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High-tech: Police are able to use the latest virtual reality techniques to stay up to date with their training.
PICTURE: ABU DHABI POLICE.

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A FORCE FOR CHANGE

Abu Dhabi Police will be a major participant in the ISNR Abu Dhabi event, with representatives speaking, exhibiting and demonstrating the force's technological capabilities and innovative solutions. Leading that charge is Lt Colonel Engineer Dr Nasser Al Saedi, AI consultant and the head of development and change. He spoke to **Jill Stockbridge**.

Since its establishment in 1957, Abu Dhabi Police has kept pace with the rapid development and progress of the emirate and the wider UAE.

This has been recognised at both regional and international levels, with Abu Dhabi ranking as the safest city in the world five years running on the Numbeo Index and with the police being awarded a six-star rating in the European Foundation for Global Quality Management Award.

However, as we move into a post-pandemic era, there are new challenges faced by security services.

Lt Colonel Engineer Dr Nasser Al Saedi, AI consultant and the head of development and change for Abu Dhabi Police said: "Although I speak for Abu Dhabi Police, police and governments around the world face very similar challenges. There are myriad political, economic and social changes happening, which governments and police organisations worldwide are trying to overcome. No country was unaffected by the Covid pandemic, which brought fundamental changes in our systems and organisations."

He expanded: "The pandemic was a global calamity; the world before was completely different to the world after it. It wasn't like a hurricane or an earthquake, which finishes after a couple of days, weeks or even months. This has lasted much longer, and we see repercussions and recessions around the world.

"The economic effect has been challenging, but it also had a great impact on policing. We observed that some countries had problems gaining the confidence and trust of their people. Here in Abu Dhabi and the wider UAE we didn't experience that. The UAE Government and its strategic leadership was the key enabler of the solution."

The unprecedented situation was managed through the application of new technologies, and the adaptation of smart systems in the police.

For Al Saedi, technological input was critical to transform challenges into opportunities. "Abu Dhabi Police introduced a number of innovations, utilising more technologies, more smart systems, and building a safer city, which continues today," he said.

"We connected existing smart systems together, adopting an integrated approach and introduced several advanced artificial

Continued on Page 2

CONTINUED FROM PAGE 1

intelligence technologies. The pandemic accelerated our progress toward improvements in these areas.

"Many existing internet of things (IoTs) are now interconnected to provide us with better abilities for early crime detection and prevention.

"Abu Dhabi Police has always encouraged a proactive community engagement and services. The Aman Service initiative in Abu Dhabi ensures community safety and stability to gather information provided by the community. During the pandemic, it became an essential tool for policing and social support activities. It massively helped us to engage and collaborate with the community directly."

This community engagement has transformed Abu Dhabi police work; minimising control while maximising community cooperation. The force has keenly increased community collaboration, making it accessible through technology, including actively using social media as a tool to understand peoples' perspectives. Although the widespread use of social media brings its own challenges.

Al Saedi said: "Cyber security is a huge challenge for both public and private sectors, as well as for communities and individuals. Drug traffickers and dealers use social media to commit crimes. They use Instagram, Twitter and WhatsApp to advertise their latest products, so we need to overcome such challenges using the similar platforms. We require technologies to predict their activities and communications, since they are constantly evolving.

"Community awareness about such crimes on social media platforms is crucial for early intervention," he added.

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For Al Saedi, the introduction of advancing technology is essential to maintain public safety. He said: "It is now considerably far more convoluted for countries to safeguard their borders and regulate the human flow across boundaries relying merely on human resources. We need new initiatives and technologies to monitor these movements, in addition to stringent administration control.

"The emergence of high-tech technologies, artificial intelligence applications and smart systems in policing and border controls are already creating new opportunities to safeguard the UAE."

Abu Dhabi Police has introduced number of initiatives with new guidelines to overcome and control traffic speeding and to detect tailgating, mainly for regular offenders, utilising the force's sophisticated AI-enabled cameras and IoTs.

"We have launched an initiative called 'the dangerous driver', where artificial intelligence determines and identifies dangerous drivers. We seek to educate the reckless drivers and raise awareness about the risk of accidents, road safety, and guide them to promote the culture of safe driving in the emirate.

The drive for safety: Video game technology is being used to help make Abu Dhabi's streets safer.
PICTURE: ABU DHABI POLICE.

"Abu Dhabi Police uses social media platforms effectively, which has significantly contributed towards a qualitative shift in education and awareness of traffic policing methods in order to make our city safer," he added.

It is evident that technology advancement has brought radical changes in surveillance and policing. The broader participation of Abu Dhabi Police in the International Exhibition of National Security and Resilience (ISNR Abu Dhabi) this year demonstrates the breadth of their capabilities.

Al Saedi said: "We are representing three different government entities in the ISNR event: Abu Dhabi Police, Abu Dhabi Civil Defence Authority (ADCDA), and Abu Dhabi Emergencies, Crises and Disasters Management Centre Response (ADCMC). This unique platform will allow us to discuss and share across the globe our latest advancements, including immersive technologies such as VR and technologies from civil defence including robots and drones.

"Abu Dhabi police will showcase 3D cameras from the crime scenes department, which is one of our latest innovative tools, and has helped us in many scenarios."

The ISNR Abu Dhabi conference will bring the national security, cyber security, policing and law enforcement communities together to discuss, share and explore new technologies and best practices to avert emerging threats.

There will be both physical and online collaborative sessions that will provide networking opportunities, and a forum for exchange of ideas.

Al Saedi said: "There will be talks on innovation in conjunction with our innovation lab, which will be open to all, including the public, officers in the security industry, and others who seek to reinforce partnerships."

The ISNR event highlights Abu Dhabi's evolution as an international hub for security technologies and the development of innovative solutions by leading companies, including EDGE and Tawazun.

Al Saedi stressed: "Despite being a relatively small country, the UAE has the capability to operate and maintain an enormous amount of data, and we have gathered a diverse workforce from across the world to work with us on this mission. The UAE's achievements in this dimension are exemplary, regardless of the size of this region."

As part of the technological progress, the Abu Dhabi Police has developed the 'centennial plan 2057', which includes 84 smart projects to be implemented to support future security trends in the emirate.

These include the I999 operations system, the explosives scanning system, the graphic analysis system for fog sensors, the weapons inspection system, linking poison test results to the drug control system, the security perspective system for security information, the system for checking forged vehicles, the digital violations system, and the smart patrol project.

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This drive to be a hub for technology is a tenet of the Abu Dhabi Government's 'vision 2030', which aims to position the emirate among the world's best cities through an integrated work system approach, achieving the highest level of quality of life for everyone residing in the emirate.

Abu Dhabi Police is committed to transform this vision into reality by continuously improving work systems and approaches through technology advancement and innovations.

"Through our partnerships with other governmental entities and private organisations, Abu Dhabi Police strives to achieve the 2030 vision of Abu Dhabi by creating a better and secure environment enabling our society to prosper," said Al Saedi.

"Future forecasting is a key engine for our efforts to identify and analyse global trends, challenges and opportunities through preventive scenarios and solutions," he concluded. ▲

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Mohamed Daoud is director of business development for governance, risk and compliance in the Middle East at Moody's Analytics. He will speak about the growing importance of prevention and detection of financial crime.

Bank on a new approach to fight terrorism financing

I am north African and French and have been living in Dubai for the last 16 years. I have spent 20 years assisting and counselling organisations fighting financial crimes in the Middle East and Africa.

Moody's Analytics provides financial intelligence and analytical tools to help business leaders make better, faster decisions. Our deep risk expertise, expansive information resources, and innovative application of technology help our clients confidently navigate an evolving marketplace.

We help our clients navigate a world of complexity and rapid change, and deliver a unique combination of leading data, analytics, and insights – enabled by our technology and workflow tools combined with deep domain expertise.

This combination provides our clients with a multi-dimensional and holistic view of risk, integrated into a suite of risk assessment offerings that help address customers' evolving needs.

The title of my seminar is *'Data analytics for the prevention and detection of financial crime'*. Organisations, whether financial institutions, corporate, or government agencies, are required by national and international regulations to screen the entities they partner in business.

The screening includes checking the names of entities and individuals against sanctions, and law enforcement watchlists. Moreover, it is mandatory to identify who are the ultimate owners and who really controls the foreign entities in question.

These regulations are enforced by the Financial Action Task Force (FATF), which is the inter-governmental 'watchdog' setting the standards and enforcing the global money laundering and terrorist financing fights and recommendations.

To be able to achieve that, compliance, risk or legal specialists perform screening of the entities or individuals against lists provided globally by regulatory authorities. However, these lists are provided with different formats, structures, terminologies, codifications, and duplications, which seriously complicates the compliance process and the search for accurate information.

To avoid the above and have a successful screening, organisations require consolidated and standardised databases, where information is checked and curated by specialised financial crime specialists and researchers across the world, such as the ones performed by the Moody's Analytics 'know your customer' (KYC) team.

Today, four countries in the region have been placed on a grey list by the FATF, which has also increased monitoring to check their progress in the fight against money laundering and terrorism financing.

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A new approach is required, and new initiatives need to be put in place to emphasise the importance of compliance, as well as to remind the risk and compliance practitioners that, after the financial sector, the public and corporate sectors are next to come under serious scrutiny in the FATF's evaluations.

The professionals who should attend this conference and hear the message are procurement, compliance, audit, risk, legal practitioners and executive management across the corporate and public sectors. Anti-money laundering/combating the financing of terrorism (AML/CFT) regulation is getting tougher on the corporate and public sectors, and not complying is not an option any more.

Moody's Analytics is a leading provider of KYC and financial crime compliance initiatives in the region and provides an innovative approach to reducing the burden of compliance and mitigation of the related reputational risk.

We work in close collaboration with most central banks, financial and regulatory authorities, and compliance associations in the Middle East. We continuously organise awareness workshops, seminars and conferences for the compliance communities to provide our data, analytics and insights regarding financial crimes and compliance.

The Moody's KYC verification business is an integral part of our global risk assessment strategy. Our strategic acquisitions in the KYC space have expanded our capabilities to provide a holistic view of risk and the ability to provide key solutions to help manage it through comprehensive solutions.

We are experts in this field and can help many customers.

We are uniquely positioned to provide long-term financial crime prevention solutions, and to share our insights. ▲

Mohamed Daoud: "Anti-money laundering/ combating the financing of terrorism (AML/CFT) regulation is getting tougher on the corporate and public sectors, and not complying is not an option any more."
PICTURE: MOODY'S ANALYTICS.

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Paul W Poteete *PhD is a professor at Geneva College in Pennsylvania. His talk opens the discussion of the effects of technology and predictive policing on human behaviour.*

Where do we draw the line?

I teach computer science and cybersecurity undergrad and graduate courses at Geneva College in Pennsylvania, a small liberal arts college that focuses on developing ethical and moral leaders.

I have created a CyberLab at the college to provide resources for the students to experience corporate and government roles working with various systems, threats, and defences, that aims to integrate faith, integrity and learning into an often amoral topic.

Prior to this role, I worked with social network analysis (SNA), or the sociotechnical aspect of predicting population behaviour through various forms of internal and external influences.

I have also led teams of individuals through difficult transitions in technology, while working with cybersecurity functions in military, government, and private organisations around the world.

PICTURE: PROFESSOR PAUL W POTEETE.

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My talk will analyse new monitoring technologies and the effects of machine monitoring on human behaviour, and ask if the citizens in countries where machines are implemented to monitor the daily lives of the population experience any negative effects.

For instance, if you had your boss looking over your shoulder 24 hours a day, 365 days a year, would you feel increased anxiety, blood pressure and depression? Would you exhibit antisocial behaviour, heart problems or other negative symptoms?

While we are happy to display our work and show off our accomplishments throughout the year, what if that monitoring never ceased?

In China, machines that can monitor social interactions are now in use. I will look at what toll that takes on human health, and, more importantly, the future of humanity.

The aim of this is to open an important dialogue about the different technical capabilities we have and the implementation of mechanised solutions to monitor human behaviour.

Social and personal behavioural responses can be predicted, to an extent, based on factors of upbringing, and sociotechnical influence and control. The problem comes in deciding where a prediction becomes an actionable threat.

Humans will always behave in unpredictable ways for reasons known only to that individual. If the algorithm predicts with 80% confidence that an outcome of this behaviour will be bad, should authorities intervene? If so, who is monitoring these authorities?

As demonstrated by the technology on display at this event, the world is on the cusp of a new age of machine control and artificial intelligence incorporation into existing policies.

The pandemic ushered in an age where citizens of a majority of nations were faced with regular testing and electronic passes for entrance into various venues. The incorporation of technology into the medical system has allowed the world to monitor infections and recoveries at a rate unseen by any previous generation.

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Predictive models that were proven very wrong initially were continuously revised, in real-time, to meet the information demands of governments and their citizens.

Although those models suffered from a lack of accuracy, they did provide enormous resources for the design of future models that may be more capable of predicting human behaviour and infection.

If those models are applied to social interactions, predictive policing could become more than the fiction depicted in the movie *Minority Report*.

Officers use many tools to help them catch criminals after a crime has been committed, but the officer is still the individual in charge of the investigation. In this case of predictive policing, just how accurate would a system's predictions need to be to become more than just a useful tool? When would it become a law enforcement mechanism in itself?

I believe that this discussion will raise important questions for anyone interested in the future of law enforcement and the difficulties faced by the officers, policy makers and citizens, who will be directly affected by this dangerous new world. ▲

While we are happy to display our work and show off our accomplishments throughout the year, what if that monitoring never ceased?

PICTURE: DR GARETH STUBBS.

COMMUNITY POLICING MOVES WITH THE TIMES

Dr Gareth Stubbs of Rabdan Academy will explore what is meant by the word 'community' in community policing, and discuss how technology is changing, shaping and developing our understanding of communities.

He will also look at how prevention has been pursued in the past in traditional community policing, and draw this into the context of our changing society in the coming decade.

Ultimately, he will ask the audience to consider what traditional policing prevention will look like in the virtual landscape, and how police should work to develop the new version of community policing before our old notion of what makes a community becomes obsolete.

Dr Stubbs was a police officer for 18 years in northern England, finishing as chief inspector managing the emergency response and community policing sections in a busy northern town.

While serving, he completed his second degree, two masters degrees, and, finally, his PhD.

He specialises in police recruitment and social networks, but has worked for many years in community policing, which is his main passion from within police practice.

He now works at Rabdan Academy as the interim program chair in policing and manages the curriculum for new policing degree students in Abu Dhabi. ▲

PICTURE: ARIF HASSAN.

ACHIEVING SUSTAINED REGULATORY NORMS

Arif Hassan, strategic accounts manager, UL Solutions, will discuss how industry sectors can achieve and sustain regulatory compliance.

Today, there is a range of regulations and requirements for securing the industrial applications market segment, mostly focused on operations. In this talk, he will also look at the trends and challenges of Industry 4.0, how IEC 62443 standards can be adopted and the benefits of doing so.

The aim of the discussion is to raise awareness of the complexity of the regulatory environment and offer guidance as to how the industry can navigate this complex landscape. As regulations continue to evolve and become more restrictive, he believes it is important for the industry to be aware of which regulations or requirements may be applicable to them, and how they can go about achieving and sustaining regulatory compliance.

Hassan leads the business development and strategic accounts for UL Solutions in the Middle East region focused on cybersecurity and payments. He has 27 years' international experience in consultative selling, consulting, programme management, and operational business management, with proven experience of managing high-value strategic initiatives allowing organisations to implement transformational business and solutions, thereby enabling them to meet the challenging trends of their industry. ▲

PICTURE: ANDY GRIFFITHS.

THE EVOLUTION OF EVIDENCE

Andy Griffiths PhD, managing director, iKAT, will look at the need to blend new technology with traditional policing skills.

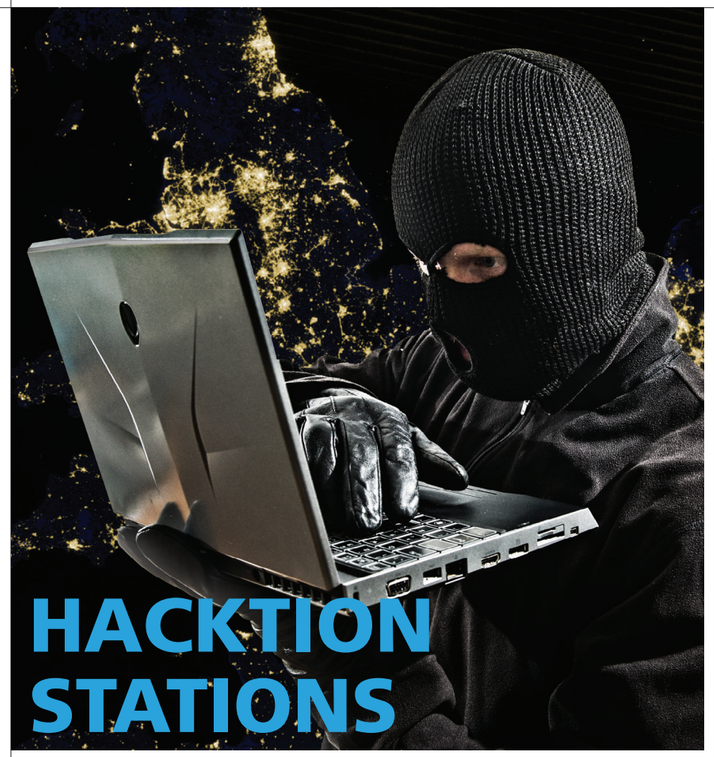
When modern policing began cameras, telephones and computers did not exist and fingerprints were the only available forensic evidence. As a result, the information provided by witnesses and statements made by suspects – known collectively as testimonial evidence – became a crucial part of criminal trials as it was often the only evidence.

However, developments in forensic and digital evidence over the last three decades challenge the future status of testimonial evidence within the criminal justice system.

New technology is being applied in different countries at an accelerating pace to make policing and security more efficient. And, yet, fundamentally policing has not changed. It still involves officers talking to citizens and investigating incidents and crimes and keeping people safe. Therefore, it is important to blend new technology with the best of traditional skills. This talk will inform the debate about how best to blend old and new techniques for the benefit of policing and society.

Griffiths has 35 years' experience in law enforcement, specialising in investigation, interviewing and intelligence, with wide experience of investigating all types of crime.

He is recognised as an international subject matter expert in investigative interviewing and criminal investigation. He also has extensive experience of criminal investigation training design, delivery and policy implementation. ▲



Hack-attack: Cyber-attacks are on the increase and critical infrastructure can be an easy target.
PICTURE: BILLYPIX.

HACKTION STATIONS

An "alarming" and invisible vulnerability persists within some critical infrastructure, much of it centred on digital control systems and compounded by insecure connected devices. **Chuck Grieve** *reports.*

Cyber-attackers are on the increase. Weak and poorly understood digital hygiene within critical infrastructure is a major concern, leaving the overall security of control systems and connected devices falling behind that of IT systems, experts believe.

Researchers in the US found cyber-attackers at this level were more likely to target industrial control systems than steal data, although both have the potential to do untold damage. Energy, transportation, public services, telecommunications and critical manufacturing installations appear to be the favourite targets.

Michael Swanagan, writing in *PurpleSec*, notes that no system is 100% secure or 'hacker-proof' as vulnerabilities are constantly evolving. "If a threat actor has enough time, resources, and manpower to launch an attack, then chances are they will find a way in," he said.

Malware and social engineering attacks are the single greatest threat to an organisation and its users, he added.

"Non-physical network vulnerabilities typically involve software or data. For example, an operating system (OS) might be vulnerable to network attacks if it's not updated with the latest security patches. If left unpatched, a virus could infect the OS, the host that it's located on, and potentially the entire network."

Leaving an OS or firewall with default policies enabled is asking for trouble. Advanced attacks, such as distributed denial of services (DDoS), can wreak havoc and inflict financial plus reputational damage.

Criminal intent runs deep in cyber-attacks. A report from [consumer credit reporting company] Experian said ransomware boomed during the pandemic, with large institutions and critical infrastructures facing disruptions and being forced to pay millions in ransom. Experian suggests malicious use of AI will furtherly power ransomware attacks, leaving both customer data and critical business information exposed.

The best line of defence, in this situation, is training and prevention, and visitors to ISNR Abu Dhabi will find myriad exhibitors offering their services and equipment.

Swiss exhibitor, Fast Systems, is showcasing its command and control software platform, Terra4D. The company says it integrates multiple unconnected systems, whether security or not, correlating data through an advanced process modelling and workflow automation system.

It offers "superior situational awareness" by presenting complex information in a simplified geographical 3D context with augmented reality (AR).

Cybersecurity is also among the extensive list of capabilities of exhibitor GNSS Technologies, a UAE-based provider of specialised security solutions. The company says its team of experts provides a wide range of customised consultancy in design and implementation of security solutions, among them key cyber considerations of secured communications, screening across all domains, and mobile command vehicles.

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Also exhibiting is Acustek, a Dublin-based supplier of security products and services. The company says it offers "digital resilience" through "unique" video and phone forensics solutions, coupled with its secured communications, cybersecurity and threat intelligence platforms.

Acustek offers specialised training in technical surveillance counter-measures (TSCM) to keep up with the ever-expanding methods deployed for personal, industrial or state-supported espionage.

In the defence realm, Dubai-based strategic technology provider, Stratign, comes to ISNR Abu Dhabi with more than two decades of experience in providing state-of-the-art communication intelligence solutions for defence and law enforcement agencies.

The company says its expertise covers an array of cybersecurity and cyber defence capabilities, including secure communication, interception and jamming, electronic warfare, radio interception and direction-finding.

Among its latest offerings is quantum resistant cryptography designed to secure data against threats in the near future.

US-based Research Electronics International (REI) has specialised in the design and manufacture of TSCM equipment for more than 35 years. The company says its detection and analysis products are used worldwide by government and law enforcement agencies and corporations to protect information and trade secrets.

Al Hamra, a leading UAE national security and defence organisation, offers integrated security and military solutions in public and private sectors. Its network of industry partners cover supply of equipment, consultancy, design, construction, system integration, customisation, and manufacturing of security support mechanisms and special tasks.` ▲

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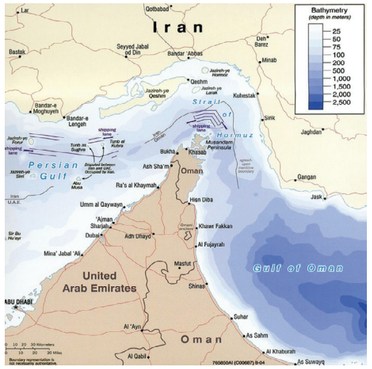
Why homeland security is so vital in the Middle East

The Middle East remains one of the most economically important areas of the globe due to its hydrocarbon-based wealth. This makes national and homeland security a huge topic for the ISNR conference. **Alan Dron** *looks at some of the wider issues affecting the region.*



Patrolling during the World Cup: A UK-Qatari joint air force squadron will be flying new Eurofighter Typhoons to keep the tournament safe.
PICTURE: @RAFPHOTOG.

Left: Iran's presence in supporting the insurgency in Yemen and its frequent threats to block the Straits of Hormuz factor into the atmosphere of edginess that persists in the region.
PICTURE: WIKIMEDIA.

Major security will be needed for decades around the Middle East, despite the world's attempts to find new sources of energy in the fight to halt climate change.

According to projections earlier this year by the US Energy Information Administration (EIA), demand for energy exports from the Middle East and north Africa region (MENA) will increase through 2050, with Asia – and particularly China – driving that demand.

Sadly, the Middle East has never been short of security risks in recent decades. External enemies have targeted some Gulf States while internal elements have posed threats in other parts of the region.

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The Gulf nations continue to face potential security threats from Iran. For example, since 1970, Iran has officially recognised Bahrain as an independent nation, yet periodically over the past 20 years, senior Iranian officials have revived claims over the island kingdom.

These claims have met with protests from the Gulf Cooperation Council (GCC) and have been swiftly withdrawn, yet they still occasionally surface – most recently in June this year, when Iranian President Ebrahim Raisi's Instagram account posted a map of Iran including Bahrain.

The map was then deleted, but its appearance provided another reminder that the issue of Bahrain's sovereignty apparently still smoulders in some quarters in Tehran.

The Iranian issue, particularly the country's continuing search for a nuclear weapon, provides a backdrop of tension in the region.

Periodically, clashes between the government and its people have flared up, most recently in the past few weeks, where the death of a young woman in police custody following her arrest for allegedly wearing a hijab improperly, sparked nationwide riots. This unrest is an unsettling reminder of the country's potential instability.

Iran's presence in supporting the insurgency in Yemen and its frequent threats to block the Straits of Hormuz also factor into the atmosphere of edginess that persists in the region.

Saudi Arabia's airports and oil refining infrastructure, for example, have come under attack several times in recent years by unmanned aerial systems launched from Houthi-controlled areas of Yemen.

Keeping potential opponents at bay has led to the governments of the region building up effective national security structures. Saudi Arabia, for example, has been able to shoot down many of the drones launched against it and the intelligence services of several of the Gulf states are highly rated.

The importance of the region to the global economy has also led to external support for nations' homeland security efforts.

In June, for example, US president Joe Biden reaffirmed the commitment of the United States to Middle East states' security and territorial defence.

In security terms, the US made it clear that it will support and strengthen partnerships with countries that subscribe to the rules-based international order and will help them defend themselves against foreign threats.

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The US affirmed its commitment to accelerate existing work with Middle East partners to enhance security cooperation.

In particular, the US is committed to advancing a more integrated and regionally networked air and missile defence architecture and countering the proliferation of uncrewed aerial systems (UAS) among non-state actors that could threaten the area's stability.

The US also maintains significant naval forces in the region to back up Gulf navies in keeping open waterways such as the Gulf in general and the critical Hormuz Straits in particular.

During his visit to the region, Biden met leaders of the six GCC nations, together with those of Egypt, Iraq and Jordan, in Saudi Arabia.

This Jeddah Security and Development Summit saw their continued commitment to challenges such as ensuring energy and food security.

The US, for example, pledged $1 billion in new food security assistance to the MENA region to help improve its resilience, adding to the GCC's support for the Arab Coordination Group's $10 billion food security package to poorer areas of the region.

On the energy front, meanwhile, Iraq is improving its resilience by concluding agreements with Saudi Arabia, Kuwait and Jordan to diversify its energy supplies, by linking its electricity grid to those of the GCC, providing the Iraqi people with new and diversified sources of electricity over the coming decade.

In the month following president Biden's visit, the US Department of Homeland Security under-secretary for policy, Robert Silvers, visited Qatar and the UAE to expand security cooperation and advance key homeland security agreements between the US and the two Gulf states.

In Doha, Silvers signed security arrangements with Qatar and engaged with key officials on a range of joint security issues, not least ensuring that the FIFA World Cup in November and December passes off safely.

Qatar will be on high alert during the four-week tournament, which will see thousands of football fans from around the world flocking to the emirate, as well as the surrounding nations.

A new UK-Qatari joint air force squadron, flying new Eurofighter Typhoons, will be patrolling the skies to ensure no aerial intrusions, while vessels of the Qatari Emiri Navy will lie offshore, to ensure no hostile actors reach the coast.

Silvers and Qatar's prime minister, Sheikh Khalid bin Khalifa Al Thani, also signed several agreements to enhance border security and to detect forged documents.

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These arrangements included establishing a joint programme to identify air passengers linked to terrorism and drug smuggling, as well as strengthening cybersecurity cooperation.

In the UAE, Silvers discussed strengthening cooperation on counter-terrorism, as well as fields such as aviation, border security and cybercrime.

The UAE's efforts in strengthening its resilience also include the national early warning system (EWS), which was started in 2017 in line with the National Emergency, Crisis and Disaster Management Authority.

This has yielded several early results, including the ability to broadcast warnings to residents through their mobile phones, as well as on smart road signage or billboards, radio, television and through mosque loudspeakers. ▲

Sowing the SEEDS: Trainees are landing jobs in the UAE's defence and security sector.
PICTURE: SAAB.

UAE TRAINEES LAND DEFENCE AND SECURITY JOBS

The first four Emirati trainees to have graduated from Saab's sustain & enhance Emiratisation in defence and security (SEEDS) programme have been offered full-time jobs.

Saab's participation in SEEDS, an initiative created by the UAE defence and security industry enabler, Tawazun Economic Council, gave trainees the opportunity to work alongside global experts and receive hands-on experience ahead of taking full-time roles at the company's facilities in the UAE.

During this placement the trainees worked across several departments, including aircraft systems, sub-system maintenance and logistics support, and software development.

Anna-Karin Rosén, managing director of Saab in the UAE, said: "We are proud to welcome the inaugural cohort of SEEDS trainees as full-time employees at our facilities in Abu Dhabi. As a leading defence and security company, Saab is uniquely placed to grow Emirati talent by equipping the next generation of Emirati leaders with engineering skills, as well as creating high-tech jobs with rewarding career paths."

Matar Ali Al Romaithi, chief officer of the economic development unit at Tawazun Economic Council, added: "We are pleased that Saab has taken this step and look forward to more Emirati engagement with them as we work to support a sustainable pipeline of future talent.

"A core focus of Tawazun's economic programme involves people development and employment programmes, identifying critical capabilities and inspiring a skilled national workforce through partnerships with companies such as Saab."

In alignment with Abu Dhabi's economic vision 2030, Saab contributes to both the development of local talent and the long-term growth of the UAE's defence industry ecosystem. It is also committed to furthering Emiratisation, with 14% of its workforce, specialised in engineering and government relations, comprising of UAE nationals.

Saab will be making robust efforts in the next few years to nurture Emirati nationals with opportunities, with a particular focus on engineering in software development, mechanics, and electronic design. ▲

Artificial intelligence (AI) – one of the major themes of ISNR Abu Dhabi – is believed by many to be the harbinger of a new era. **Chuck Grieve** *has been finding out more.*

AI drives humanity towards new frontiers

AI is "humanity's new frontier which, once crossed, will lead to a new form of human civilisation".

This was the assessment of Audrey Azoulay, director-general of the United Nations Educational, Scientific and Cultural Organization (UNESCO).

Writing in 2018, she said the AI revolution opens up "exciting new prospects" accompanied by its own set of challenges.

"Alongside the increasingly sophisticated use of big data, AI is undergoing exponential growth and finding new applications in an ever-increasing number of sectors, including security, the environment, research and education, health, culture and trade," she said.

AI in security had an estimated market value of $5 billion in 2020 and was expected to nearly triple to $14 billion by 2026.

Visitors to ISNR Abu Dhabi will find ample evidence of this explosion of development. Whether through data analysis, machine learning, or advanced heuristics – mental 'shortcuts' people use in problem-solving – AI offers more efficient, less labour-intensive solutions in security applications, especially in scenarios that rely on pattern recognition and digesting mountains of data.

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Two years of global disruption caused by the Covid-19 pandemic has turned the spotlight on the potential of AI-based technology in tracking and analysing the spread of diseases that could cripple a country and render it, and its critical infrastructure, vulnerable.

The modelling enabled by AI helped authorities make difficult decisions about lockdowns, business closures, travel restrictions, and other predictive countermeasures intended to prevent even worse consequences.

The military potential for AI is huge, thanks to a natural convergence between the two areas. Military hardware bristles with data sources – cameras, sensors, communication networks – that provide AI's ideal operating environment.

Counterterrorism activities, including threat screening at large gatherings of people at airports, sporting events, schools and entertainment venues, benefit from AI-driven capabilities such as facial recognition.

The US Department of Defense (DoD) has

On target: Turkey's home-grown Bayraktar TN2 drone harnesses the power of AI to devastating effect.
PICTURE: WIKICOMMONS.

described AI as the "most disruptive technology of our time" and is reportedly running AI-based projects to improve decision-making cycles. The DoD acknowledges it is "investing billions of dollars" in AI throughout its domain, mirroring what it sees as significant investments by strategic competitors, notably China and Russia.

A recent report by the US Government Accountability Office said the DoD's use of AI ranges from automating simple back-office tasks and predicting mechanical failures in weapons platforms, to performing complex analyses to support warfighting that go beyond current software capabilities. It said: "Traditional software is programmed to perform tasks based on static instructions, but AI is programmed to learn and improve at its given tasks."

International consultancy, PwC, called AI "a big game-changer in the global economy". Beyond 2030, the consultant said, its impacts on both the economy and society will "almost certainly" increase. It was important for the Middle East to be strategically placed in order to provide a springboard for the future.

The report said the UAE, Saudi Arabia and Qatar, in particular, had demonstrated "strong commitment" towards the development and implementation of AI technologies.

In the UAE, the government "is keen to support digital transformation processes", said Omar Sultan Al Olama, Minister for Artificial Intelligence and the Digital Economy.

"This is being achieved by developing digital activities and providing innovation solutions that contribute to improving the performance of governments and the lives of communities."

Al Olama's portfolio is believed to be the first of its kind in the world, and underlines the Gulf country's determination, set out in the *UAE Artificial Intelligence Strategy 2031*, to double the contribution of the digital economy to the UAE's non-oil GDP from 11.7% to more than 20% within the next decade.

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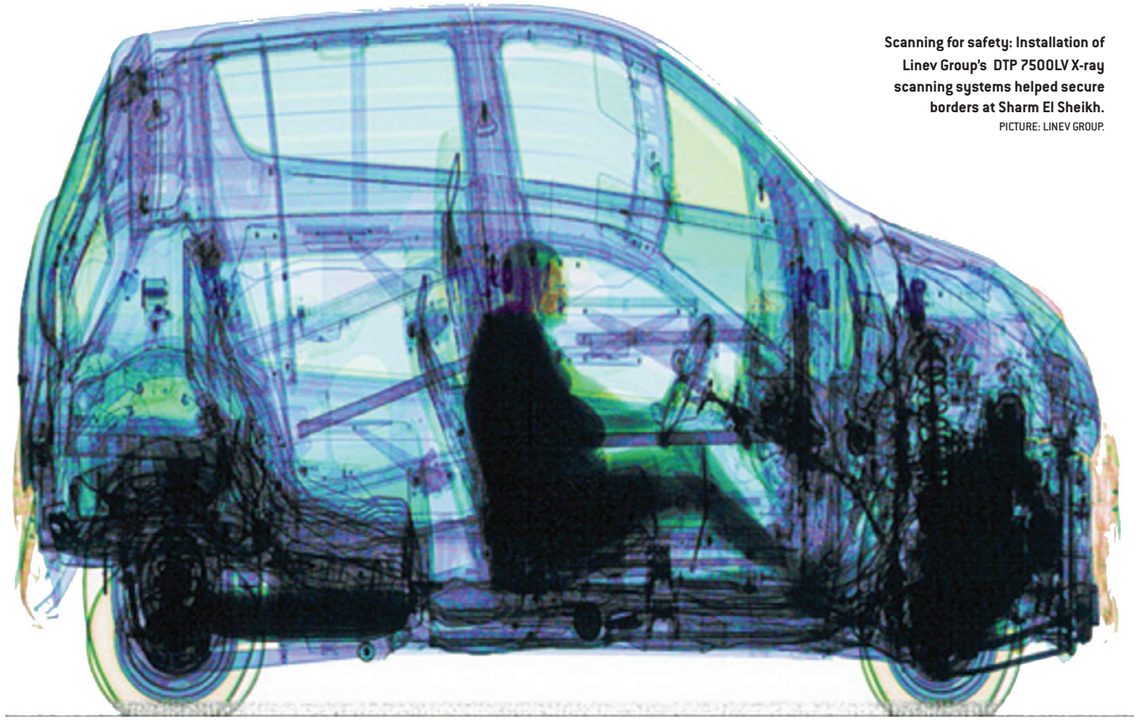
Outside the Gulf, adoption had been slower, driven by differences in key enabling factors: infrastructure and access to skilled labour, for example.

The development of non-oil sectors through investment in AI technologies could strategically position the region for the years to come.

Dr Khushnam PN, an independent researcher and analyst writing in *Diplomatist*, notes that AI is at the core of the post-oil economic visions in the Middle East, and manifested in major national initiatives such as EDGE and the Tawazun Economics Council in the UAE, and the Saudi Technology Development and Investment Company (TAQNIA), whose focus for investment incudes security, defence, IT, and critical infrastructure.



Scanning for safety: Installation of Linev Group's DTP 7500LV X-ray scanning systems helped secure borders at Sharm El Sheikh.
PICTURE: LINEV GROUP.

These are consistent with Saudi 'vision 2030', the kingdom's roadmap for technological development, that has led to the establishment of institutes, centres of excellence, and commercial organisations dedicated to various applications of AI.

The UAE was the first country to appoint a minister of artificial intelligence. Besides its own national programme for AI, called building a responsible artificial intelligence nation (BRAIN), the UAE has a global vision of creating an AI-friendly ecosystem that promotes universal research and collaboration.

Elsewhere, Qatar, Kuwait and Bahrain have similar AI initiatives and goals, all designed to build competitive advantage and maintain robust national security capabilities.

But it is Turkey's investment in AI, in particular its AI-enabled uncrewed aerial vehicles (UAVs), that has raised its international profile, via the Ukraine conflict.

The country's Bayraktar TN2 drones – entirely made domestically – have been credited with considerable in-theatre success. The system has now reportedly been sold to at least 13 countries.

Highly capable despite its relatively slow/low operational parameters, the TN2 can loiter up to 27 hours, tracking targets with high-resolution cameras before deploying smart bombs said to be so accurate they can hit an infantry trench and take out the anti-aircraft systems designed to destroy it.

Its performance belies the opinion of many military analysts, who had considered it of little use in conventional combat.

It now represents, as one US commentator was reported to say, "a fairly significant operational revolution in how wars are being fought right now. This probably happens once every 30 or 40 years".

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Practical applications for AI in security abound, from the mundane to the highly imaginative.

Machine learning has led to advanced techniques of scanning the underside of vehicles for bombs while the vehicles are moving at up to 45kph. Systems are capable of processing 3D images from high-resolution cameras to detect suspicious anomalies.

Static X-ray vehicle scanners from exhibitor, Linev Group, a world leader in transmission X-ray scanners, operate in more than 80 countries in sensitive locations such as airports, prisons and borders, including Sharm El Sheikh in south Sinai.

GNSS Technologies, based in the UAE since 2006, harnesses the entire spectrum of AI to design, customise and implement solutions including perimeter protection, border surveillance, simple pan-tilt-zoom (PTZ) cameras and other "security objectives".

At ISNR Abu Dhabi, the group will be showcasing its capabilities in screening for air, land and sea borders, lawful interception, bioinformatics, DNA and forensics, secure printing, secured communications, perimeter protection, surveillance, cyber security, armoured vehicles, uncrewed vehicles, mobile command vehicles, sonar and tactical training.

Another exhibitor, global player Atos, will be promoting its use of AI and the internet of things (IoT) for public safety, emergency management, command and control, border control, law enforcement, critical communications and video analytics.

Describing itself as No 3 worldwide in managed security services, the company works with public and private sector organisations to evaluate and adopt digital innovation for the most critical missions.

Canadian exhibitor, Patriot One Technologies, will be promoting its scanning platforms, the Patscan Radar sensor solution, a cognitive microwave radar (CMR) system to detect concealed guns and knives utilising microwave radar technology coupled with custom machine learning/AI software.

The company says its solution is "the next generation of software and sensor component technology to covertly deploy as a layered multi-sensor platform to detect and combat active threats before they occur". ▲

Critical infrastructure is the life support system of our everyday existence. Thanks to technological advances, globalisation, and the demands of an increasingly urban population, it has become more efficient and productive. However, as **Chuck Grieve** *reports, the factors that enable such unprecedented benefits make critical infrastructure, of all kinds, vulnerable to threats.*

Why it's critical that infrastructure stays protected

Critical infrastructure threats range from extreme climate events and earthquakes to industrial accidents and malicious attacks in the real or cyber worlds, any of which can trigger a tidal wave of negative impacts around the world.

While the range of risks to infrastructure may be expanding at an alarming rate so, too, is the capability to deal with them, as visitors to ISNR Abu Dhabi will observe as they tour the exhibition hall.

Advances in information and communication technologies (ITC) have exposed societies to unprecedented risks no less dangerous to the assets on which people depend than bombs and bullets. Regardless of the attacker's motivation, the disruption and chaos that can result is the same.

But, despite a growing awareness of a changing security environment, levels of preparedness have by and large not kept pace. This realisation prompted the UN Security Council five years ago to issue a worldwide call to bolster antiterrorism readiness and resilience.

The *Compendium of Good Practices* that followed set out a pragmatic approach to designing, improving or implementing policies and measures to protect critical infrastructure.

Writing in its introduction, Interpol warned that the interdependence of infrastructure through sectors and industries, cyber and physical areas, and across natural and political borders, means that the consequences of an attack could be far-reaching. "One attack on a single point of failure could lead to the disruption or destruction of multiple vital systems in the country directly affected, and a ripple effect worldwide. This creates an appealing target to those intending to harm us."

The need for vigilance has been brought forcefully home by Russia's weaponisation of energy and food in the Ukrainian crisis, which has caught western governments off guard and largely incapable of mounting an immediate response. The safety of Ukraine's nuclear power plants (NPP) are a particular concern.

Rafael Mariano Grossi, head of the International Atomic Energy Agency (IAEA), told delegates to its annual conference in September that he was promoting a plan to establish a nuclear safety and security protection zone around beleaguered Zaporizhzhya NPP. "We must do everything in our power to prevent a nuclear accident that would add tragedy to the suffering," he said.

ISNR Abu Dhabi attendees will be well aware of the tactics and weapons at the disposal of potential attackers, and the exhibition will showcase state-of-the-art responses to a multitude of threats.

Resilience, said Interpol, could only come "by getting all relevant actors able to prepare, prevent and respond" to the ever-changing threat to critical infrastructure.

"In law enforcement, we are keenly aware of the tragic paradox: a terrorist incident is often among the best opportunities for learning and improving."

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The same may be said for post-Covid recovery, with the Organisation for Economic Cooperation and Development (OECD) noting that many countries are treating renewed investment in infrastructure as a stimulus measure.

It said: "Tackling the complex challenges and opportunities related to infrastructure resilience and maintenance requires a multidimensional approach to get the best out of the asset over its life cycle."

Authorities should treat resilient infrastructure as an economic opportunity, said the OECD. "Resilience is essential to absorb the impacts of adverse shocks and it creates a unique opportunity for countries to be ready against future risks as part of their recovery efforts."

New technologies, such as digitalisation, can cut asset maintenance costs while improving operational efficiency. For example, technology has played a critical role in responding to the Covid-19 crisis as it enables infrastructure to become more resilient to future disasters. "At the same time, digitalisation comes along with new vulnerabilities to security threats, which require further thinking around resilience and maintenance," pointed out the OECD.

State-of-the-art: A Broadcast Solutions team operates meshLINK successfully in the shielded environment of the Frankfurt Stock Exchange.
PICTURE: BROADCAST SOLUTIONS.

Disaster preparedness: Fast deployment enables ArgusElite's UAS to enhance Hazmat response decision-making.
PICTURE: ARGUSELITE.

Disaster preparedness and response solutions are the speciality of Alliance Solutions Group, with its ArgusElite hazmat uncrewed aerial system (UAS).

Deployable within minutes of arriving at the scene, the ArgusElite is designed to provide real-time sensor data mapped to a GIS ground station, allowing crisis leaders to collect critical and time-sensitive information that enhances hazmat response decision-making within minutes.

Secure communication is vital for critical infrastructure. Exhibitor Broadcast Solutions, a leading systems integrators in media and content production, is promoting meshLINK.

Newly released, it provides state-of-the-art video encoding, full-duplex IP and mesh networking, in a rugged and straightforward system.

The company says it ensures an uninterrupted and stable wireless transmission in RF-challenging environments, such as the Frankfurt Stock Exchange, which is highly shielded to prevent unlawful access to data.

Also exhibiting is French company ITHPP, which provides solutions to protect critical sites and infrastructure against aerial threats.

The company, a leader in pulse power and high-power microwave technologies, says its anti-UAV mobile defence system is easy to deploy and is compact.

ITHPP also offers a solution for stopping a motor vehicle with a device that uses high-power microwaves to interfere with the vehicle's electrical cabling, causing its engine to stop. The company is a supplier to the French atomic energy commission and ministry of defence, among others.

QUANTUM POSES BOTH THREAT AND PROMISE

In a 2020 report, Deloitte said quantum information technologies will "almost certainly" have significant impacts on national security, from extremely secure communications, through faster code-breaking, to better detection of aircraft and submarines.

"The possibilities afforded by advanced quantum information technologies may affect some of the most important national security tools and tasks, such as intelligence collection, solution optimisation, encryption, stealth technology, computer processing and communications," said the report.

Although today quantum phenomena can be used to store, process, and analyse a new type of information, there are many challenges to be overcome before these systems can operate at scale.

Industry observers expect quantum technologies and computing to revolutionise the security environment. Dr Leandro Aolita, executive director of Quantum Algorithms at Abu Dhabi's Quantum Research Centre, goes one step further. "I think it will be one of the major disruptive technologies of the century," he said.

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Scaling up current quantum technologies to industrial capability will take time.

Academics, such as Dr Aolita, suggest 10-15 years. However, spokesmen for commercial laboratories are more bullish, seeing possible deployment in less than a decade.

The theoretical foundations of quantum technologies are understood, so building a large-scale quantum computer should be possible. "Where we need breakthrough results is in manufacturing quantum chips," said Aolita, adding this is a "very difficult" engineering challenge.

Quantum computers capable of breaking current cryptographic encryption techniques (and thus stealing secret data) are still "far off", said Aolita. That does not mean the security community can be complacent. "It is still important to think about security and encryption techniques because legacy information will be vulnerable when – not if – a fully fledged quantum computer is running," he said.

But this potential vulnerability may be overstated. His research division, which is part of the ground-breaking Technology Innovation Institute (TII) – the applied research leg of the Advanced Technology Research Council (ATRC) of the UAE – is plugged into a global network of institutions working on similar challenges.

"We're all working at the frontier of knowledge, so it's unlikely one country would get ahead for more than a few years," he explained.

While the US or China may have an advantage in industrial-level fabrication because of the huge investment it will take, any first-mover advantage would be short-lived. He felt most countries would continue their own development for the purposes of "national sovereignty" and resilience.

DRONES MEET THE CHALLENGES OF PUBLIC SAFETY AND SECURITY

The Drone Centre (TDC), which forms part of the show's technology trail, will launch the brand new DJI Mavic 3 Enterprise series of drones at the event.

Only revealed by Chinese company DJI at a global launch on September 27, this will be the first sighting of the new series in the Middle East.

The new DJI Mavic 3 Enterprise Series is a compact, portable, powerful, and extensive series that, according to the company, redefines the standards for small commercial drones and drives forward a new era of lightweight operations.

The drone is equipped with a mechanical shutter, a 56x zoom camera and a real-time kinematic (RTK) module for centimetre-level precision, making it the ideal tool for utility inspection, surveying and mapping missions.

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The DJI Mavic 3T is equipped with a thermal camera and takes search-and-rescue missions to the next level.

TDC is the DJI Enterprise official platform in the Middle East, offering DJI Enterprise hardware and software, and providing the training to enable clients to get the most out of the investment they make in purchasing drones and establishing in-house drone teams.

Drones have enjoyed a strong presence in the region since 2014, and TDC will demonstrate how the latest line of DJI solutions can meet the main challenges of the public safety and security sector.

During the show, the TDC team will showcase drones that specifically address the three main challenges – reducing response time, increasing resource efficiency, and making operations safer. The answers, it says, are the DJI M300 RTK, the DJI M30T and the latest addition, the DJI Mavic 3 Enterprise series.

Rising above the competition: When paired with the DJI dock, the M30T can take off, collect data, land, recharge, and be ready to head back out – all without human intervention. PICTURE: TDC.

Most relevant to the public safety and security industry is the compact nature of the more recent drone models. Usually, when machines are reduced in size, there is a cost to be paid, either in safety or operational efficiency.

However, DJI has managed to reduce the size and weight of its drones, while actually improving performance. The M30T rises above the competition due to its compatibility with the DJI dock. When paired with the dock, the drone can take off, collect data, land, recharge and be ready to head back out – all without human intervention.

Drone technology has much to offer for the public safety and security sector. Specific to this region, we've seen a lot of initiatives from the regulatory boards trying to enable and take advantage of drones, such as the Dubai SkyDome project.

Adopting drones in law enforcement or civil defence is the next step towards empowering people on the ground, reducing response time, and improving resource efficiency. ▲

GAINING AN EDGE WITH ULTRA-SECURE COMMUNICATIONS

Waleid Al Mesmari: "We invest extensively in R&D and keep pace with the latest advanced technologies so we are in a position to meet the evolving operational requirements of our clients." PICTURE: EDGE.

EDGE makes its debut at ISNR 2022 showcasing a wide range of products in the fields of law enforcement and national security.

It will be demonstrating the group's extensive portfolio of electronic warfare, cyber, and secure communications solutions, as well as a range of small arms and ammunition.

EDGE's electronic warfare & cyber technologies (EW&CT) cluster will be represented by a wide range of capabilities, including SIGN4L's sophisticated NAVCONTROL-G spoofing system, V-PROTECT radio frequency (RF) communication jamming system, and WIFINDER homeland security solutions.

It will also showcase BEACON RED's security and intelligence training, cyber solutions, and cyber testing capabilities.

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However, it is DIGITAL14, provider of ultra-secure communications solutions including the KATIM platform, that may be attracting the most interest.

Waleid Al Mesmari, senior vice president, electronic warfare & cyber technologies, said: "We are very excited to launch a new product from DIGITAL14's wide-ranging portfolio of secure communications solutions. This particular product has world-class potential, and we look forward to unveiling it to our customers during the event."

Leveraging the most advanced technologies, DIGITAL14 has developed unique sovereign cryptography with postquantum capabilities. The company adopts a 'secure by design' mindset, from concept to completion – ensuring its solutions are foundationally secure.

Network connectivity exposes an unsecured layer for data in-transit and is the source of the vast majority of cyber-attacks. Due to this, the most sophisticated and strongest solutions should be used by organisations to secure client infrastructure and user data in-transit between sites, whether locally or geographically dispersed across the world.

Al Mesmari added: "We invest extensively in R&D and keep pace with the latest advanced technologies so we are in a position to meet the evolving operational requirements of our clients. We recognise that digital threats are now more resilient and persistent, and are intersecting with our daily security in unprecedented ways.

"There is a major requirement for secure communications both regionally and globally, and this is an area of focus for the EW&CT cluster going forward." ▲

CLEAR VIEWS IN ALL CONDITIONS

Hikvision is a leading supplier of video surveillance products and solutions, leveraging a strong R&D workforce and state-of-the-art manufacturing facilities.

Since 2001, Hikvision has established one of the most extensive marketing networks in the industry, comprising 33 overseas regional subsidiaries throughout the world, ensuring quick responses to the needs of customers, users and partners.

Among the products the company will showcase at the event is the new Pro series pan-tilt-zoom (PTZ) cameras with integrated ColorVu technology, a first for this range and launched only last month.

With ColorVu, Hikvision's new Pro series cameras can provide consistent image brightness and full colour imaging as the camera zooms in and out. This ensures crystal-clear details and vivid colour for distant objects at all times and in all conditions.

Traditional PTZ cameras can struggle to ensure that images remain bright and clear when they zoom in, especially in low light conditions. This is because the lens aperture gets smaller when operators increase the focal length, reducing the light entering the lens and thereby affecting the clarity of images. With Hikvision ColorVu technology, a very large fixed aperture is used in the Pro series varifocal PTZ cameras, enabling consistent light and colour for clearer imaging as the camera zooms in or out at night.

The new PTZ cameras' fixed F1.2 lens aperture allows as much as 14x more light to enter the lens compared to conventional PTZ units. This same capability also ensures vivid and full-colour imaging in light conditions as low as 0.0005 lux: or nearly total darkness. ▲

OPENING THE DOOR ON SAFE CITY SOLUTIONS

GNSS Technologies is a leading security contractor and systems integrator.

The company consults on, designs, manages, and implements a wide range of customised security measures – everything from perimeter protection to printing the UAE e-Passport.

GNSS specialises in artificial intelligence (AI), machine learning, robotics, the internet of things (IoT), explosive ordnance disposal, technical surveillance and counter measures, screening for air, land and sea borders, lawful interception, bioinformatics, forensics, secure printing, secured communications, perimeter protection, cyber security, armoured vehicles, unmanned vehicles, mobile command vehicles, and sonars.

During the show, the GNSS team will be showcasing a number of different solutions, including the latest Raman technology in explosive, drugs, hazardous materials trace detection, and the Patriot One multi-sensor gateway for the detection of concealed weapons.

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Patriot One's gateway detects concealed guns and knives on people in a fast-lane setting (no bags or carry-on trolleys), preventing mass casualty attacks on the general public in high traffic facilities and venues.

The gateway's autonomous detection system can spot threats with individuals carrying concealed guns, knives, or related dangerous objects into secured private or public spaces, utilising its unique passive sensor array.

Gateway can be installed at schools, stadiums, concert halls, shopping centres and other entryways into private, public or secured buildings.

Safe entrance: Patriot One's multi-sensor gateway detects concealed guns and knives on people in a fast-lane setting.
PICTURE: GNSS TECHNOLOGIES.

Yahya H Zeitouneh, general manager, GNSS Technologies, said: "Our solutions are based on the latest AI-powered engines and machine learning processes, allowing the solutions to answer the increasing demands of the clients to keep up with a dynamic working environment. We help ensure the safety and well-being of the UAE, as per the vision of the UAE leaders to make this country the safest place on Earth to live.

"With the geopolitical situation in the region, our solutions play an important role in ensuring the UAE stays on top of the latest innovations in homeland security to provide territorial safety and to offer the UAE inhabitants the highest standards for safe and liveable cities." ▲

NO HIDING PLACE FOR NARCOTICS 'MULES'

Linev Group, which specialises in the supplying X-ray systems for the security, medical and non-destructive testing (NDT) markets, will be at ISNR highlighting its new product designed to detect narcotics contraband by international couriers in their stomachs.

"The Clearpass CI machine has been designed to be user friendly and very effective in detecting foreign objects in the abdominal area," explained Igor Bondarev, director.

The UK company is a 'unique ecosystem' made up of international companies and supplies its X-ray technology all over the world.

"The Middle East is a very important market for us and a place to be if we consider ourselves as a global player," said Bondarev. "The group has a long history of supply to these markets. This was behind a decision to expand our presence, with a UAE regional office to be closer to our customers and better serve their needs."

Bondarev said the UAE is of particular interest to the company.

"It's the most advanced and fastest-growing economy in the region with all the necessary instruments in place," he said. "Its ambitions go beyond the borders of traditional business, trying to innovate in each segment, and that's what we like because we are "united for innovation".

Igor Bondarev: "The Clearpass CI machine has been designed to be user-friendly and very effective in detecting foreign objects in the abdominal area."
PICTURE: LINEV GROUP.

In fact, the Dubai office is not restricted to the Middle East countries but looks at potential markets in its proximity as well.

"Religious and cultural similarities, along with the individuality of the countries in the region, represents a very interesting ecosystem in which to work," said Bondarev.

Describing ISNR as "an amazing platform" to attend, he added: "We can exchange security expertise and talk to professionals from all corners of the world." ▲

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DELIVERING THE DEFINITIVE VIEWPOINT FOR REGIONAL AEROSPACE DEVELOPMENTS

Arabian Aerospace – previous winner of 'Best International Publication' – and **African Aerospace**, provide key market coverage for the Middle East and Africa. These two industry leading magazines – both quarterlies – are produced by award winning journalists led by aviation expert and five times Aerospace Journalist of the Year, Alan Peaford. Both publications are complemented by daily online news services.

Award winning **Arabian Aerospace** magazine – now in its fourteenth year of publication, has become the premier title for the aerospace industry across the Middle East, North Africa and Turkey.

African Aerospace – launched in 2013 to focus on the exciting potential offered by markets in Africa – provides comprehensive Continent-wide coverage, in both English and French.

Our mission is to provide news and features about the entire industry and its activities in these regions, for those people in the industry whether they are locally based or have an interest in business in these areas.

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ARABIAN AEROSPACE AFRICAN AEROSPACE SHOW BUSINESS

New tech: The RS3 and EV1 firefighting robots. PICTURES: ALQUDRA.

ROBOTS FIGHT FIRE WITH TECHNOLOGY

The launch of the latest in electric firefighting robotic technology will take place at the AlQudra's stand. Dubai-based AlQudra International Companies Representation has become a leading solutions provider for key industries in the Middle East, focusing on innovative technologies, effective solutions and products, merged with artificial intelligence to cater to the needs of the fourth industrial revolution.

The company is the official representative and distributor of Howe & Howe Technologies in the region.

During the event, the AlQudra team will showcase the diesel firefighting robot RS3, and will be launching, for the first time, the newest models of the electric firefighting robotic technology EV2 & EV1.

The featured Thermite EV2 is an all-electric firefighting robot of modular design, including a multi-position nozzle and additional attachments. It is powered by a battery pack instead of a combustible engine and, unlike an oil-cooled engine, does not require oxygen for power.

The Thermite EV2 has the ability to operate for several hours on a single charge and is capable of moving farther into high-temperature, dangerous environments, extending the capability of firefighters, while enabling them to maintain a safer stand-off distance.

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The EV2 is the first thermite to be operated by a state-of-the-art, hand-held controller for effective targeting of fires. The controller features an eight-inch screen and provides real-time situational awareness with recording capabilities. It receives regular software updates to ensure operators have the most recent, reliable technology at their fingertips.

Mohammad Bany Hathel, CEO AlQudra, said: "Howe & Howe Technologies is a leading US technology company in the field of uncrewed ground vehicles (UGV) robotics worldwide. The company has developed the robotic firefighting robot with the same strong military base to meet the needs of firefighters, as a first responder, and raise the level of security in risk areas that may be caused by natural disasters and massive fires.

"It is characterised by endurance of geographical factors, difficult climatic conditions, and high temperatures. Abu Dhabi Civil Defence is already using our firefighting robots, and the UAE Civil Defence HQ/ Ministry of Interior and ADNOC have these firefighting robots in operations."

The team will also be showcasing the homegrown Al Damani DMV300 electric vehicle. Hathel said: "We are proud to say that we are the first manufacturer of an electric vehicle in the GCC region."

The Al-Damani DMV300, developed in collaboration with established companies including Aston Martin and General Motors, has a battery capacity of 52.7 kWh, a top speed of 160km/h, and a range of 405km. Its fast charger powers up the vehicle 20-80% in 30 minutes. ▲

FAST AND ACCURATE DRUG SCREENING IN YOUR POCKET

Abu Dhabi's Techand Smart Solutions will debut a unique pocket-sized narcotics screener at the show, seen for the first time in the region.

TactiScan from Spectral Engines is the world's first portable drug screening device. It is designed to be used by police patrols to detect illicit narcotics onsite, with no officer exposure and no expertise required to operate.

This re-usable hand-held narcotics screener has extremely high measurement accuracy from a low drug concentration, and the user interface is significantly more functional than in the products presently used in the field.

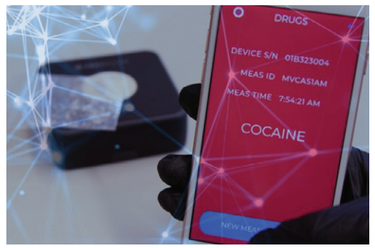
The operator simply places the sample on the scanner. No preparation is required, as the TactiScan can scan through a transparent plastic bag. No consumables are needed, so no additional chemicals, swabs, or swipe pads need to be carried or used, which cuts risk, cuts costs and ensures the product is eco-friendly.

The simple optical reading ensures that the sample is preserved intact, and the same sample can be analysed in the laboratory.

The scanner is sensitive, with specific substance detection designed to detect drugs in typical street concentrations and cutting agents.

The core of the TactiScan narcotics scanner is a Spectral Engines' near infrared (NIR) spectral sensing module, combined with mobile and cloud connectivity, to enable fast mass data management.

Results appear in seconds on the operator's phone in the field, both IOS or Android, while a report is generated at the office. ▲



Eco-friendly: TactiScan can scan through a transparent plastic bag, no consumables are needed, so no additional chemicals, swabs, or swipe pads need to be carried, which cuts risk and costs. PICTURE: TECHAND SMART SOLUTIONS.

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