

WHAT'S THE BUZZ? TECHNOLOGY

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INTERVIEWS:
SIÂN GODDARD
WRITING:
MARK BERESFORD
EDITING:
CARMEN MOURA
DESIGN:
ANTONIO CAPARRÓS
VASAVA
www.thebuzzbusiness.com

Ever since the Neolithic Revolution gave us agriculture, trade, city states and even art and culture, the history of human beings has been a story of technological development. From the discovery of iron smelting to the invention of gunpowder, the printing press, the car and the computer, new technologies have continually reshaped the world we live in.

What has changed in the last few years is the pace of this change. Whereas before it took inventions decades or even centuries to spread across the world, recent innovations such as the smartphone and the Internet have upended whole industries in a matter of years. Adapting to this accelerating pace of technological change is perhaps the greatest test facing all contemporary organizations.

The latest Buzz feature shows just how some of the world's leading businesses are rising to the challenge.

In a world where consumer tastes can transform almost overnight, only those companies with the ability to respond rapidly, innovatively and imaginatively to change will be able to survive and thrive.

In the automotive industry, carmakers in Europe have had to adapt to a seismic shift in market demand that has been as shocking as it has been unexpected. In just a few years, demand for compact three-door hatchbacks, once the bread-and-butter of nearly every company in the business, has fallen to almost negligible levels. As consumers migrate to SUV designs and five-door body types, carmakers have been forced to eliminate some of Europe's most iconic three-door models from their catalogues altogether.

For South Korean car manufacturer Kia, which rose to prominence partly on the back of a reputation for reliable compact models such as the three-door Ceed, the revolution in the market could have been disastrous.



The ProCeed: good looks, great personality

Instead, the company seized the opportunity to reinvent the Ceed range and elevate the Kia brand to a higher level by launching its jaw-dropping ProCeed, a five-

Flexibility is the key to the future.

Emilio Herrera,
COO, Kia Motors Europe

door shooting brake body with an emotive, swept-back design unlike anything else in its segment.

Q&A WITH Albert Biermann, Head of Research & Development Division, Hyundai Motor Group

New models such as the ProCeed five-door shooting brake are repositioning Kia as an aspirational marque for couples and young families, helping to breathe new life into Europe's enduring love affair with the family car.

What has the new ProCeed added to the Kia range, in terms of the driving experience?

I am a strong advocate of balancing the driving experience with the styling of a specific vehicle. The new ProCeed is a good example of character

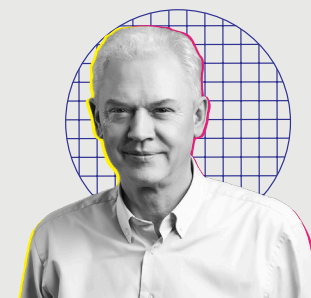
matching. The unique styling convergence of dynamic elegance and versatility finds its equivalent in the driving experience. Driving precision, agility and smooth power combined with good sound isolation and ride comfort puts the ProCeed in a unique position in the market place. The design appeals and the driving experience makes the deal.

How important is the GT engine to the whole Ceed experience?

The Gamma 1.6 Turbo is the smooth and powerful heart of our top models, the GT models. This engine in combination with our dual-clutch transmission offers a wide range of driving character and shows the emotional potential of the Ceed family. I'm convinced the GTs will challenge some hot hatches for driving fun and overall vehicle balance.

“The ProCeed was something of a gamble for us, but a gamble that has fully paid off,” says Emilio Herrera, COO for Kia Motors Europe. “It has added an emotional dimension to our brand and helped us attract customers who would not normally think about buying a Kia.”

Combining youthful dynamism and head-turning looks with the space and versatility of a tourer, and available exclusively as a GT Line or high-performance GT model, since the turn of the year the ProCeed has



Why is Kia focusing so much on fun and emotion?

Kia is a young and emotional brand with iconic cars like the Soul or Stinger. We want to touch the hearts of our customers and not just reach their brains with our excellent safety and quality.

At Kia, how are you improving the driving experience?

In our group, Kia has the power and the role to surprise and this first

been repositioning the Kia brand and setting new standards in its market. Kia recorded its best-ever quarterly sales in Europe during the first three months of 2019, with the radical redesign of the Ceed range helping the company win share from less ambitious rivals. Just in March this year, Kia sold as many models of the new ProCeed as it sold of its predecessor during all of 2018.

“There is no competitor to the ProCeed in our market.”

Artur Martins,
VP Marketing and Product
Planning, Kia Motors Europe

“The ProCeed is an affordable product in an affordable segment but with the DNA, energy and emotion of a sports car,” says Artur Martins, vice president of marketing and product planning at Kia Motors Europe. “It has become a brand shaper for our entire company.” ■

of all means outstanding design. From our next generation of Kia champions, like the Optima, Sorento or Sportage, you can expect advances in the human factors of operation, such as enhanced connectivity and further advanced driving assistance systems for safety and convenience. In our new architecture for electric vehicles, we are working on Kia models that have the potential to take the driving experience of balanced emotion to the next level. Of course, we are not forgetting about fun to drive, with further improvements in ride, handling and NVH (noise, vibration and harshness). People spend quite some time in their vehicles. They should enjoy the drive. ■

GAS BREAKTHROUGH TRANSFORMS HEAVY TRANSPORTATION

More than 20 years after capital goods giant CNH Industrial launched its first trucks and buses powered by natural gas, the technology is breaking out of

its niche markets and poised to dominate the mainstream.

“Gas is no longer an alternative for the future,” says Annalisa Stupenengo, president of CNH Industrial’s Powertrain segment—represented on the market by the FPT Industrial brand—and an inspirational role model for the



The IVECO Stralis NP 460hp traveled 1,728 km by road from London to Madrid

POWER WOMAN AT THE WHEEL

What are the advantages of gas for vehicle operators?

Today a vehicle that is equipped with a gas engine may cost more, but when taking into account fuel consumption and the price of fuel, the total cost of ownership is lower. Fuel savings can reach 30% compared to diesel. The vehicles may also benefit from subsidies and tax incentives. The performance in terms of power is the same as its diesel counterpart. And of course, the environmental improvements are significant, with substantially lower greenhouse gas emissions, particulate matter and noise. CO₂ emissions can be close to zero. As a result, gas trucks are allowed into low emission zones where diesel vehicles are not permitted.

What are the other environmental benefits?

Sustainability is part of our

DNA at CNH Industrial. We are very excited by the possibility of creating a truly circular biomethane economy. Our customers could produce biomethane from agricultural biomass or from urban waste and use that gas to power their vehicles. It is a completely carbon-neutral cycle. For farmers, it is also an ideal opportunity not only to cut the cost of fuel but to create their own fertilizer and generate electricity for their own farm and for the national grid.

What challenges have you encountered as a woman in an industry dominated by men?

Sometimes stereotypes have seemed more important than reality. In my first jobs, every time I entered a meeting room people thought that I was an assistant or just a young lady bringing in the photocopies or slides. As a woman, you have to take on those stereotypes and show that you are as good or better than the men at what you do. You also have to act in a team and make sure that all team members share the

same goals and the same vision. Sometimes, as a woman it is easier to assign the right value to diversity inside a team.

“Gas can deliver the same level of performance as a traditional diesel engine, but with lower Total Cost of Ownership (TCO) and much lower emissions.”

Stupenengo started her rise to the top of the industry in 1996, when she joined the purchasing department of Fiat Group. In recent years, her ability to confront stereotypes head-on and to challenge accepted ways of thinking in a male-dominated industry has helped position CNH Industrial as a global pioneer in alternative powertrain technology.

“Being a woman in an environment where women are uncommon can help you think outside

the box,” she says. “It can help produce lateral thinking that considers some aspects of the world picture that other people may not be looking at.”

That lateral thinking has been quick to generate results. Initially confined to buses and refuse collection, demand for CNH Industrial’s gas-powered vehicles is soaring across sectors ranging from farmers to construction companies to long-distance truck businesses.

Powered by Stupenengo’s determination to break down barriers, the company now has its sights set on the final frontier in alternative fuels: hydrogen fuel cells. “We think hydrogen is the long-term solution,” Stupenengo says. “It is the cleanest fuel possible.” ■



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I would encourage every woman in this industry to follow her dreams. If you believe

“A sea change is taking place in propulsion technologies.”

Annalisa Stupenengo, President, Powertrain, CNH Industrial

in something, if it is doable and it is the right thing for the company, then you only need to act in order to realize it. ■



Barcelona is an ideal testing ground for micro mobility solutions

THE URBAN MOBILITY REVOLUTION

For today’s urban visionaries who are reimagining the role of the car in the 21st century, there is no more inspiring playground than the historic and vibrant city of Barcelona.

Few cities can rival Barcelona for the diversity of its built environment, which ranges from the labyrinthine medieval walkways of the Gothic Quarter to the 19th century grid system of l’Eixample and the more recent redevelopments for the 1992 Olympic Games. With the global urban population set to surge to 68% of the total by 2050 from 55% currently, this forward-looking and creative metropolis has become the perfect real-world testing environment for the transport innovations that the world’s cities so desperately need.

“Barcelona is the ideal place to be when it comes to trialing new

“We want to create the future of urban mobility.”

Luca de Meo, President, SEAT

ways to reinvent the transport and logistics system of today,” says Luca de Meo, the president of Barcelona-based car manufacturer SEAT. “It is our good fortune that our hometown is a dynamic hub for urban innovation and is widely considered to be one of the smartest cities in the world.”

At the Mobile World Congress in Barcelona in February, SEAT

released a concept car that represents a radical new answer to the challenges of urban reinvention. Dubbed the SEAT Minimó, the all-electric two-person quadricycle combines the safety and comfort of a car with the agility and easy parking of a motorbike, with a total footprint of just 3.1 square meters compared with 7.2 square meters for an average city car.

In addition to the physical design of the SEAT Minimó, it is the strategic thinking behind the car that has created the biggest buzz in the automotive world. The SEAT Minimó is the first-ever vehicle to be purposely designed for shared mobility services, incorporating an innovative battery-swap system that can reduce the operational costs of an electric carsharing system by up to 50%. Tailor-made for a world in which authorities limit the access of personal cars to city centers, the SEAT Minimó points the way to a future when zero-emission carsharing services will provide a cleaner and smarter form of transporting people for short distances around an urban area.

“This is the solution that carsharing companies have been waiting for,” de Meo says. “It is potentially a revolution for sharing platforms.”

“Urban mobility is changing and our role as a manufacturer and provider of mobility is changing with it. We are now more than a carmaker. With the SEAT Minimó, we are future-proofing SEAT and leading the mobility revolution.” ■

Dr. Sebastian Grams, CIO, SEAT

QA

How is SEAT getting ready for a new era in mobility?

We are preparing SEAT for the coming century. We are already very well positioned in connected cars and we are digitizing our company step by step. It is my responsibility to help SEAT build up its software capability to prepare for the digital future. This year we are creating our own software house. Our aim is to be the front-runner in solutions such as digitized services for

“Software development is critical to the future of the car industry.”

connected cars and new mobility concepts such as SEAT Minimó,

an all-electric concept car that combines the best of cars with the best of motorcycles. As of 2019, it is SEAT’s job to spearhead the Volkswagen

Group’s micromobility strategy by coming up with ideas and creating products specifically designed for short trips within cities.

Why is now the right time for SEAT to invest more in software development?

We need to adapt to a fast-changing environment and successfully complete the company’s digital transformation. Having our own software house employing more than 100 people here in Barcelona will help us digitize our processes and develop new business models and mobility services. To transform from a car manufacturer into a mobility

company, software has to become one of our core competences.

How are digital technologies already changing product development at SEAT?

We have increased our use of computer simulations. Because road tests can be carried out on a computer, simulations save us a lot of time, effort and materials. For testing future mobility solutions, we also utilize very advanced simulators that can take into account vehicle-to-vehicle communications. Other important technologies include Augmented Reality (AR) in the design process and 3D printing in prototyping, design and production.

Big Data is another priority for SEAT. Our aim is to learn from

the data we are collecting in our internal processes and to create algorithms that could help us

in purchasing decisions: for example, algorithms which tell us when it is the best time to place an order.

How is SEAT innovating in powertrain technology?

We strive to offer as many powertrain technologies as possible to drivers. We are strong believers in the potential of gas, and we have already launched several models that are powered by CNG (compressed natural gas). We have already started our e-offensive by presenting the 100% electric concept car SEAT el-Born, the SEAT Minimó concept and the CUPRA Formentor, a high-performance plug-in hybrid CUV. ■



The SEAT Minimó



FANTASY BECOMES FACT IN WORLD OF MOBILITY

For generations, futuristic technologies such as robotaxis and elevators that move sideways through buildings have been a staple ingredient of science fiction and fantasy movies. Now, thanks to the power of digitalization and artificial intelligence (AI), these are becoming a reality, leading urban mobility and architecture into exciting new territory.

Already, ordinary car drivers have access to a range of navigation, safety and infotainment services that just a few years ago existed only in the imagination of film-set designers and games developers. Nvidia, whose technology powers the lane control and parking assist functions of most cars today, started life as a specialist in video games and animation. “We helped bring modern consumer technology

Ropeless elevators unlock new possibilities for buildings; with Formula E, Nissan is showcasing its vision of Intelligent Mobility into the car industry,” says Danny Shapiro, Nvidia’s senior director of automotive. “The systems we build are now the brains inside self-driving vehicles.”

Cruise control and lane keeping represent only the first steps in the journey towards cars, trucks and buses that are fully powered by AI. The latest version of Nvidia’s DRIVE platform enables vehicles to detect camera blindness—for example, when the sun shines directly into a sensor or when mud or snow limit a camera’s vision—prompting the car to take appropriate action. The system even incorporates facial identification, so that a car will be able to open its doors or start its engine automatically when a recognized driver approaches.

By feeding these systems with vast volumes of data, Nvidia developers are also helping vehicles learn for themselves how to recognize different road users such

as pedestrians, bicycles, fire trucks, dogs and cats, increasing traffic safety and opening up the roads to new segments of society.

“What we are developing will save lives and give people who are blind, disabled, too young or too old unprecedented access to driving,” Shapiro says. “It will change society for the better.”

Software is also playing a crucial role in another aspect of the revolution on our roads: electrification. “People focus on batteries and motors, but software is just as important,” says Michael Carcamo, global motorsport director at Nissan, one of the world’s leading producers of electric vehicles (EVs). “It’s software that will drive the performance and capabilities of EVs in the future.”

Meanwhile, digitalization is opening up a new chapter in the history of the unsung technology that has made today’s high-rise

cityscapes possible: the elevator. In the 800-foot-high Innovation Test Tower of thyssenkrupp Elevator in Rottweil, Germany, the company’s MULTI elevators use data from Internet of Things (IoT) sensors and AI to predict demand and send cabins to the floors where they are most needed, by large groups at peak times or even by regular individual visitors.

Even more dramatically, the elevators can achieve all this without ropes and move in new directions. Inside its test tower, the company has installed cabins using sophisticated linear induction motors rather than cables and belts. “Our elevators can move both vertically and horizontally, making it possible to serve buildings with no limitations to height or design,” says Prof. Michael Cesarz, CEO of the MULTI division at thyssenkrupp Elevator. “It opens up totally new possibilities in architecture.” ■

Q&A WITH Prof. Michael Cesarz, CEO, MULTI, thyssenkrupp Elevator

Why does elevator design need to change?

Elevators enabled the first high-rise buildings. But until now the basic principles have never really changed. Elevators are still cabins hanging on ropes. However, we are now seeing buildings that are more than 800 meters high. Conventional elevators are reaching their limits. We need a new concept.

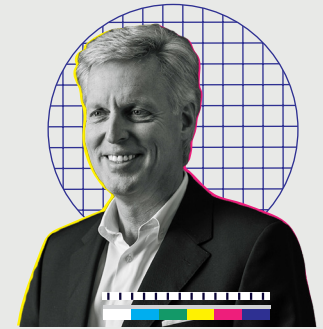
How does the MULTI elevator work?

When we started looking at how to reinvent the elevator, someone joked that we needed to cut the ropes. We suddenly realized that without ropes, elevators can serve taller and taller buildings. Plus, by using linear induction motors and

An elevator is the nervous system of a building and the shafts are like the backbone.”

lighter cabins, the elevators can go horizontal and even inclined, enabling new possibilities. There

could be sky bridges to connect cities on an upper level, or direct connections between underground



metro systems and buildings. We want our elevators to connect seamlessly to public transportation

systems such as buses and trains.

What are the main benefits of MULTI?

Because multiple cabins run in one shaft, like a continuous train track inside a building, we can reduce the number of elevator shafts in a building by 30% to 50%. We can save space and either reduce the footprint of the building or host more people. Then, thanks to digitalization, AI and the IoT, we can optimize usage, reduce waiting times and make every building a pleasant place to work, visit and live. ■

THE PEOPLE-FIRST ORGANIZATION

Donna Kimmel, EVP and chief people officer at Citrix, is a recognized expert in delivering cultural transformation at large organizations and in creating meaningful programs that empower people and maximize productivity. Here, she talks about how new technologies are reshaping the workplace and turning the talents and aspirations of employees into the primary driving force of business success.

How is digital technology changing the relationship between employer and employee?

Over the past five to seven years there has been a strong shift in power favoring employees. There is a transformational change taking place across organizations, with new technologies enabling companies to adopt a people-centric culture that powers collective business success. At a time of increasing technological complexity and social challenges, our solutions can help reimagine the workplace and put people and productivity first.

How is the importance of human capital changing as a consequence?

For a company to be successful, you need a strong business strategy and you need to drive your financials in the right direction. But you can’t do any of that without the right people. In my own career, I have seen the HR function take on a new role advising the leadership team about

forming a people-first strategy that drives results.

How can companies respond to the needs of millennials and Generation Z?

Millennials have done a great job at pushing for better ways to get work done. Their emphasis on purpose-driven work, flexibility and innovation has benefited us all. Having an engaged, talented and motivated multi-generational workforce is critical to the success of any organization.

Companies need to create a workplace that enables employees from all walks of life to be their best every day, within a flexible environment that enables them to collaborate whenever, however and wherever. Work is not a place across organizations, with new technologies enabling companies to adopt a people-centric culture that powers collective business success. At a time of increasing technological complexity and social challenges, our solutions can help reimagine the workplace and put people and productivity first.

I believe human capital is as important as financial capital.”

Donna Kimmel, EVP and Chief People Officer, Citrix

What can Citrix do to deliver that vision?

We are how the future works. Not only are we creating solid business solutions centered on experience, security and choice, we are customer one of our technologies. We’re taking our experiences and using them to build better offerings for our customers. Everything from flexible working to intelligent workspaces that learn our behaviors and save us time. We have an employee-centric vision we’re ready to share with the world and help employees and employers everywhere deliver amazing ideas and results. ■



MAKING SMART CITIES HUMAN

One of the leading figures in the Arab technology world and a regular speaker at international conferences, for more than 20 years Dr. Aisha Bin Bishr has been on the cutting-edge of ICT development for the public sector in the United Arab Emirates. As the director general of the Smart Dubai Office, she is now helping turn Dubai into a recognized benchmark for smart cities around the world.

Technology is one of the biggest gifts that women have received.”

Dr. Aisha Bin Bishr, DG, Smart Dubai

How do you think technology has improved the lives of women in Dubai and the UAE?

Not only in Dubai but in the Gulf states in particular, and across the Middle East and North Africa in general, technology has empowered women. It has given them a voice and helped them contribute not only to their families but also to the economic development of their countries. Using platforms like blogs, Instagram, Twitter and Facebook, women have been able to start their own businesses and promote their knowledge and ideas. Technology is one of the biggest gifts that women have received. It has changed their lives dramatically.

What role do women play in the government of the UAE?

Many people are surprised when they find out that in the UAE women account for almost 66% of government-sector workers. There are eight female ministers, representing one third of the

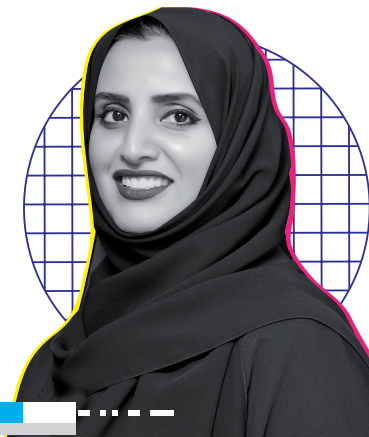
seats in the cabinet. The Federal National Council is chaired by a woman and 20% of the council are women. The target is to achieve 50%.

What are the advantages of being a woman in the smart-city space?

Women see things from a wider perspective, while at the same time pay attention to the details. When you work with developers and in the technology field, it is easy to forget that people are human beings who get sick, feel happy and are sometimes in a bad mood. I tell my colleagues not to forget that at the end of the day we are human. We are not robots. That is also what makes Smart Dubai’s vision different: Our vision is not about implementing technology, it is about how to serve people. We embed happiness at every layer of our smart city strategy.

As a recognized role model for women in tech, what is your advice for other Arab women in the sector?

I would encourage every woman to stand up, define her own future, overcome all her challenges and not allow anyone to come and tell her what to be in the future. No matter what your background or challenges, you can implement your dreams if you believe in them. No woman should allow others to define her future for her. ■

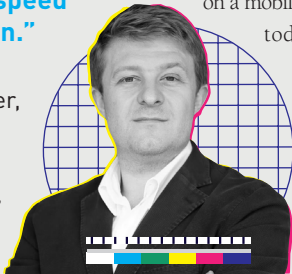


THE NEXT LEVEL FOR GLOBAL GAMING

Ever since the release of the first consoles in the 1970s, video games have transformed home entertainment and helped turn technologies such as personal computing, smartphones and the Internet into essential features of everyday life. Now the gaming industry stands on the brink of

“In our games we are prioritizing connectivity, speed and immersion.”

Victor Kislyi,
CEO and Founder,
Wargaming



another revolution, with artificial intelligence (AI), virtual reality (VR) and 5G mobile poised to unleash a new era of innovation.

Victor Kislyi, the Minsk-born chess prodigy who founded Wargaming and created legendary games such as World of Tanks and World of Warships, discusses how the industry is developing new narratives for the latest generation of computers,

consoles and smartphones, feeding the growing appetite of hundreds of millions of gamers around the world.

How are new technologies impacting gaming demand?

The development of computer games echoes the development of books. Books used to be inaccessible and very expensive but became cheaper and more popular with the invention of printing technology. The same trend is now happening with computer games. The easiest and most accessible way to play games now is on a mobile phone. Everyone today is carrying a

super computer around with them in their pocket 24/7. This means that everyone can play mobile games, even without an Internet connection.

How is the profile of the average gamer changing as a result?

Whereas years ago gaming was seen as a geeky hobby, now it has become part of our daily life. Every kid is a gamer now. But it is not only young people who are gamers: At Wargaming we are tailoring certain



World of Tanks: legendary online multiplayer tank action

games to older audiences, such as the 35+ segment. As session-based games develop, more and more people are taking up gaming.

How do you see the industry developing in the future?

Gaming is moving online, so gamers can download games from the Internet, but consoles will not go away. Consoles and mobiles are not taking share away from each other. Gaming is a bigger market than Hollywood and the music industry and is moving toward \$200 billion a year. As a content creator, it is Wargaming's job to create global phenomena for all types of hardware.

How are you preparing for technological change at Wargaming?

No one knows where the next

disruptive breakthrough will come from. We know that at some point in the future, AI and VR will be in every home, but we are not sure when that will be and what form it will take. We will adapt to the future as and when it happens.

In any competitive business, success comes down to the people. At Wargaming, we are passionate about games and we invest a lot in R&D, prototyping our methodology and testing our games with consumers. We are also investing where the talent is and have opened a new studio in Guildford, near London, where talented developers from around the world are already working on a new multiplatform title. ■

DARKMATTER SHINES LIGHT ON EXPO 2020 THREAT

Early last year, as thousands of athletes paraded for the opening ceremony of the 2018 Winter Olympic Games in Pyeongchang, television and computer screens at the main press center went blank, broadcasters' drones were grounded and users were unable to follow the first sporting events online or print out their tickets. The Games had become the latest victim of a cyberattack targeting a high-profile global event.

With less than 18 months to go until Dubai starts welcoming millions of visitors to Expo 2020, a critical priority for organizers is to protect the world fair from the increasingly audacious ranks of cyber criminals.

“Expo 2020 will be much more of a challenge than the Olympic Games, which lasted for only two weeks,” says Karim Sabbagh, CEO of DarkMatter Group, the UAE's leading digital and cyber transformation firm, and the official cybersecurity provider to the event.



“Expo 2020 will last for six months, will be the most digitized fair ever and will be a project of national significance for the UAE.

“Digital enhancements are going to be a core part of the visitor experience. It is our job to secure all of those digital assets for every second of those six months.”

DarkMatter will provide a wide range of services for Expo 2020, from security management and monitoring to risk assessments, incident response and technical forensics. The company will make extensive use of AI and applied analytics to help determine

where to focus its defenses against the thousands of attacks that are expected to target the fair every day.

To protect the event, DarkMatter is already leveraging global resources from research and development centers across North America, Europe, the Middle East and Asia, as well as know-how from some 650 employees of more than 60 nationalities.

“Expo 2020 will provide us with an international platform to showcase our digital expertise,” Sabbagh says. “Our ambition is to be a truly global player in cybersecurity.” ■

PHOTO: Smart and safe with DarkMatter's KATIM phone