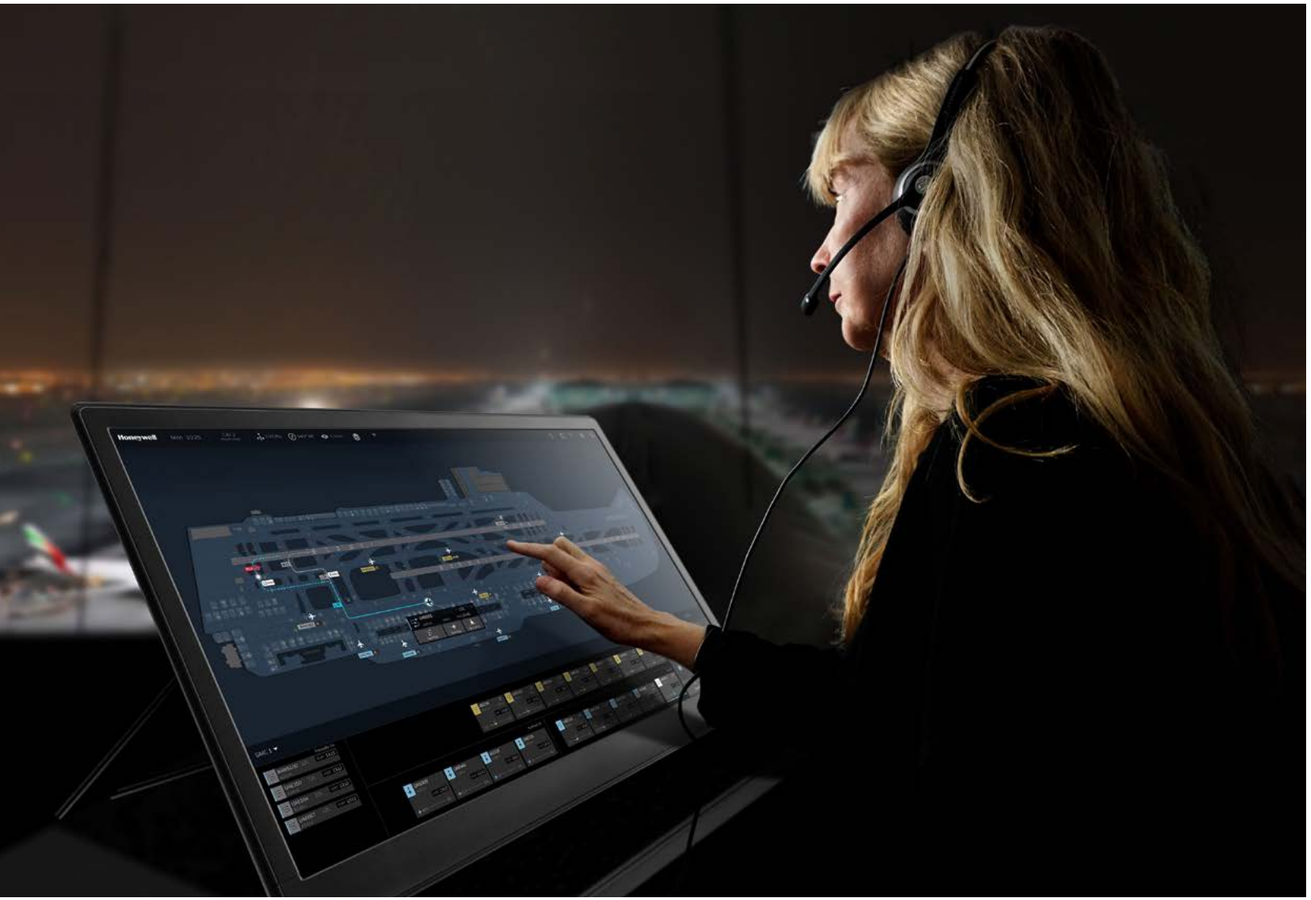
Stephane Duproz, CEO - Africa Data Centres

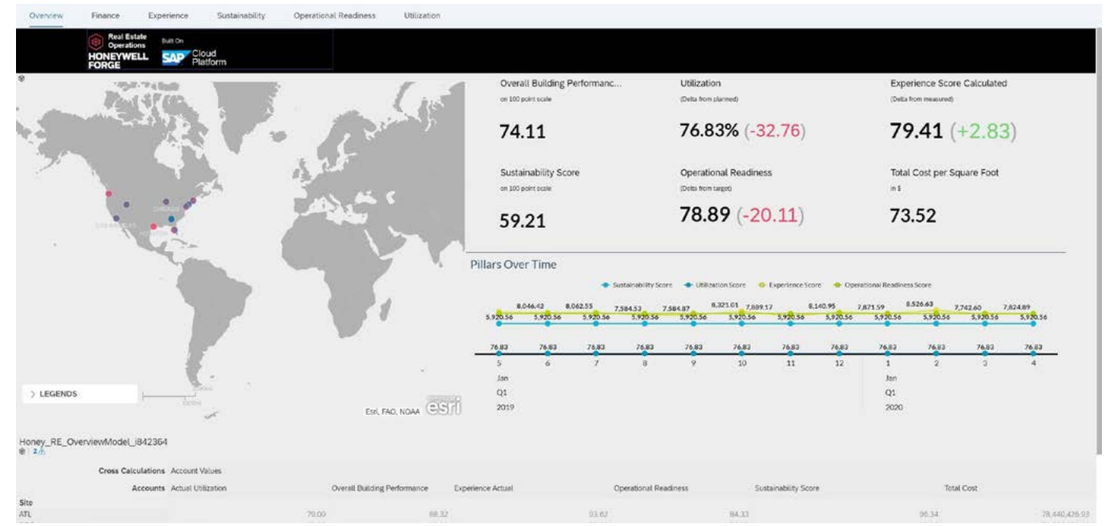
According to Stephane Duproz, CEO of Africa Data Centres, the facility will redefine the data centre experience for regional, continental and global customers. "The unique combination of this outstanding facility and Africa Data Centres' certified operational excellence is the ideal choice for the most demanding organisations, especially those in the financial services sector, who require the highest standards of security and resilience for their IT infrastructure. We cannot wait to open this hidden gem to the market," he explains. "The acquisition marks a significant extension to Africa Data Centres' pan-Africa network of interconnected, carrier and cloud-neutral data centres. It cements our continent-leading position and will further accelerate Africa's digital transformation." Jörg Fischer of Standard Bank adds, "Standard Bank is extremely pleased to have completed this historic milestone with Africa Data Centres, which is aligned with the Bank's cloud-first digital transformation strategy. Our digital vision is to bring innovation into every aspect of the bank's IT systems, transform the employee experience and in turn enable a consistently rich and rewarding customer experience."

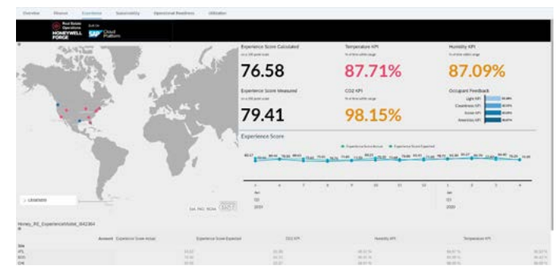
The facility has been purpose-built as a Tier IV data centre, offering maximum levels of security and reliability: an essential requirement for demanding financial services organisations. It is also unique in its configuration, featuring complete redundancy across all power and cooling components, unrivalled physical security and seamless scalability for expansion. In line with all Africa Data Centres' facilities, the Johannesburg site will also operate on a fully carrier-and cloud-neutral basis.

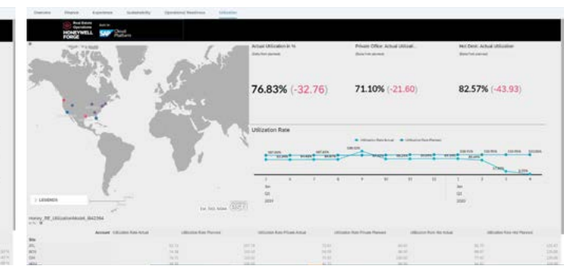
The unveiling of this remarkable facility coincides with an unprecedented level of demand from national, continental and global customers, expecting the highest levels of quality, security and reliability. In response to this demand, Africa Data Centres has also started work on a further 10 MW IT capacity facility at its Midrand campus. Elsewhere in Africa, the organisation operates facilities in Zimbabwe, Rwanda and Kenya. Its Kenyan facility is currently the largest outside of South Africa.

Strive Masiyiwa, Executive Chairman of the Liquid Telecom Group said, "We are investing heavily in South Africa at the moment, as well as the rest of Africa. We are very confident in the future of South Africa, hence this significant investment." Masiyiwa also confirmed that plans are at an advanced stage to enter West Africa, adding, "We have secured land to build the largest data centres in Ghana and Nigeria."










Christian Klein, CEO, SAP

Honeywell and SAP partner to improve building performance with cloud

Honeywell and SAP SE have teamed up to create a joint cloud-based solution based on Honeywell Forge. SAP® Cloud Platform will streamline and combine operational and business data to support better decision-making and drive greater efficiencies.

The companies' first area of focus will be the real estate industry, where building owners often need to pull data from disparate sources that are not normalized. This makes it extremely difficult to determine the true efficiency and utilization of their portfolios.

Drawing on the power of the Honeywell Forge autonomous buildings solution and the SAP Cloud for Real Estate solution, the new offering will enable facility managers and building owners to reposition their portfolios through cost savings and newly identified efficiencies, while also helping to improve tenant experience. Honeywell Forge powers a new AI-driven autonomous control capability that makes automatic adjustments to maintenance, comfort and sustainability.

As buildings come back online in the midst of the COVID-19 pandemic and economic crisis, owners are expected to focus on key performance indicators (KPIs) tied to enhanced occupant safety and reduced carbon footprint along with energy savings. By providing real-time access to these KPIs, the joint offering will help building owners optimize their operations to meet aggressive energy savings targets and substantially reduce maintenance hours. For example, in the HVAC operation alone, which is known to account for 35 percent of total energy consumption1 in commercial buildings, an AI-automated system such as Honeywell Forge can save up to 23 percent in energy costs.2

"Building owners today often struggle to get the real-time data they need to determine the true efficiency and utilization of their portfolios," said Darius Adamczyk, chairman and CEO, Honeywell. "Honeywell and SAP together will provide insights from the boiler room to the boardroom that make it easier for our customers to get a true picture of how to optimize building performance, lower carbon emissions to meet sustainability goals, reduce energy costs and help enhance occupant experience. Having this information readily accessible will allow our customers to generate tremendous business value while becoming more sustainable, and it will greatly enhance the appeal of their buildings to renters and tenants."

"Our partnership will significantly change the game in digital and intelligent real estate management," said Christian Klein, CEO, SAP. "Customers will greatly benefit from the single holistic view provided by our offering dashboard. With the addition of Qualtrics, companies can also collect employee sentiment data to provide a complete 360-degree experience measurement while optimizing occupant productivity, building performance and their entire real estate portfolio. With embedded artificial intelligence and data analysis, our solution will enable managers to determine their optimal office use and adjust their portfolios to reflect varying economic, environmental and regulatory conditions."

The solution from Honeywell and SAP will provide customers with easy access to a wider range of pertinent real estate data, including energy performance, security, maintenance, rent, taxes, location, regulations, lease terms and other costs.

The critical role of Digital Infrastructure; A view from MEA

Mohamed Samir, VP of Global Services for MEA, Nokia

The Middle East and Africa is one of the most diversified telecoms markets in the world. Stretching from Senegal to Pakistan and from South Africa to Iraq, it spans regions with highly advanced connectivity where 5G rollouts are happening at pace, as well as isolated rural areas with some of the most limited connectivity on the planet. The market is therefore a microcosm of the wider world; and at a time when half of the global population has been under confinement, the challenges faced by its telecoms networks are representative of those currently being faced across the globe.

Over just a couple of weeks, we have seen approximately 30% traffic growth in MEA networks – the same kind of growth that we would usually expect in a year. It is not just the scale of the increase that is testing operators, but also the significant behavioral changes as whole populations move abruptly to a new digital way of working and living, leaving city centers deserted and placing unprecedented pressure on residential networks. Across several countries In MEA we have noticed a massive increase in the usage of certain applications, for example, Zoom traffic has increased by 1000%, Webex by 500%, and Netflix by 50% - whilst YouTube usage is up 5-10% and social networking apps like Instagram and Facebook have seen spikes in traffic of 5-15%.

Combined, this presents a stark challenge to networks across a varied range of markets; it is a challenge our industry has risen to admirably, but one we can expect to endure.

We have now passed the initial surge in network use. We are seeing demand peaks stabilize as citizens across the world adjust to a new normal, completely reliant on connectivity. But the restrictions we are facing have fundamentally redefined the world's expectations of networks. Operators should prepare for significantly elevated levels of demand – and crucially, uncertainty around usage patterns – for some time to come.

At Nokia, we have worked closely with operators to help them responding swiftly to the first phase by reducing congestion through network optimization and upgrades; and together, we are now looking to the next phase. We see two key priorities for operators as we adjust to the changes this pandemic has brought:

Scale. The COVID-19 lockdown restrictions will continue to place extreme demands on new areas of the network, particularly indoor and residential locations. Adding capacity in these new "hot zones" through spectrum expansion and additional sites will help prepare for the uncertainty we face moving forward, where in-built scalability and flexibility will be key in both access and transport networks. In MEA, temporary spectrum allocations been granted by local regulatory in many countries to support operators to cope with traffic surge and better serve the local community. The COVID-19 restrictions have also highlighted the challenges faced by populations across the world unserved or underserved by broadband. Fixed Wireless Access solutions, built over LTE or 5G, are providing an effective way to expand broadband access to reach these communities in the short term.

Stimulate. The priority so far in this crisis has been to respond quickly and decisively to urgent challenges. However, the steps we take today will help pave the way towards our 5G future, and towards eventual economic recovery. In the coming months, operators must ensure they are evolving networks in a progressive way, making the most of network automation to create more flexible network architectures that can be run with minimal human intervention.

Telecoms will play a key role in accelerating the global digital transformation and the advance of 5G, providing a catalyst for the world's fourth industrial revolution and enabling advanced e-health, e-commerce, e-learning, cloud robotics and more. If we invest now, we can further strengthen our infrastructure, economies and societies to cope in the best way possible with whatever challenges future decades may bring.

Despite the uncertainty ahead, there is one thing we can be sure of – as we move towards a 5G world, our networks will become even more critical to everyday life. 5G networks are likely to underpin practically all critical functions of government and industry. Ensuring resilience will be of the utmost importance; it could quite literally be a matter of life and death.

To support and enable this, we will need to draw on the skills and efforts of the extraordinary teams who have helped us weather the current crisis – field engineers and operations teams who have worked 24/7 to secure and strengthen our vital infrastructure. We must thank our people and invest in them; because as advanced as our technology gets, it will only ever be as good as the people creating and supporting it.

COVID-19 impact shows networks' crucial role in society

Ericsson expects the global number of 5G subscriptions to top 190 million by the end of 2020 and 2.8 billion by the end of 2025. These forecasts are included in the June 2020 edition of the Ericsson Mobility Report, along with projections for data traffic growth and regional subscriptions.

The report also takes an incisive look at the role of networks and digital infrastructure in keeping societies running and families connected during the COVID-19 pandemic. Fredrik Jejdling, Executive Vice President and Head of Networks, Ericsson, says: "The spread of COVID-19 has prompted people all over the world to change their daily lives and, in many cases, work or study from home. This has led to a rapid shift of network traffic from business to residential areas. The latest Ericsson Mobility Report shows that mobile and fixed networks are increasingly playing a bigger part of critical national infrastructure."

While 5G subscription growth in some markets has slowed as a result of the pandemic, this is outweighed by other markets where it is accelerating, prompting Ericsson to raise its year-end 2020 forecast for global 5G subscriptions.

"Beyond measuring the success of 5G in subscriptions, its impact ultimately will be judged by the benefits it brings to people and enterprises," Jejdling adds. "5G was made for innovation and this crisis has highlighted the true value of connectivity and the role it can play in restarting economies."

Value of digital infrastructure

Changes in behavior due to lockdown restrictions have caused measurable changes in the usage of both fixed and mobile networks. The largest share of the traffic increase has been absorbed by fixed residential networks, which has experienced a 20-100 percent growth. But many service providers also noticed a spike in demand on their mobile network.

In a recent study conducted by Ericsson Consumer Lab, 83 percent of the respondents from 11 countries claim that ICT helped them a lot to cope with the lockdown. The results show an increased adoption and usage of ICT services, such as e-learning and wellness apps, that have helped consumers adapt to new realities, underpinned by connectivity. Looking ahead, while 57 percent say they will save money for financial security, one-third plan to invest in 5G and an improved broadband at home to be better prepared for a potential second wave of COVID-19.

FWA takes an expanded role

FWA connections are forecast to reach nearly 160 million by end of 2025 – totalling about 25 percent of global mobile network data traffic. At the end of 2019, global FWA data traffic was estimated to have been around 15 percent of the global total. It is now projected to grow nearly 8 fold to reach 53 exabytes in 2025, representing 25 percent of the global total mobile network data traffic.

FWA delivered over 4G or 5G is an increasingly cost-efficient alternative for providing broadband and several factors are driving the FWA market: demand from consumers and businesses for digital services along with government-sponsored programs and subsidies.

SonicWall adds multi-gigabit switch series to manage SD-Branch capabilities

Distributed organizations are continuously challenged with administering necessary security measures to thwart escalating cyberattacks to protect workforces outside of the protection of traditional networks. To simplify security deployment, management and visibility for organizations with growing branch footprints, SonicWall unveils new secure SD-Branch capabilities, and a complete line of new multi-gigabit switches, to cost-effectively scale and manage remote or branch locations. "Business success often coincides with expansion, leading to an increased need for visibility, security and bandwidth across a distributed organization," said SonicWall President and CEO Bill Conner. "As the world begins to re-open its doors, organizations must re-architect for the 'new business normal,' which includes implementing cost-effective, software-defined networking and security principles across the business."

SD-Branch Critical Technology as Organizations Re-Architect for New Business Normal

To simplify the management needs associated with distributed locations, campuses and branch offices, new SonicWall secure SD-Branch capabilities deliver single-pane-of-glass management across LAN, WAN and security controls. Complementary Zero-Touch Deployment capabilities help address the shortage of cybersecurity experts by enabling quick deployment of appliances and services. Cost-effective secure SD-WAN allows organizations to leverage less expensive internet links. Organizations also can choose cost-effective subscription license models to control costs and reduce operational overhead.

New SonicWall Switch Line Features 7 Models for All Business Use Cases

SonicWall's new multi-gigabit switch line works seamlessly with SonicWall next-generation firewalls and SonicWave wireless access points, creating an end-to-end multi-gigabit network that can be easily managed

via Capture Security Center, a scalable cloud security management system.

To maximize stack capacity, the switch can work independently, or with multiple switches, and can be daisy-chained to form a single switch with the port capacity of the combined switches. Organizations can tailor their speed and power with the option of seven different switches, managed with SonicWall next-generation firewalls (SonicOS 6.5.4.6 firmware), Web UI, CLI or the Capture Security Center (CSC). "We have a unique environment with a mix of different vendor switches," said Greg Thomas, ComLogic. "The ability to deploy two independent platform switches that seamlessly integrate with SonicWall products significantly helps streamline processes and reduce operational costs."

SFP ports can be leveraged for multi-gigabit performance up to 10 Gbps, making it ideal for SD-Branches and enterprises with increasing bandwidth needs. The switch also features gigabit ethernet ports to power on wireless access points, VOIP phones and IP cameras.

"With companies forever changing how they operate with remote employees and offices, it's more important than ever to ensure the maximum performance of applications, traffic and workflows," said Conner. "These additions will allow IT departments to focus on other issues at hand, reduce budget constraints and finally address the shortage of critical cybersecurity skills."

Accelerating Endpoint Protection for Boundless Workforces in COVID-19 Era

Employees warrant the same protection outside of the confines of corporate networks as they do when mobile or working from home. SonicWall Capture Client helps control and manage content accessed by endpoints with configured policies that allow or block access to various websites. This allows endpoint security and content filtering to be managed from the same management console and includes web activity reporting for easier monitoring. Common operating systems, including endpoints using Windows, Windows Server, Mac and Linux, are protected from malware and other malicious attacks by autonomous detection and protection in mission-critical data centers or a standalone/disconnected networks.

As the number of endpoints become increasingly significant challenges for IT departments to manage and protect, a combination of SonicWall Capture Client, Secure Mobile Access and Cloud Application Security can provide protection for end-users, devices and applications beyond the traditional network.

Boundless Cybersecurity for the 'New Business Normal'

The distributed IT reality is creating an unprecedented explosion of exposure points across enterprises, SMBs and governments. SonicWall's unified Boundless Cybersecurity platform handles the most evasive and cutting-edge threats across a 'boundless' workforce of remote, mobile and cloud-enabled users.

This approach protects organizations across a range of attack vectors, including networks, email, mobile and remote access, cloud, SaaS applications, endpoints, IoT devices and Wi-Fi. T

Pak MoIT announces the winners of National Education Challenge 2020

Top 3 innovators of the National Education Challenge were announced in ceremony that was held on Sunday through a video link by the Ignite – MoITT. Shoaib Ahmad Siddiqui, Secretary IT & Telecom graced the event as chief guest on behalf of Federal Minister for IT & Telecom Amin Ul Haq. The challenge was launched on 18th of this month by the Ignite – MoITT through NIC Karachi to mitigate the effects of COVID-19 outbreak on education and literacy.

The top solution, Taleemabad clinched Rs. 1.5 million, the startup promises to increase engagement through different assessments that can be implemented on a daily-basis which will help individuals to overcome daily life challenges,. The first runner-up, Halla Gulla was awarded Rs. 1 million for their solution to address the importance of early childhood education and its impact on generating fast learning results besides building a strong foundation, and second runner-up, Nativ Learning received 0.5 million for expanding the rate of literacy by making education material available in native languages which are seamless to understand. The prize money has been awarded to these ingenious ideas as SEED Funding so that the young founders can further develop their products/solutions.

National Education Challenge received 150 applications from across Pakistan. 15 online training and mentoring sessions were conducted during the application phase to motivate innovators, educators, and technologists to participate in the challenge. Renowned tech educationists and industrialists Judged 150 ideas to select top 25 ideas which were further mentored by industry leaders to prepare them for pitching in the semi-final which was held on 26-27 June 2020. 10 ideas made to the grand finale to compete for the top 3 position.

In his message, the Honorable Federal

Shoaib Ahmad Siddiqui
Federal Secretary IT & Telecom

Minister for IT & Telecom, Amin ul Haq lauded the youth for coming up innovative solutions that are designed to get the modern educational tool within the reach of all strata of society. He also congratulated Ignite and NIC Karachi for conducting a meaningful online - hackathon.

Shoaib Ahmad Siddiqui, Secretary IT & Telecom said that we are geared up to transform every sector by implementing 4th Industrial Wave Tech. We should organize more innovation challenges and sprints to inspire the spirit of creating new solutions that can counter the adverse effects of COVID19 in Pakistan.

Syed Junaid Imam, CEO Ignite congratulated the winners and hoped to see them utilizing the SEED grants for developing their products/solutions with a meaningful impact. He also divulged the recent initiatives launched by Ignite such as funding for COVID centric health solutions, AgriSurge Challenge 2020 to find innovative solutions that can revolutionize agriculture sector in Pakistan through 4th Industrial Wave (4IW) tech.

Nokia's research highlights 5G FWA opportunity for operators

Nokia new research highlights 5G Fixed Wireless Access (FWA) as the most desirable 5G use case amongst consumers globally. The study, which was conducted by Parks Associates, surveyed 3,000 people in the UK, US and South Korea and examined consumer understanding and demand for 5G services across six different use cases including autonomous vehicles, video surveillance and immersive technologies1. The research confirms that there is an opportunity for mobile operators to compete with broadband providers by offering FWA to homes and businesses.

The new research highlights that 76 percent of all respondents regard FWA as the most appealing use case overall, with 66 percent claiming they would subscribe to 5G FWA if it cost the same as their current broadband service and delivers the same or better performance. Indeed, more would subscribe if it cost less. Currently, 41 percent of respondents only had the option of a single broadband provider with many resenting this lack of choice. This highlights the opportunity mobile operators have to offer FWA as an alternative to traditional broadband services.

The research was conducted prior to the global COVID-19 pandemic, which has driven the world to work and learn from home, however, this has coincided with consumer demand for better quality video calls. Indeed, 90 percent rated high-quality, uninterrupted video streams a "very valuable" aspect of 5G. Additionally, a majority of consumers find 5G video use cases attractive, with 66 percent rating video capture and streaming applications appealing, and 69 percent rating video detection and alerting appealing. More than one-third of consumers found AR experiences for remote commerce appealing even before the COVID-19 crisis. The need and appeal has likely increased with social distancing.

More broadly, the outlook for 5G is positive based on the findings. Although current familiarity with 5G remains quite low, with just half of consumers claiming any level of familiarity, the appeal of 5G increases with education. Eighty percent of those very familiar with 5G find it appealing compared to 23 percent of those who are unfamiliar. Further, over 50 percent of smartphone owners said they were likely to switch operator if their current provider doesn't offer them 5G in the next 12 months.

"The Road to the Future"

Zain Group publishes ninth annual sustainability report

Zain Group has announced the publication of its ninth annual sustainability report, entitled "The Road to the Future".

Embedding sustainability in every aspect of its business, Zain is dedicated to its digital strategy of consistently working towards developing the mobile telecommunications ecosystem centered on a vision of inclusive development that leads to socio-economic growth.

In this consolidated Group-wide report, the company focuses on the concept of providing Meaningful Connectivity which triggers systemic change, ultimately creating room for development and growth, aiming to address the company's social, economic and environmental impacts.

Noteworthy, is the FTSE Russell's inclusion of Zain Group in its FTSE4Good Index Series, the world's leading Environmental, Social and Corporate Governance (ESG) index, a key indicator to help investors identify companies that meet globally recognized sustainability standards.

'The Road to the Future" report includes Zain's key ESG indicators which is primarily based on the company's sustainability strategy and initiatives, established on six main pillars with its activities driven by the following imperatives: Creating shared value; Promoting social innovation; Inclusivity and leaving no one behind; Addressing Sustainable Development Goals; Tackling climate change; and Youth empowerment.

Zain Vice-Chairman and Group CEO, Bader Al-Kharafi commented, "Now more than ever, the need for a fundamental systemic change is central to the region's transformation and growth. In our world, digital and technological advancements offer endless opportunities to not only address negative impacts but create positive ones. Through digitization, our wide range of services, and reach, Zain aims to unlock the possibilities that the Sustainable Development Goals (SDGs) offer and the publication of this report is testament to our ongoing efforts and resolve."

Al Kharafi continued, "FTSE Russell's inclusion of Zain Group in its FTSE4Good Index Series reconfirms our commitment to embedding ESG principles in every operational aspect of the company."

On her part, Zain Group's Chief Sustainability Officer, Jennifer Suleiman said, "In an era of rapid change and disruption, having a forward-thinking vision is an essential aspect of our sustainability strategy. At Zain, we welcome the tides of disruption as they often provide us the chance to evolve in a positive manner."

Suleiman added, "It is short-sighted for a company not to consider what the impact of its operations are on the environment and adjust its way of doing business accordingly. The reason we remain so committed to publishing our sustainability reports is to be extremely forthcoming of our own experiences in this area, and to inspire others to follow suit and have real conversations and implement real solutions in the pursuit of truly sustainable programs."

Action in motion

Internal and external stakeholders alike are at heart of Zain's sustainability activities. Throughout 2019, some of the significant developments undertaken by Zain and its

operations include:

Regarding the universally important issue of climate change, Zain became a member of the GSMA Climate Action Task Force with the objective to play a more strategic role in addressing the company's environmental footprint. By becoming a member of the Carbon Disclosure Project, which provides a reporting framework and guidance to address climate change, Zain also installed 849 outdoor (base station/power) solutions and 91 small shelters across its operations to reduce carbon dioxide emissions, while deploying 25 solar and hybrid base solutions. These actions symbolize a firm step by Zain in the fight against climate change.

Zain continued to solidify its supply chain process through implementing initiatives such as the Supplier Assessment Questionnaire; joining up to the Supplier Code of Conduct; alignment to international best practices through Zain's ESMP Guidelines; and supporting two audit visits per year on selected suppliers on social and environmental criteria.

From an economic perspective, the company has expanded its life-enhancing digital financial services available in Jordan and Iraq under the Zain Cash brand, to now include Saudi Arabia, under the brand name Tamam, an end-to-end digital microlending platform offering micro-loans to vulnerable communities in the Kingdom. 52% of men, and 35% of women possess a bank account in the Kingdom, though among the unbanked population, 86% men and 75% of women own a mobile phone. Moreover, Zain Kuwait and Boubyan Bank announced plans for the development of the first digital platform for Islamic banking services, marking the first digital partnership of this nature in the region made between one of the biggest regional telecom entities. This encourages the development of digital banking services helping support startups and emerging enterprises and contribute to the incredible digital innovation taking place across the region.

With respect to the people at Zain, who are the heart of the organization, the company further enhanced its Gender Diversity and Inclusion program building its Women Empowerment initiative aiming to develop and increase female leadership. Furthermore, Zain launched its WE ABLE program to promote diversity and inclusion in the workplace aiming to become Disability Inclusive by 2022 and became a signatory to the International Labor Organization (ILO) Global Business and Disability Network Charter. Zain firmly believes it is important that the contributions that people with disabilities can make in our workforce and in society in general are given ample opportunity to be recognized.

Moreover, Zain's Youth (ZY) Empowerment Program plays an instrumental role in empowering youth in the region. Initiatives launched under ZY include Generation Z; a year-long graduate program in Kuwait that enhances digital and behavioral skills preparing them for future employment and contributing to society at large; Zainiac, an internal e-platform that aims to encourage intrapreneurship within the organization and thereafter support in the incubation process and developing the business idea, noting the initiative has received over 700 unique ideas; and Reverse Mentoring, aiming to improve diversity and inclusion by reducing gaps between younger and senior employees, whereby youth act as a sounding board for new product launches and initiatives, better understanding one another's perspectives.

> **"Now more than ever, the need for a fundamental systemic change is central to the region's transformation and growth"**
>
> *Bader Al-Kharafi*

Engaging with its teams across the region, Zain organized several forums to align departmental strategies and objectives with the main aim of sharing best practices and scaling the opportunities of Meaningful Connectivity that empower the communities Zain serves. Functions included Regulatory, Digital, Risk Management, Commercial, Legal, Procurement and Technology.

From a products and customer perspective, Zain launched 5G networks in Kuwait and Saudi Arabia, expanded much needed 4G networks across other key markets and continued to expand its B2B presence expanding its reach by including SoHo (small and home offices) and SMEs segments. Furthermore, the company is moving forward in its plans to set up a centralized ICT and Digital professional services hub that serves Zain's operations and other business entities across Zain's footprint and beyond. This hub will provide Cloud and Cybersecurity services, IoT, Big Data and Analytics as well as a wider spectrum of new technologies covering areas related to Artificial Intelligence, Blockchain and Drone solutions to name a few. It is through these key steps that exemplify the efforts that the connectivity Zain provides takes a life of its own, and embodies the true meaning of Meaningful Connectivity, further accelerating much needed systemic change.

The company also scaled its Zain Group API, growing it exponentially in products offered and customer usage in Kuwait, Jordan and Saudi Arabia and expanding it during the year to Bahrain, Iraq and Oman. The social ambition is to open some of Zain's assets to emerging developers both regionally and internationally with the aim of creating new opportunities for young entrepreneurs to partner with Zain. This will allow the company to provide their services to our customers therefore expanding their reach ultimately creating shared value for both the company and the entrepreneurs. One relevant example that had multiple benefits, is Zain's launch of the Zain Kids application offering educational games and videos that can be managed by parents.

Safeguarding future generations and mitigating negative impacts of broadband connectivity is an especially important part of Zain's sustainability agenda, and the company reinforced its commitment to protecting children, publishing a report titled "Child Online Safety: Minimizing the Risk of Violence, Abuse and Exploitation" online under the Broadband Commission Working Group: Child Online Safety.

GLOBAL ICT, TELECOM & SATCOM EVENTS 2020

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London, UK

01-03 September 2020
5G World
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Dubai, UAE

13-16 September 2020
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Dubai, UAE

14-15 September 2020
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avia – Asia Video Industry Association
Satellite Industrial Forum
Singapore

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5G Asia
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26-28 October 2020
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3-4 November 2020
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TCCA Critical Communications World 2020
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Welcome developers to join us!
Contact us: mecloudai@huawei.com