

OW BUSINESS





IDEX/NAVDEX SHOW DAILY / ABU DHABI / FEB 17 2025

NOTHING GOES UNSEEN

ONTHE

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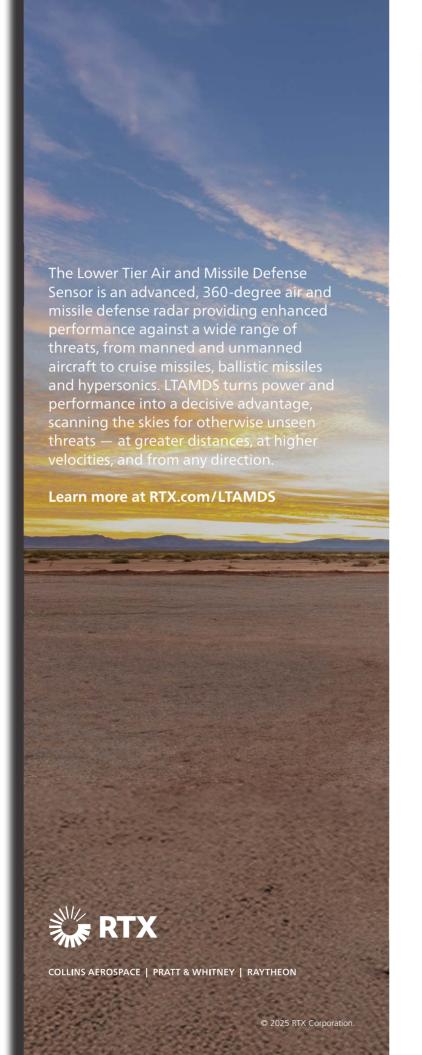
encompass the resilience of supply chains, integrity of information and the strategic use of space capabilities in a world where world disruption can halt supply chains in an instant. The future of security is not something we wait for but something we build together." International Defence

Conference, see story p5













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Exhibitions welcome record numbers in 2025

IDEX/NAVDEX ON THE CREST OF A WAVE

he United Arab Emirates is the focal point of the world's defence industry this week at record-breaking IDEX and NAVDEX exhibitions. The largest ever editions open for business today putting the spotlight on the global defence industry at a time of deep geopolitical uncertainty and amid a myriad of security issues across the Middle East and beyond.

"This edition marks a milestone in the 32-year journey of success, garnering unprecedented global attention, underscoring its growing influence in the defence and security sector," said

major general Faris Khalaf Al Mazrouei, chairman of IDEX and NAVDEX.

The 17th edition of IDEX, the 8th edition of NAVDEX, and the accompanying International Defence Conference (IDC), which took place at the Emirates Palace yesterday, is organised by Adnec Group in collaboration with the UAE Ministry of Defence and the Tawazun Council.

This year's NAVDEX features naval fleets from eight nations, including the UAE, Bahrain, Oman, Pakistan, Greece, South Korea and India, with the first vessels welcomed this weekend as they passed through the

waterway towards the Adnec Marina.

According to commodore Rashed Ibrahim Rashed Al-Muhaisni, chairman of the maritime committee of NAVDEX, this week will witness the launch of several warships for the UAE Armed Forces, plus the participation of 21 vessels from allied and friendly nations, including newly-manufactured ships that proudly showcase the advanced technologies of the Emirati defence industry.

Opening the IDC yesterday,

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Conference, see story p5







Conference focuses on supply chain disruption

Disruptions to global supply lines are nothing new. They have been around throughout the 20th century and the post 9/11 era.

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ELTA's radar systems are invaluable assets, enhancing the safety

Proven Digital AESA Radars

The IDC conference, entitled "Defence Reimagined: Innovation, Integration and Resilience" saw moderator, Bilal Y Saab tell the audience: "What we are dealing with today is the likelihood and complexity of those disruptions often occurring at the same time, even if by different things.

"Pandemics like COVID-19, national disasters, ransomware, cyberware issues, conflicts, and sanctions have all played their part. Often the need to be more resilient to this, is to work collaboratively. but that isn't happening," Saab

If that wasn't enough, general (retired) Hulusi Akar, chair of Turkey's national defence committee in Turkey, said: "Today tariffs between the US and others including Canada, Mexico, China and the EU, as well as the crises in Ukraine and Gaza, could impose delays and blockages.'

One of the panellists, professor Manmohan Sodhi, of Bayes Business School (pictured), wrote the first paper on supply chain risk

and disruptions as well as the first books on the topic in the early 2000s, "People are still talking about the same things we were talking about 20 years ago!" he said.

He continued: "But there are two new things - supply chain interdiction and supply chain infiltration that have appeared this year."

The professor then looked at some topics and challenges that US president Trump is taking on.

"Chemicals from India and China are going through Mexico, where it's been repackaged and entering the US as fentanyl."



"If you look at what the Israelis did with the explosive pagers. that's also infiltration. That's a new threat, and a downstream one." Sodhi said. The message from the speakers was the world has to be watchful on who is controlling these global sea routes, and the IDC conference raised issues that some may have not understood or even realised were out there.

Lockheed Martin exec wants easier second sourcing approvals

ecent supply chain disruptions, coupled with increased demand, are driving a need for more overseas production and sourcing. It is also showing a need to make it easier to bring on board new suppliers, said Tim Cahill, the head of Lockheed Martin missiles and fire control (pictured right).

"I need additional supply chains I need additional manufacturing sites," Cahill said at the International Defence Conference yesterday. Lockheed Martin is in the process of ramping up production of both tactical missiles and air and missile defence interceptors as the Pentagon and customers abroad look to replenish inventories and augment supplies. For instance, in October the Pentagon awarded the company a contract to supply 650 Patriot PAC-3 missiles annually from 550.

"My particular division built 30,000 end-product articles for delivery, not assemblies, but missiles and sensors and those type of things last year. And that's a lot of things to build so we need to be able to build those in other places on Earth," he said.

One of the challenges in the past has been getting new suppliers approved for production, he said, saying it simply takes too long. "What's going to have to happen is a relaxation of some of the standards that I think it takes to actually qualify a second source,' he said.

Cahill signalled the Trump

administration's indication it is ready to shake up the way things have been done as an opportunity, with industry having to now put forward ideas on what changes could be beneficial. Change likely will also have to involve Congress



and stakeholders abroad, he said "I think everyone across the

planet now realises that if we don't do something different in the supply chain, and if we don't do it collectively, collaboratively... we're not going to get to where we need to be," he added.

Lockheed Martin is taking other steps to harden its supply chain, he said, including looking into bulk titanium purchasing. Access and the price of titanium has become more challenging since Russia's full-scale invasion of Ukraine has disrupted supply.

"I'm going to buy titanium for my entire supply chain," he said. The bulk purchasing should allow the company to secure not just supply, but also at better prices.

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Edge continues to expand

here is no stopping Edge, UAE's leading advanced technology and defence group, as it continues to expand its portfolio of cutting-edge products.

Launched in November 2019, its vast diverse portfolio can be seen at a variety of different stands: C20 in Hall 5, outdoor stand CP-270 and Abu Dhabi Ship Building (ADSB) at NAVDEX 2025, stand B-022.

There are 46 new systems and solutions across its all-domain portfolio at IDEX 2025 and NAV-DEX 2025. The launch of the new solutions boosts the group's portfolio to 216 products, enabling it to strengthen national sovereignty through critical defence systems, and to pursue international growth through partnerships and exports.

Hamad Al Marar, managing director and CEO of Edge, said: "This is by far our most advanced display to date, showcasing not only next-generation solutions, but the critical technologies that power them.

"We have moved beyond delivering stand-alone systems to developing integrated, multi-domain capabilities that enhance mission effectiveness and operational superiority.



One of the new launches in the air domain is the Anavia HT-750 rotary-wing heavy-lift ISR unmanned aerial vehicle

"From autonomous platforms and advanced sensing technologies to secure communications and counter-UAS solutions, every product we are unveiling at IDEX 2025 is designed to deliver realworld impact." said Al Marar.

New launches in the air domain are the Anavia HT-750 rotarywing unmanned heavy-lift aircraft featuring intelligence, surveillance, and reconnaissance (ISR) and cargo delivery capabilities; and the P145i, an all-weather two-stroke, six-cylinder, 1.8-litre aeronautical piston engine manufactured through Edge's Powertech entity, that was publicly unveiled on February 12.

New solutions in the land domain include the Havoc robotic combat vehicle (RCV), produced by Estonia-based Milrem Robotics; and the NIMR Ajban MK2 series with three new multi-role armoured vehicle variants (Ajban 441AE, Ajban 432AU, Ajban 452A). In the small arms category, new products include the Caracal Sniper rifle multi-calibre (CSRM).

In the naval domain, Edge has launched its new 45-metre FA-400

offshore patrol vessel, designed with full IP ownership and constructed entirely in the UAE.

Edge's portfolio of secure communications, counter-UAS, and electronic warfare capabilities includes the showcasing of Katim X3M, a rugged, secure, and modular mission-critical communication device for battlefield communications; the Shadow 3 portable and autonomous C-UAS; and the Border Shield surveillance system, among other high-tech solutions.

The space technology arm, FADA, is unveiling Tactica, an AI-powered C4I (command, control, communications, computers, and intelligence) system, harnessing the power of AI and generative AI to revolutionise space intelligence.

To accelerate technological advancement, Edge is launching key programmes and unveiling its most advanced suite of electronic warfare, radar, and electro-optical systems to date.

These solutions include compact gimbals, high-precision electro-optical cameras from the Mirsad family, and next-generation radars from the 'Tawaq' portfolio, recently tested in the UAE.

XRange adds drone training village

As Edge's unmanned combat aerial vehicle programmes, like the Reach-S, gain more momentum, the Abu Dhabi business has announced a dedicated environmental test centre and new facilities for advanced vehicle blast and ballistics testing.

XRange, a multi-domain training, test and evaluation (TT&E) facility for defence, aerospace and commercial customers, operated by Remaya, has announced the expansion of its capabilities to better serve its clients.

The significant capacity reinforcements include a secondary runway, two emergency runways, an environmental test centre, an unmanned aerial systems (UAS) drone training village, and expanded airspace for customer operations. Additionally, the introduction of a data acquisition systems facility and an upcoming vehicle blast and ballistics test service will further complement XRange's testing capabilities.

Speaking on the upgrades, Haitham Awinat, chief executive officer of Remaya, said: "XRange was designed to push the boundaries of what is possible in terms of conducting critical TT&E activities in the UAE.

"While significantly boosting our operational flexibility, these enhancements allow our clients to expedite their product development processes and accelerate the delivery of their solutions to market."

The new 1.2km graded asphalt secondary runway at Abu Al Abyad

airfield is designed to support developmental UAS operations, enhancing the efficiency of the existing primary 3.8km runway.

The new runway doubles the test island's capacity to hold simultaneous flight operations for the conventional take-off and landing of UAVs while enhancing overall operational flexibility.

Additionally, two 800m emergency runways boost recovery capabilities, ensuring safe extraction of UAS systems during inflight contingencies while keeping both main runways accessible for other customers.

Further boosting XRange's test facilities, clients can now undertake component level environmental testing using electrodynamic shaker tables, temperature and



A UAV prepares to land at XRange, a new training, test and evaluation site for UAVs and UCAVs

humidity conditioning chambers, and drop-testing for up to 40kg of developmental high explosives (HE). The training village is designed to support low-level UAS testing in simulated urban environments. XRange was launched in 2023 and is located 100km southwest of Abu Dhabi city, on a highly-secure 355km² island.





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New platforms highlighted in this year's show

his week's IDEX and NAVDEX

collocated events are expected to draw in more than 1,800 participants, marking a 414% increase since its launch in 2015. With this year's edition seeing new initiatives including a new platform for chemical, biological, radiological, nuclear, and explosive (CBRNE) threats.

The events are featuring 41 national pavilions, with the UAE pavilion being the largest at 25,000 square metres, a 4% increase from two years ago. The growth of the UAE as a defence industry itself is indicated by the number of national companies reaching 213 – some 16% of the exhibitors.

Organised by Adnec Group in collaboration with the Ministry of Defence and the Tawazun Council, brings together global companies and experts showcases the latest technologies and solutions in the sector.

Chairman of the organising committee, Major General Staff Pilot Faris Khalaf Al Mazrouei, (pictured above) has high hopes for the event. "This edition marks a milestone in the 32-year journey of success, garnering unprecedented global attention, which underscores its growing influence in the defence and security sector. These exhibitions play a pivotal role in strengthening international security and fostering global peace," he said.

While there are many new products and systems on display. deputy chairman Major General Mubarak Saeed bin Gafan Al Jabri said: "The event is not only about technical showcases and commercial deals but it also aims to build sustainable strategic partnerships, foster trust, and enhance international cooperation in defence and security. This commitment aligns with the UAE's vision to support innovation, economic diversification, and cement its position as a global leader in the defence industry," he said.

Humaid Matar Al Dhaheri, man aging director and Group CEO of

Adnec Group, added: "More than 3,300 products and technologies will be displayed, demonstrating the significant role IDEX and NAVDEX play in supporting the defence industry and enhancing the competitiveness of UAE-based companies on regional and international levels.

The exhibitions will also host over 156 start-ups, accounting for 10% of total exhibitors." Visitors will also see seven new



countries presenting at the shows this year.

"Qatar, Ethiopia, Hungary, Latvia, Lithuania, Romania, and Chemical and biological threats are featured in new IDEX platform

Cyprus – are participating," said Al Dhaheri.

The new dedicated CBRNE

g platform is located in Hall 14,

g opposite the grandstand and
featured 38 companies from

13 countries. Elsewhere there are more than 150 start-up companies marking their debut on the international stage.

Fourth IDEX for video specialist VITEC

Exhibiting at its fourth IDEX, 35-yearold IPTV, video streaming and digital signage solution provider VITEC described the event as "a must" if it wants to operate in the region.

Aurélie Albert, head of marketing – sales enablement, elaborated that although the Middle East market is already sizeable, this is "just the start".

Although integrated globally across multi-industry domains (including hospitality, government applications, broadcast and security), the defence sector comprises approximately 30 per cent of VITEC's global remit.

In the US, a market Albert described as "very successful", this has risen to around 50 per cent. Globally, VITEC's team comprises of some 500 staff, 75 per cent of whom are engineers. However, here in the Middle East, customers are already supported by two offices, with technical support augmenting

 $sales \, representatives.$

With building brand awareness cited as a crucial enabler to continued growth, the French private company also highlighted how educating the market that "video is key" (a capability only predicted to rise) is integral to its expansion in the region. Working with undisclosed partners in the region who lack VITEC's specialist knowledge, "it's a niche market, but can have a big impact," concluded Albert.



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RAFAEL

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It's a MADS world and Roketsan offers strong focus

urkish manufacturer
Roketsan is building on
its developing reputation
across the Middle East and
North Africa. It brings an array of
missile, rocket and ammunition
technologies to this year's IDEX,
as well as systems that it says
will strengthen the defences of
countries across the region.

The company's CEO, Murat İkinci, said: "As a company that flies our country's flag on four continents, we continue participating in international fairs and showcasing our state-of-theart defence systems.

"As one of the strong and reliable solution partners of the UAE and Gulf region countries that host IDEX, we are exhibiting many of our systems at this fair, from our UAV ammunition to our anti-tank systems, from our air defence systems to our cruise missiles."

İkinci said he is putting a lot of store on the many meetings that can be arranged at the show. "We aim to increase the economic added value we provide to our country and strengthen the defence of the UAE and countries in the Gulf region by establishing new partnerships," he said. "As we have done so far, we will continue to proudly represent our country in the international arena."

With a strong focus on mobile air defence systems (MADS) the Roketsan stand has experts to talk through potential solutions such as BURÇ.

BURÇ was unveiled at IDEF in 2023 to great acclaim with the MADS integrated onto an FNSS Pars 8x8 AFV.

It is mounted onto the roof of the vehicle and installed in an electrically-operated remote controlled turret which transverses a full 360 degrees. Its flexibility and design is set to defend against small and large targets such as UAVs and helicopters.

Roketsan is exhibiting a number of munitions at IDEX including MAM-L IIR and MAM-T IIR, the new generation of mini smart munitions; İHA-122 and İHA-230 air-to-surface ballistic supersonic



BURÇ's flexibility and design is set to defend against small and large targets such as UAVs and helicopters

missile; TEBER and LAÇİN guidance kits; CİRİT laser-guided missile; KARAOK short-range anti-tank missile; L-UMTAS laser-guided medium range anti-tank missile system; and LUMTAS-GM long-range anti-tank missile system.

The Roketsan stand also offers

detail on the SOM stand-off missile, ÇAKIR cruise missile, laser-guided artillery ammunition, KMC-U tactical missile weapon system, MBRL multi-barrel rocket launcher, METE laser-guided mini missile system, TRLG-122, TRLG-230, TRG-300 and BORA missiles.

How UAE looks to enhance C295 capability

The United Arab Emirates Air Force and Defence has been operating seven Airbus C295s since 2019, but from the outset there has always appeared to be aspirations to convert some into special mission aircraft.

At Dubai Air Show 2017, two aircraft, a sales demonstrator destined for the Uzbek Air Force and a Royal Saudi General Aviation Command were displayed in an intelligence surveillance and reconnaissance (ISR) and gunship configurations respectively.

On the latter, Turkey's Roketsan and Spain's EXPAL showed off their options, to equip four underwing pylons. Their presence was an indication of the UAEAF&AD'S aspirations for the aircraft.

To date none of the UAEAF&AD



aircraft have been seen operating in roles other than tactical transport, but the local air force is renowned for its ubiquitous operational needs and the C295 seems to be edging towards that objective.

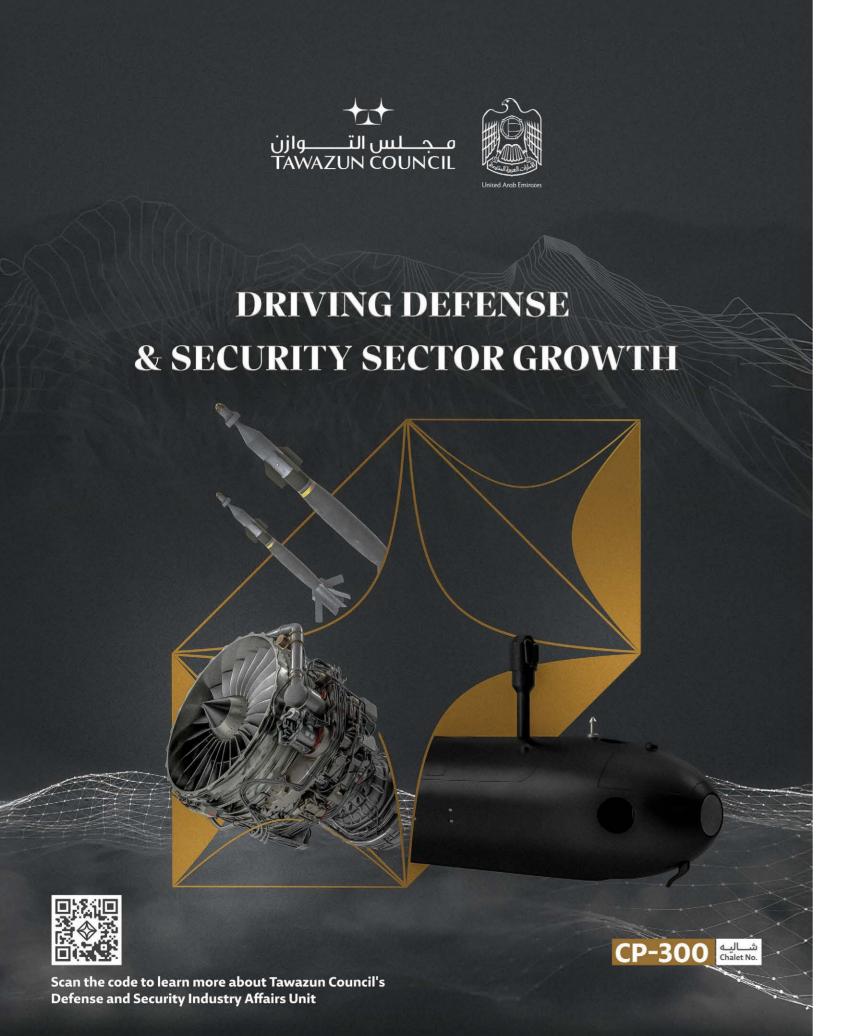
In November last year EDGE's EPI, signed a serial production contract for C295 cargo compartment removable tanks (CCRTs) with Airbus Defence and Space. Under the agreement, the two companies will work together exclusively on the serial production of C295 CCRTs over a five-year period, building on the success of the prototyping phase, which included 12 special process accreditations for aerospace assembly activities.

The agreement also involves the integration of 300 fabricated parts, centre of gravity testing, and leak

testing. It supports EPI's transition to assembling recognisable sub-systems for an aircraft programme.

The contract is aligned with the vision of 'Make it in the Emirates'. The CCRT tank, jointly industrialised by Airbus and EPI, is designed for versatile applications, including ground refuelling (GR) operations, extended range (ER) missions, and air-to-air refuelling (AAR) operations.

Jean-Brice Dumont, head of air power at Airbus Defence and Space, said: "The recent addition of the CCRT enhances the C295's capabilities, enabling new missions such as aerial refuelling. All CCRTs are manufactured by EPI, highlighting the UAE's strategic role in Airbus' global defence supply chain and its commitment to advancing local manufacturing capabilities."



A Step Ahead – Combat Proven, Future-Proof Naval Radars

odern navies face an evolving threats arena powered by ongoing developments in targeting and attack systems. Included among the significant new dangers are low visibility manned and unmanned aerial platforms, and long-range cruise and hypersonic anti-ship missiles. The latter are of particular concern because their trajectories are difficult to predict and their high speeds leave short time for intercept. These threats increase the enemy's ability to execute coordinated attacks from beyond the ship's line of sight, and threaten to overwhelm the current defensive systems of surface combat vessels

In response, IAI's innovative sensors and systems subsidiary, ELTA
Systems (IAI ELTA), offers the combat proven MF-STAR and ALPHA shipborne multi-function radars, which provide naval forces with the ability to efficiently detect, track, engage and eliminate advanced threats. Both these powerful, modular, fully digital AESA radars include class leading multi-beam and multi-technique capabilities, together with superior ECCM features.



Credit: IAI

MF-STAR and ALPHA exploit breakthroughs in wideband Active Electronic Scanning/Staring Array (AESA) technology. Developed and matured at IAI ELTA over the past decade, AESA significantly exceeds legacy solutions in both receiver sensitivity and Effective Radiated Power (ERP). Furthermore, AESA technology enables narrow multi-beam operation in reception and transmission for simultaneous tracking of multiple threats with unmatched efficiency.



Credit: Bharat Electronics Ltd.

True long-range multi-function radar systems, MF-STAR and ALPHA provide local and area defense in blue and littoral waters with their surveillance, tracking and weapons guidance capabilities. Moreover, extended-range versions can detect and track tactical ballistic missiles (Ballistic Missile Support). The German Navy chose IAI ELTA radars to equip their F124 Air Defense Frigates based on their performance and Ballistic Missile Support capabilities.

These highly automated radars require little or no operator involvement, and the extensive use of Built in Test (BIT) and modular components make them easy to maintain. Not only are they the most mature radars in their respective classes, they are also the most flexible with regard to addressing future threats owing to their modular architecture and software driven design.

Both radars employ proprietary wideband solid-state transmit/receive module groups (TRG).

These fully digital TRGs constitute building blocks that can be added to increase performance as needed. Each compact TRG unit contains individual S-Band transmit/receive channels constructed with the latest GaN Solid State Amplifier (SSA) technology. These modules enable the radars to be scaled to different vessel sizes, mission profiles and budget constrains. Both MF-STAR and ALPHA share the same TRGs, simplifying ILS and reducing Life Cycle Cost (LCC).

MF-STAR employs four oblique fixed panels to provide 360-degree coverage while minimizing radar signature. Versions are available for larger ships such as frigates while lighter, more compact configurations address corvettes and smaller vessels. MF-STAR delivers class-leading range, commensurate with the size of the installed antenna.

ALPHA radar utilizes a single panel mounted on a rotating pedestal to achieve 360-degree coverage with built-in IFF and navigation antennas. Offering superb performance in a lighter, more compact, lower cost form factor, ALPHA can also be enhanced in the future with additional TRG modules.

The backbone of the Israel Navy's air surveillance and defense array - IAI ELTA's combat proven, fully digital radar family is in service, or in the process of fitting, on over thirty ships worldwide. IAI ELTA's pioneering efforts are such that while competing AESA systems are in their first generation, MF-STAR represents a battle tested third-generation design.

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AW149 MODERN MULTI-MISSION PERFORMANCE

ilitary helicopters must be equipped to perform the most demanding battlefield missions in the harshest environments. The AW149 is a latest-generation medium multi-role military helicopter that delivers the highly effective and survivable capability required by today's armed forces, combining advanced technologies, equipment and weapons with unparalleled safety and performance characteristics.

The AW149 is optimised for a multitude of battlefield missions such as troop transport and re-supply/external load lift; medical and casualty evacuation; Search and Rescue (SAR) and Personnel Recovery; special forces operations; close air support/armed escort; Command and Control (C2); and Intelligence, Surveillance and Reconnaissance (ISR).

The AW149 blends performance, lower life-cycle costs and day/night all-weather capability in a single platform. The large, rapidly reconfigurable cabin can accommodate a wide range of role equipment and weapon systems to enhance operational effectiveness and survivability on the battlefield.

The advanced open architecture mission system enables the quick and effective integration of mission-specific and customer-specific equipment, avionics, weapons and defence systems. The helicopter is day/night capable with a single pilot Night Vision Goggle (NVG) compatible, low workload glass cockpit.





The AW149 ensures unparalleled crew safety. Contributing to its superior battle survivability are high levels of ballistic tolerance of the blades, airframe and components, crashworthy fuselage and seats, energy-absorbing landing gear and structure.

The main gearbox has a unique 50-minute dry run capability, while the helicopter also features self-sealing fuel tanks, a fully integrated defensive aids suite along with additional armour protection.

The spacious, unobstructed cabin and large sliding doors on both sides enable the rapid transport of heavily laden troops and mission equipment in support of high-tempo operations.

The large sliding doors support fast roping and hoist operations, enabling troop insertion and extraction on the hover while allowing simultaneous cover fire from window-mounted machine guns.

A large equipment stowage area for stretchers and medical kit can be accessed optionally from the cabin. The AW149, already in service with or chosen by international operators for a range of applications and under evaluation among various countries, is ideally suited to modernise defence helicopter fleets and replace a range of ageing types in the medium weight category.

The AW149 is a latest generation multirole military helicopter designed from the outset to meet the most demanding needs of armed forces. The platform can be reconfigured to perform a wide variety of demanding tasks in the toughest operational conditions.

The AW149's advanced equipment, weapons and system technologies, combined with its agility, range/endurance and high power margins, highest levels of safety and survivability, provide defence users with high operational availability, mission effectiveness and cost efficiency of the fleet.



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Comrod transmits at IDEX

egular IDEX exhibitor
Norway's Comrod is stressing
the vital role its antenna systems
and high-performance data link
solutions play in today's manned
and unmanned systems.

"Historically, communications were about people talking to people. Whereas now, we live in a data-driven world, and we live in a data-driven defence world," said Paul Griffiths, marketing manager at Comrod. "Therefore, you need the highest data rates you can achieve over the longest distances, and that's what we offer."

Comrod, which began manufacturing antennas in 1948, develops a large range of field-proven, ground-deployed, vehicle, man-held, shipboard and submarine antenna systems.

"Everything in the defence world relies on the air interface, that is RF (radio frequency) communication," said Griffiths. "The man, the vehicle and the UAV, everything relies on the data link, which relies on an antenna and that's where our expertise is."

Comrod always brings its RF engineers to shows to discuss technical questions with



customers, such as the challenge of rationalising multiple antennas on a single vehicle, which is fed back to the engineering team.

In April 2024, Comrod acquired US firm Triad RF Systems,

co-located on its stand, a developer of RF/microwave amplifiers and RF subsystems. These systems help achieve higher data rates over longer distances, which users are constantly striving to achieve.

Antenna manufacturer
Comrod produces ground,
vehicle, man-held, shipboard
and submarine systems, said
Paul Griffiths, marketing
manager at the firm

Could Morocco be the first in MENA race for the F-35?

For years Gulf militaries have expressed interest in the Lockheed Martin F-35 joint strike fighter aircraft. There were indications from the early days of the Abraham Accord that Israel could lift its

objections to air forces such as the UAE and eventually Saudi Arabia getting their hands on the aircraft.

A third MENA country also had the F-35 on its shopping list – and that was Morocco.



F-35 sales in the region have always been limited by a U.S. policy to support qualitative Israeli defence superiority in the region — a policy that delayed previousgeneration fleet sales in the region and kept the Israeli military a step ahead of its neighbours.

But according to analysts at Aviation Week Network, rumours have begun to swirl suggesting that a Moroccan F-35 deal may come within months and include 32 F-35s, which would make Morocco the first non-Israeli F-35 operator in the MENA region and opening the door for future sales to the Arab world.

Israeli and U.S. officials had supported a bid by the North African kingdom to buy the F-35 five years ago, but the contract was never signed before President Donald Trump's time in office came to an end. His return has heralded a revival in the Moroccan plan.

According to Aviation Week forecasts, Morocco's current fighter fleets feature a mix of F-16 Block 52+ C and D tails that will soon be upgraded to the block 72 V standard, as a fleet of 24 new-build Vipers enters service alongside them.

Israel – which will operate 100 F-351s by 2035 – will maintain its qualitative edge through more advanced (and timelier) upgrades, while Morocco will field a larger fleet of Lockheed Martin's fifthgeneration fighter than Spain, Portugal, Singapore, Romania, Czech Republic, Greece, or Denmark.

If signed, the prospective deal would open the door to additional non-Israeli F-35 sales in a deeppocketed region that Lockheed Martin officials surely have been waiting to break into.

15

Tecnobit brings a sense of reality to combat simulation

Cimulation training is at the heart of solutions offered by Tecnobit, part of the Spain-based multinational Oesía Group (Stand 12-B22).

The company's Joint Terminal Attack Controller (JTAC) is an advanced training tool designed to prepare the military for combat.

According to Jaime Ledo, product manager of simulation at Tecnobit-Grupo Oesía, the ITAC simulator provides a realistic training environment through the use of high-quality 3D graphics and virtual reality.

"The ITAC simulator uses immersive technologies such as large domes with wide fields of view (FOV), high resolution and brightness, as well as virtual and mixed reality (VR/MR)," he explained. "This allows ITACs to immerse themselves in a simulated combat environment that closely resembles reality.

In this manner they gain handson experience and develop an intuitive sense of how to operate on the battlefield at a fraction of the cost of live training. Importantly, ITACs can train in a virtual environment where there is no risk of accident or injury.

"This not only makes training safer, but also more efficient, as the JTAC simulator also encourages strategic decision-making and ITACs can practice as many times as necessary to master a skill." Ledo added. "Moreover. they receive immediate feedback on their performance, which helps them identify and correct any deficiencies in their skills."

He said the JTAC simulator



is designed to be easy to use and practical. It does not require a large amount of space or complicated hardware configurations, making it easy to deploy in different locations and environments.

Tecnobit's solutions, including the advanced Simaca artillery simulator comprising JTAC, is operational in Spain and Brazil. and has been in development for the UAE Army since 2021.

Ophir Optronics Solutions has success in its sights

Having recorded an impressive 25 per cent growth in the last 12 months, high-performance infrared optics specialist Ophir Optronics Solutions acknowledges the growing defence market is synonymous with rising geopolitical tensions – or, as Shalom Revivo, senior director of sales explained, "a tough neighbour-

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hood" to operate within.

and homeland security, the last

Having started out doing coding for optics 48 years ago, Ophir has since moved into assembly of its products; branching out to become the biggest brand of infrared optics in the world today. With a range of military solutions spanning land and sea warfare, missiles

applications continues to attract ongoing innovation – including addressing threats of loitering munitions and kamikaze missions. Alongside its primary facility

decade's trend for counter-UAS

in Israel, the vertically-integrated company also works out of five US locations, alongside facilities in India, Japan, Korea and Romania; the latter having tripled in size in recent years.

With more than 250 customers worldwide, around 30 per cent of Ophir's sales are to the US. a further 35 per cent to Europe, with Israel and the Far East comprising the rest.

"There's a shortage of companies that can produce optics for defence purposes," explained Revivo, highlighting that parent company MKS Instruments nevertheless "gives us strength".

A platform-agnostic lens such as the system shown here with Shalom Revivo can weigh as little as 250g and

Türkiye-based Elektroland (Stand C9-002) offers innovative solutions in the area of unmanned ground vehicles and autonomous systems for defence and public security.

Safely from a distance

Its vehicles have been utilised extensively by end-users for United Nations and other international peacekeeping operations.

The BOGAC 6X6 unmanned ground vehicle (UGV) boasts outstanding mobility on all terrain. thanks to the power taken from all six wheels. Moreover, its modular architecture also allows for a high payload capacity.

In a lighter class the 5kg Egorov vehicle is used in urban areas. Carrying a maximum payload of 7.5kg, it has a robotic arm and zoom camera module.

Elektroland is also showing its remote-operated disrupter holders, designed for safely disabling or destroying suspicious objects. The Levent disruptor holder system can capture photographic images or video footage replayed before and after firing.

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Controp unveils strategic shift towards comprehensive defence solutions

Electro-optical and infrared technology provider Controp is unveiling its integrated defence portfolio, representing what the company describes as a "strategic shift from specialised payloads to comprehensive defence solutions".

In line with the company's growing international footprint and global network of subsidiaries, its new capabilities in integrated electro-optical/infrared (EO/IR) systems provide comprehensive operational solutions for a variety of missions — better embracing the complex

needs of the modern battlefield

"From lightweight microgimbals for UAVs and loitering
munitions, to long-range
surveillance and advanced
detection systems, our new
offerings demonstrate the shift
from stand alone sensor payloads
to scalable, integrated defence
ecosystems," explained Hagay
Azani, president and CEO of
Controp.

Augmenting its strategic switch of focus, Controp will also be demonstrating the latest iteration of its flagship SPEED series of



EO/IR surveillance systems at the show, with both SPEED ER and MR variants having proven their performance in challenging conditions across the Middle East. These will be complemented by the new STAMP XED (the latest in a family of miniature UAV payloads), offering extendedrange optics and advanced target tracking.

Russia showcases T-90MS tank

ussia's defence export organisation, Rosoboronexport is showing a record number of products at IDEX, with many incorporating lessons learned during the conflict in Ukraine.

More than 40 Russian manufacturers are represented.

"The general idea of our exhibit is to show Russia's comprehensive approach to developing and upgrading all types of weapons, taking into account the experience of modern combat operations," Rosoboronexport director general Alexander Mikheev said.

"This factor has already enabled

us to sign contracts worth more than \$4.5 billion with 15 friendly countries in 2025."

Among the major systems on show are the upgraded T-90MS MBT, the Pantsir-SMD-E shortrange SAM system, KUB newgeneration loitering munitions, the upgraded Kornet-EM ATGM system with remote control and the new Bulat missile for engaging light or medium armoured vehicles.

The centrepiece of the
Rosoboronexport stand is the
T-90MS tank, designed and
manufactured by Uralvagonzavod.
This new variant has a range
of protective systems aimed at
defeating modern battlefield
threats, including explosive
reactive armour (ERA), add-on
slat armour, electronic warfare
equipment aimed at jamming aerial
drones and an active protection
system to intercept incoming
missiles.

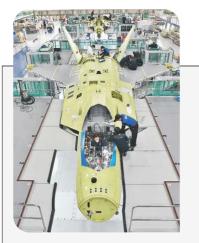
The T-90MS is also equipped with a new digital fire control system and integrated command information systems. The tank's 125mm cannon can fire new APFSDS, air-bursting fragmentation projectiles and guided missiles.

Rosoboronexport is also showing the new Pantsir-SMD-E very short-range SAM system.
The vehicle can replace its normal load of 12 57E6-E missiles with no fewer than 48 TKB-1055 small-sized missiles that give it considerable persistence in the face of multiple drone attacks

– another lesson learned from

the conflict in Ukraine.





THE ROAR OF THE KF-21 IN SACHEON:

KAI'S CHALLENGES AND FUTURE PROSPECTS

t Korea Aerospace Industries (KAI) headquarters in Sacheon, Republic of Korea, the sound of the KF-21 fighter jet's test flights fills the air. The KF-21, South Korea's next-generation fighter, began development in 2015 and successfully completed its rollout in 2021, followed by the maiden flight of the first prototype in 2022. By 2023, a total of six prototypes had successfully completed their maiden flights sequentially, bringing the system development on track and allowing major development milestones to progress successfully.

The KF-21's system development is planned in two phases. Phase 1 (Block-1) aims to verify basic capabilities and air-to-air combat readiness by mid-2026, while Phase 2 (Block-2) will focus on air-to-ground strike capabilities in a phased approach, targeted for completion by the end of 2028.

The aircraft has already completed supersonic flight tests and successful launches of shortrange air-to-air missiles (IRIS-T) and mediumto-long-range missiles (Meteor), with aerial refueling tests currently progressing smoothly. Additionally, through the system integration of domestically developed missiles and guided weapons in Republic of Korea, air-to-air and airto-ground armament capabilities are expected to be significantly enhanced.

Across the runway where test flights are conducted, KAI's production facility is busy preparing for the mass production of the KF-21. In 2024, KAI signed an initial mass production contract with the South Korean government, with deliveries set to commence in 2026.

KAI, South Korea's leading aerospace company, was established in 1999 through the merger of the aerospace divisions of Samsung, Daewoo, and Hyundai, Initially focused on fuselage manufacturing and licensed production, KAI has since expanded its expertise to develop indigenous platforms such as the KT-1 basic trainer, FA-50 Multi-role combat aircraft, and the KF-21 fighter.

Additionally, KAI produces rotary-wing



aircraft, including the KUH Surion utility helicopter and the LAH light armed helicopter, as well as satellites and launch vehicles, further expanding its aerospace portfolio.

KAI closely collaborates with the South Korean government and military to develop costeffective and highly efficient defense systems that address the nation's unique security challenges. Building on these efforts and achievements, KAI is seeking opportunities for cooperation to enhance the security environment of nations worldwide and strengthen combat capabilities. Additionally, it has been maintaining successful partnerships with multiple customer nations.

KF-21 program. The company has established a roadmap to lead the development of fifth- and sixth-generation fighters and manned-unmanned teaming (MUM-T) systems to gain superiority in future battlefields. In line with this roadmap. development will move forward as planned.

As major countries such as the UK, Japan, and (GCAP), the US Air Force advances its Next-Generation Air Dominance (NGAD) initiative. and France, Germany, and Spain develop the

However, KAI's ambitions extend beyond the

Italy pursue the Global Combat Air Programme

KAI's ambitions extend beyond the KF-21 program. The company has established a roadmap to lead the development of fifthand sixth-generation fighters and manned-unmanned teaming

Future Combat Air System (FCAS), KAI is currently conducting research and development on a manned-unmanned integrated system based on KF-21 platform which includes the performance enhancement of next-generation manned fighters, unmanned combat aerial vehicles (UCAVs), and attritable multipurpose drones (AAPs). To this end, KAI is developing key technologies such as unmanned aerial vehicles (UAVs), autonomous flight, AI pilots, and MUM-T(Manned-Unmanned Teaming) and these advancements will enhance the survivability and combat effectiveness of manned fighters while maximizing costefficiency through the Next-Generation Air Combat System (NACS).

Additionally, KAI has established a roadmap for mission execution in future battlefield environments, utilizing the development of multi-purpose cargo(MC-X) for airlift missions and manned-unmanned integrated systems (UAV carrier) based on multi-purpose cargo (MC-X) and the development is planned to proceed accordingly.

In addition, KAI plans to integrate secure satellite communications and high-speed data links to enhance mission effectiveness. The KF-21 and NACS programs have already garnered interest from multiple countries. including those in the Middle East, and KAI is actively engaging in discussions on the way of development with potential partners.

Sestan Busch getting ahead

It's all about head protection for Croatian company Sestan Busch. which is at the show showcasing its range of head protection systems.

"We provide top quality head protection systems and personnel protective equipment for our modern heroes," said CEO, Aloiziie Sestan.

The company has produced 2.5 million safety helmets globally. including providing helmets to the UK Police Force, as well as the GHQ armed forces here in the UAE.

"We have delivered 200.000 helmets to the UAE armed forces, so it is a very important country for us and why we are here at IDEX," said Sestan.

Right: Ahead of the game: CEO, Alojzije Sestan



Shoot and scoot with The Beast from Flyer Defense

| S-based Flyer Defense is showing its Flyer 72 multipurpose mobile fire support system (MPMFSS), nicknamed 'The Beast', at IDEX 2025 this week (Stand 03-A34).

This system is a specialised

variant of the Flyer 72 HD (heavy duty) ground mobility vehicle. With the Alakran 120mm mortar launchers from NTGS, it has the ability to "shoot and scoot" by firing up to eight mortar rounds before relocating within 90 sec-



onds. The double base plate design for the rear-mounted mortar ensures superior terrain compatibility and optimal firing accuracy. The Beast carries up to 50

rounds of 120mm mortar rounds. It seats up to four crew members and is equipped with partial armour for limited crew and stowed mortar round protection. The vehicle also features a pair of door-mounted light machine guns.

Rapid deployment of the Flyer 72 MPMFSS is achieved through air drop or slung under CH-47 Chinook or CH-53 helicopters. It is also internally air transportable by the Lockheed Martin C-130 and larger fixed-wing aircraft.

Under the UAE-based International Golden Group (IGG) banner, Flyer Defense LLC (Stand 04-C20) is also displaying its mission-specialised, lightweight, high-mobility, all-terrain tactical wheeled vehicles here at IDEX 2025. Flyer Defense started delivering an initial shipment of these

vehicles to the UAE as early as 2022 as part of a multi-year con-

Billed as a replacement for the Humvee (high mobility multipurpose wheeled vehicle), the Flyer vehicle enables military ground forces to move quickly for extended distances over difficult terrain. These vehicles are capable of being transported internally in rotary and tilt-wing aircraft.

According to Flyer Defense, the Flyer vehicles increase ground mobility, allowing for rapid deployment into contested areas. Tested and certified, these vehicles are highly modular platforms, allowing rapid vehicle customisation for immediate operation-relevant configuration.

Flyer Defense founder and CEO, Oded Nechushtan, said: "We are proud to offer our proven solution to the UAE as we simultaneously continue to grow our manufacturing capabilities with strategic partnerships."

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(MUM-T) systems to gain superiority in future battlefields...



Pioneering the Next Era of Defense at WDS 2026

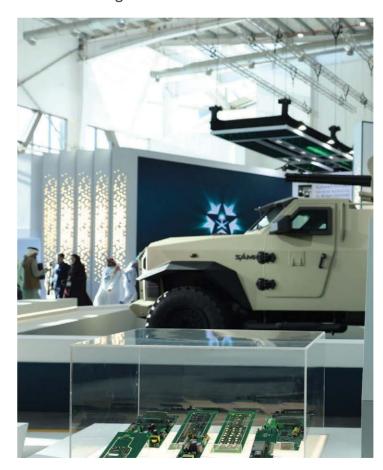


he defense landscape is evolving at an accelerated pace as groundbreaking technologies and strategic advancements push boundaries. Embracing the shift, WDS 2026 will serve as a global platform where innovation meets execution, bringing together industry leaders, emerging enterprises, and cutting-edge solutions that redefine modern defense. Integrating advanced software with traditional hardware, the event will showcase a seamless fusion of innovation, strategy, and capability. With newly introduced features, WDS 2026 is set to amplify networking, cultivate knowledge exchange amongst experts, and drum up collaboration across the defense ecosystem.



Unmanned systems continue to be a game-changer, reshaping military operations with AI-powered capabilities that enhance efficiency, precision, and adaptability. WDS 2026 places these latest advancements in autonomous technology at the foreground of the event through static displays and live demonstrations, revealing their transformative impact across land, air, sea, and space domains.

Designed to facilitate real-time engagement, the event's state-of-the-art venue —complete with a dedicated runway and purpose-built infrastructure — will provide an unparalleled environment for showcasing next-generation defense solutions. From live demonstrations to interactive exhibits, attendees will gain first-hand insights into the future of military operations and evolving defense strategies.



Building on the success of WDS 2024, which welcomed 773 exhibitors, over 106,000 trade

visitors, and more than 441 delegations from 116 countries, WDS 2026 is primed to reinforce its position as a leading global defense exhibition. As the event continues to set new benchmarks by facilitating high-level business engagements, collaboration opportunities ripple through the supply chain, driving innovation and advancements that propel the industry forward.



Join us at WDS 2026 to witness the next frontier of defense technology. This is your opportunity to experience industry-defining advancements, participate in powerful discussions, and be active in the conversations shaping the future of global defense.

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Naval Group showcases multi-purpose and modular launching system

Alan Dron looks at how new threats at sea are being countered by French R&D

ASYMMETRIC WARFARE

MPLS combines several

different payloads – missiles, rockets, loitering munitions or decoys – in a single launcher

he past three years have seen an upsurge in asymmetric warfare at sea.
Ukrainian uncrewed surface vehicles (USVs) have caused major damage to Russia's Black Sea fleet, while Yemen's Houthi rebels have made passage through the Red Sea hazardous for both merchant vessels and warships.

The Houthis have used a mix of simple drones, anti-ship missiles and even ballistic missiles to complicate the task of naval vessels defending themselves and the merchantmen they escort through the area.

This type of asymmetric warfare forms a backdrop to one avenue of Naval Group's R&D in recent years, namely the development of the multi-purpose and modular launching system (MPLS).

As its name suggests, MPLS combines several different payloads – missiles, rockets, loitering munitions or decoys – in a single launcher. This gives it the ability to handle several types of threats that present themselves simultaneously, or in quick succession.

The launcher's design incorporates several interchangeable ammunition modules that can be reconfigured according to operational requirements.

These can hold a range of effectors such as Thales' lightweight multi-role missile (LMM), which can engage a range of targets including fast missile attack craft, USVs, helicopters or UAVs.

The launcher can also hold 68mm or 70mm rockets and a range of ammunition types, while work is under way to integrate the Mistral anti-aircraft and Akeron anti-tank/anti-structure missile.

Naval Group says that installing multiple effectors on a single launcher simplifies onboard integration and increases payload capacity. The company adds that the system is designed to be easy and fast to reload – likely to



become an increasingly important factor in future combat scenarios, particularly when multiple threats are inbound.

An MPLS launcher has a payload of around 1,000kg and a ship can be fitted with one or more MPLS turrets, which can combine different weapon configurations.

The system's turret can move in two axes and MPLS integrates firing computers and a fire control system that enables it to hit manoeuvring targets. It can operate in stand-alone mode or connected to the vessel's combat system.

On the other side of the equation, meanwhile, Naval Group has itself invested heavily in R&D over the past 15 years to develop the use of air, surface and submarine drones by navies.

The French company has created a division dedicated to all types of uncrewed vehicles and autonomous systems, which is now a strategic pillar of the organisation.

"We provide navies with seaproven drones adapted to naval constraints, and ensure both physical integration to the ship of all unmanned system components (air, surface, sub) and functional integration to the ship's combat management system," said a spokesman.

Situational awareness

"Thus, unmanned systems relay most efficiently intelligence and reconnaissance information: those data are gathered and automatically processed by the Naval Group combat management system in real time, thus improving the situational awareness of the commanding officer."

Naval Group integration solutions are 'drone-agnostic' - they can be adapted to multiple types of uncrewed vehicles, rather than being limited to controlling specific types.

The company is positioned across the uncrewed vehicle sector, from drone mother ships to the drones themselves (aerial, surface and sub-surface).

It acts as an integrator of these into naval command systems, from creating the underlying architecture for uncrewed systems to integrating them into naval vessels, both surface warships and submarines.

It also provides the vital 'behind the scenes' role of in-service support, such as creating the necessary infrastructure at naval bases, storing and maintaining the vehicles as well as providing the training for personnel, using simulators, leasing and an 'as-a-service' offering to customers.

Naval Group's UxV and autonomous systems division has structured its product portfolio around four product lines.

These are a system product line; a USV product line with the SeaQuest drone; a UUV product line, with the SeaGent autonomous underwater combat system; and an onboard segment product line for the physical integration of all types of UAVs on the ship and their deployment.

Naval Group maintains a fleet of demonstration vehicles in the three environments, using the same mission system, making it possible to accelerate the maturity of employment concepts and technologies.

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Stand: 07 - C09

STRENGTH THROUGH PERFORMANCE



Otokar

Airbus Helicopters chief upbeat on Middle East market after strong 2024, writes Graham Dunn

From strength to strength

A irbus Helicopters sees continued strong demand in the Middle East after boosting total orders by around 10 per cent in 2024 across civil and military markets.

The Airbus division secured 455 gross orders – or 450 at a net level – last year, compared with 410 orders in 2023.

"For 2024 I confirm the continued momentum on the helicopter market, particular on the civil and the para public markets worldwide," said Airbus Helicopters chief executive Bruno Even, speaking at a full-year briefing on January 27.

He was similarly upbeat on prospects in the military segment, citing increased defence spend by many countries.

"There is a need to renew the military helicopter fleet, so also in the military market we see overall a positive trend," he said, noting one of the strategic priori-

ties of the company is to be "as competitive [in that market] as on the civil market". He pointed to increased momentum and positive sales in 2024 with the military versions of the H145 and H225 models.

Airbus sales in 2024 included a deal with Iraq covering a dozen H225M multi-role helicopters for use by Iraqi Army Aviation, deliveries of which begin this year. It also late last year secured an order from Bahrain's interior ministry for nine H145 light-twins to be deployed with the state's police service.

"We see the market in the Middle East region being strong, both in the military and the civil [segments]," said Even.

"In particular we see Saudi Arabia developing well, with the need to provide air transport capability for VIP transport, for medical services and for all types of missions," he said. "We really see the market in Saudi Arabia being strong. But not only there, in the rest of the region [tool."

Airbus Helicopters delivered 361 units in 2024, 15 more than the previous year. "It's really a strong performance in a challenging context, in particular with the supply chain," said Even.

He added that an announcement will follow "in the course of 2025" on its move with Indian conglomerate TATA to add a final assembly line in the country for the H125 light single-engine helicopter, plans for which were first announced a year ago.

"We strongly believe in the development of the Indian market," Even added. "On the civil market we have seen strong momentum in 2024, in particular for the H125 which just confirms [to] us that we were right in this strategy to implement this assembly line."▲

At the vanguard

Allen-Vanguard is used to protecting the lives of the armed forces, bomb technicians, and security personnel, and it has chosen IDEX to launch its next technological product to support front-line troops.

"As modern battlefield threats evolve, we are responding by launching the cornerstone of our latest Radio Frequency (RF) multi-function Cyber Electromagnetic Activities (CEMA) platform that provides the necessary flexibility and adaptability for front-line troops to quickly and easily dominate the CEMA space; a capability that is particularly important when providing security in the Middle East," explained Bobby Strawbridge, President of Allen-Vanguard.

"This new capability 'leverages' the latest in analogue signal processing technology and is the culmination of significant strategic investment and massive engineering development."

Strawbridge said this new technology enables direct RF sampling, without the use of tuners, across the entire RF spectrum used by UAS and RCIED devices.

"The Middle East has been a core market for Allen-Vanguard for a long time, and we have used our experience gained from supporting our clients in the region to help design and develop this new technology," he said.

"Not only is it exciting from an engineering perspective and enables the EW capabilities that our customers demand, but it also should be of interest to any OEM in the EW sector," he added.







Leonardo DRS is Supporting Modernization Through Smart Industrial Partnerships and Advanced, Interoperable Capabilities

he battlespace of today is much more complex than just a few years ago. Drones, loitering munitions, and a range of other sophisticated kinetic and non-kinetic threats put allied ground, maritime, and air platforms at ever-growing risk. The recent conflicts in the Middle East have highlighted these threats, moving allies to quickly update their defensive capabilities. Leonardo DRS believes supporting allies and collation partners of the United States is critical, and developing closer industrial partnerships and providing advanced military capabilities to ensure a strong and interoperable defense is a necessity.

For more than ten years, Leonardo DRS has been a close partner to allied nations around the Middle East and North Africa Region who are working to modernize their armed forces, significantly increasing national security through close teamwork and advanced technology to defend against current and future threats.

"As a company deeply committed to supporting the U.S. military and its allies around the world, we take pride in building strong partnerships and delivering our expertise to expand local industrialization and increase national security capacity around the region," said Bill Guyan, president of international business development for Leonardo DRS. "We are proud of our ongoing commitment to our partner countries, and look forward to providing advanced, mission-critical capabilities while strengthening the region's defense industry to ensure a lasting impact."

Strengthening Partnerships to Strengthen National Defense

Leonardo DRS continues to grow its partnerships across the Middle East and North Africa to support allied nations in modernizing its defenses to protect against current and emerging threats. The partnerships range from providing the company's proven, advanced technologies, to platform integration, and increasing in-country defense industrial capability.

The company is working with leading regional manufacturing and service providers of defense systems, to explore opportunities for in-country production and assembly of critical situational awareness technologies.

The company specializes in the development and integration of advanced vehicle-mounted battle management systems and a range of other cutting-edge technologies that modernize Command, Control, Communications, Computers, Cyber, Combat systems, Intelligence, Surveillance, and Reconnaissance (C6ISR) across multiple combat ground vehicle platforms.

Leonardo DRS has a vast experience in working with partner countries on joint development of advanced and reliable technologies, production, and long-term support for defense solutions tailored specific country requirements.





Advanced Solutions for a Complex Battlespace

Core to supporting regional allies is providing proven, advanced and interoperable capabilities to ensure partner countries have technology they can rely on and allows allied warfighters to seamlessly operate together on the battlefield. Leonardo DRS is a leader in developing and providing world-class advanced mission command systems that combine a multitude of platforms and capabilities to provides full situational awareness, networked across the battlefield.

Leonardo DRS also has extensive experience in Battle Management System (BMS) integration and supports a wide range of missions for U.S. defense agencies and allies. The company's proven systems integration capability extends to air, land and sea.

Leonardo DRS is the leading global supplier of proven advanced BMS and networked computing for ground forces worldwide. The powerful BMS platforms are A.I.- capable and designed to operate a range of mission-critical systems and sensors.

The company's advanced BMS is designed to integrate information from a range of various sources, from next-generation sensors, intelligence, and reconnaissance data, to provide warfighters with extensive battlefield situational awareness networked across units. The information allows users to make informed decisions quickly and efficiently and enhancing combat effectiveness.

These battle management systems use the latest commercial offthe-shelf technologies that represent the continued design evolution of an innovative mission-critical platform computer and provide combat-proven reliability to the Warfighter. These next-generation systems easily integrate with today's sensors, systems and applications on ground vehicle platforms, including thermal systems, tactical radars, blue force tracking software, and electronic warfare capabilities. This wide range of information is processed and sent across the network to give units, commanders and command posts broad situational awareness the capability to make the right decision when mission success depends on it.

Leonardo DRS is a Trusted Partner

As a company relied upon by the U.S. military to provide innovative and advanced technology, Leonardo DRS is proud of its deep experience in partnering with allied countries to ensure they have access to the best available defense technologies.

From providing advanced capabilities to supporting the integration of technology in combat platforms, to working with regional partners and finding ways to strengthen their defense industry, the company offers world class products and services for modernizing defensive capabilities.

The complex battlefields of today require proven, advanced, and interoperable solutions to defend against the modern and emerging threats. Leonardo DRS stands ready to continue to partner with our close allies across the Middle East and provide leading technology and integration capabilities that will modernize their armed forces while preparing them for future threats.

To find out more how Leonardo DRS can support the need to modernize defense capabilities, visit www.LeonardoDRS.com or our IDEX booth #02-B12.

INTERVIEW ABDELHAFID MORDI ON INNOVATION IN AIRSPACE PROTECTION AND SECURING SOVEREIGNTY

Can you tell us more about
Thales Emarat Technologies
and its role in the UAE's defense
and technological landscape? Thales has
had a long-standing presence in the UAE – we
celebrate 50 years in the country this year.

We have been working closely with our clients on advanced technological solutions across Defence and Security, Aerospace and Space, Cybersecurity and Digital Identity. Our commitment to the UAE's vision is evident in the incredible work that we have done in the country.

Thales Emarat Technologies was established in 2019 as part of the Tawazun Economic Program. It is a strategic defense asset that plays a key role in supporting the UAE's vision for national sovereignty through trusted innovation and industrial excellence.

Since its establishment, TET has launched key initiatives like the Radar Centre of Excellence, Defence Services Center, and the Digital Center of Excellence, positioning it as a hub for critical systems development. In 2023, we launched the Radar Factory, and the Go to UAE initiative. In 2024, we added nine Emirati suppliers to our global network.

We work closely with our clients to ensure the UAE remains a global and regional leader by advancing high-tech manufacturing, securing critical infrastructure, and reducing reliance on foreign supply chains. The long-term objective is for TET to become an export hub that caters to the wider region.

In recent years, we've seen a shift in air surveillance needs. Could you explain some of the new challenges and how Thales is addressing them? As the world becomes more connected, the need to protect airspace has grown exponentially. We're facing new and more complex types of threats, including those that target critical infrastructure or exploit gaps in traditional radar coverage.

Many parts of the world also experience frequent testing of airspace with unidentified flights, which must be detected even in dense civilian air traffic. At Thales, we've responded to these evolving needs by designing and delivering advanced air defence systems that ensure superior situational awareness for Command and Control (C2) centres, keeping airspace secure.



How do Thales's advanced air defence systems work to address these challenges?

Thales's air defence systems are designed to protect forces, vital assets, and critical infrastructure from both asymmetric and conventional threats. By leveraging cutting-edge radar technology, we're able to detect, identify, and neutralise a wide range of threats, whether they are fast jets, missiles, or even hovering helicopters and UAVs. Our systems provide operators with a comprehensive view of the airspace at all times, no matter the threat type or environmental conditions.

How is Thales continuing to innovate in airspace protection technology? We are constantly pushing the boundaries of what's possible in air defence and surveillance technology. At Thales, we continue to refine our radar systems to ensure they meet the ever-evolving threats in the airspace. This includes advancing our range, digital technologies, improving our radar's ability to detect and classify targets, and ensuring that our systems integrate seamlessly with other air defence assets. The future of airspace protection

is dynamic, and we are committed to staying ahead of the curve, delivering the most reliable and sophisticated solutions to keep nations safe.

How important is sovereignty when it comes to airspace protection, and how does Thales ensure its solutions support national sovereignty? Sovereignty is a critical aspect of airspace protection. Countries need to have full control over their airspace, which means they must rely on technologies they can trust and manage independently. Thales is uniquely positioned in this space because we provide fully sovereign solutions. Our systems are designed, developed, and manufactured entirely within our own ecosystem. We are also a systems integrator, and this ensures that our clients have full ownership and control over their airspace protection capabilities, which is essential for maintaining national security. Sovereignty in air defence means no dependencies on foreign technologies or foreign governments, which is one of the most powerful assets in today's global security environment.



Middle East defence procurement evolves

Aviation Week's Robert Wall, Tony Osborne and Craig Caffrey look at how the region is adjusting its approach to defence spending ising defence budgets in Asia and Europe in recent years mean that the Middle East is no longer the principal outlet for Western arms exports. But the region's financial muscle and efforts to establish local arms manufacturing centres have kept it central to shaping the dynamics of the global defence industrial base.

Saudi Arabia recently illustrated this in unveiling its latest defence budget plan, which calls for a five per cent hike in spending. The budget will rise to 272bn riyals (\$73bn), the world's seventh largest, from a revised estimate of 259bn riyals (\$69.1bn) in 2024.

The budget documents suggest a strong focus on advancing Riyadh's Vision 2030 goal of buying 50 per cent of defence equipment locally by the end of the decade. The interim target for this year is 20 per cent.

A reduction in procurement spending over recent years amid budgetary constraints will help Saudi Arabia achieve this benchmark by minimising large off-the-shelf purchases from overseas suppliers. The budgetary situations in the United Arab Emirates (UAE), Oman and Bahrain are similar.

Logistics package

When the US released the details of its fiscal 2024 arms transfer data, valued at a record \$117.9 billion, the only Middle Eastern mention was the authorisation of a logistics package for Saudi Arabia that made the list of 10 largest foreign military sales authorisations – and barely, as it was the ninth largest, valued at \$2.8 billion.

That is not to say the Middle
East no longer looms large, Saudi
Arabia's requirement for more
combat aircraft has drawn the
focus of Boeing with its F-15EX,
Dassault with its Rafale and
Eurofighter with its Typhoon.

Saudi defence officials have made clear they are looking to couple their next combat aircraft purchase with efforts to boost indigenous defence production capacities, including through involvement in a next-generation fighter project.

Italian prime minister Giorgia Meloni said during a January visit to Saudi Arabia that she was open to the country joining the Global Combat Air Program (GCAP). Italy has partnered with Japan and the UK on GCAP, with an eye to

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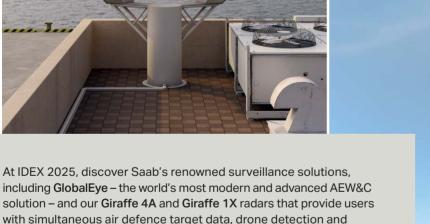
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analysis A

Procurement evolving

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introducing the aircraft into service around 2035.

Those deals also show how Saudi Arabia is working to catch up with the UAE in building up its domestic arms industry. The UAE has taken a lead largely through its effort to build up the five-year-old Edge Group through a series of acquisitions.

The company, created out of the merger of several businesses. has evolved into a provider of uncrewed aircraft systems (UAS), munitions and other equipment. Edge recently said its total sales have reached about \$5bn.

While the domestic market remains the backbone of the company's turnover, Edge says, its exports now surpass 40 per cent of revenue

Leonardo used Meloni's visit to announce an agreement to expand cooperation with Saudi Arabia in combat aircraft and helicopters. Italy's ELT Group signed a similar deal with Saudi Arabian Military Industries subsidiary SAMI Advanced Electronics Co. to look at collaboration and localisation of advanced technologies.

Persian Gulf state procurement activity is somewhat more muted than in the past, in part because

"Like Embraer. Airbus sees transport aircraft opportunities in the region and hopes to secure orders for the A400M, particularly from Saudi Arabia. The deal could gain momentum now that Germany has lifted a block on arms exports to the country"

the countries shopped heavily over the past decade, particularly for US and European-made fighters. Dassault rolled out its first Rafale in Ianuary for the UAE and plans to start delivering the 80 fighters in 2027.

Even so, there is still appetite for systems to support other armed forces needs. Embraer Defence chief commercial officer Frederico Lemos said.

The Brazilian aircraft-maker has been in talks with countries in the Middle East to sell its C-390 tactical transport, Lemos said, noting that recent success

securing orders elsewhere has helped in those talks. The company expects about 30 per cent of the 460-aircraft addressable market over the next 20 years to be sold in the region as countries look to replace long-serving Lockheed Martin-built C-130s.

Lemos asserts that the C-390 could serve as a tanker to support special operations or to deliver lower-cost refuelling options than the larger strategic tankers some air forces in the Middle East operate.

Boosting fleets

Both Saudi Arabia and the UAE have boosted the size of their tanker fleets in the past three years. Abu Dhabi ordered two more Airbus A330 multi-role tanker transports in 2021, and Saudi Arabia ordered four more in July, growing its fleet to 10 aircraft.

The additional tankers expand the expeditionary capabilities of the two air forces; both now regularly deploy their aircraft into Europe and South Asia for training and power projection.

Like Embraer. Airbus sees transport aircraft opportunities in the region and hopes to secure orders for the A400M, particularly from Saudi Arabia. The deal could gain momentum now that

Germany has lifted a block on arms exports to the country.

Embraer also sees opportunities in the Middle East to place more A-29 Super Tucanos, which Lebanon already flies, Lemos said. in particular as countries look to tackle intercepting UAS.

The turboprop combat aircraft could do that mission at a fraction of the cost of using a jet fighter, he said. The UAE has already taken steps to address that threat, placing an order in November 2023 for 40 indigenously-developed Calidus B-250 turboprop training aircraft.

Another sign that air defences are high on the agenda in the region is South Korea's success selling the medium-range groundbased KM-SAM II to Iraq, Saudi Arabia and the UAE.

Militaries in the Middle East are not just looking to defend against UAS, they are pursuing large stocks themselves. Having struggled to purchase US platforms for many years, several countries have opted for rival Chinese equipment only to encounter reliability issues.

Talking Turkey and beyond

Now Turkey is seemingly becoming the UAS provider of choice.On January 1, Istanbulbased Baykar announced the delivery of at least two Bayraktar Akinci twin-engine systems to the UAE, part of an order for roughly 60 airframes.

The country is buying a similar number of the smaller tactical TB2 platforms and plans to arm them with weaponry developed by Edge.

Baykar also has signed a large deal to provide Akinci to Saudi Arabia, with Saudi industry expected to perform assembly of the aircraft and some of the sensors through agreements with Turkish industry.

SAMI also has ambitions to build its own systems. Kuwait and Oatar have acquired TB2s as well, but the UAE is ramping up in-house UAS efforts under Edge.

Despite China's drone missteps, it has made inroads into the region with training aircraft, including selling its Hongdu JL-10 advanced iet trainer to the UAE.

Those initially went to the country's aerobatic team, but the UAE has options for an additional 36 for advanced training. ▲

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Green Power Turbine Systems's AT-01 four-seat, single-engine trainer, and P2P-2025, an eight-seat, twin-engine aircraft for training, utility and cargo missions



GREEN POWER ON DISPLAY

erbian company Green Power Turbine Systems is gearing up for the design, certification and production of two new aircraft models – the AT-01 four-seat, single-engine trainer, and the P2P-2025, an eight-seat, twin-engine aircraft for training, utility and cargo missions.

Both will be powered by the TPE 200 turboprop engine also being developed and manufactured by Green Power, said Goran Memon, senior principal engineer.

Green Power, which is a subsidiary of EdePro, a specialist in propulsion systems for rockets, UAVs and missiles, is a new exhibitor at IDEX. It sees good potential

for both aircraft in the African, Middle East and Southeast Asia markets, said Memon.

The prototype 200kW TPE 200 engine first flew on a helicopter test bed in mid-2023 and is slated to enter the EASA certification process in early 2025, said Aleksandar Pantovic, head of product development and design

The aircraft will be developed simultaneously on the same timelines with the plan to have prototypes in build by mid-2025, first flights in 2026 and first deliveries to customers in 2027, said Pantovic.

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MARSS set to double presence in GCC area

"Ve are living in a different world to the one of two years ago, for sure," said Rob Balloch, chief growth officer of MARSS, as the UK company prepares to showcase its cutting-edge NiDAR technology at IDEX.

However, with MARSS wellestablished within the region to "protect multiple strategic assets and critical infrastructure," he highlighted that it is well-positioned to take advantage of the increasing focus on flexibility and adaptability desired by end-users.

MARSS' mission at IDEX is to demonstrate how its NiDAR system – described as "a platform that lends itself to sensor integration and mission management, situational awareness across multiple different platforms that's very scalable and modular" – can integrate with the plethora of sensors available, integrating and adding to existing systems.

"IDEX is going to be full of solutions," Balloch explained. How-

ever, an established presence in the region is key, "working in close cooperation with the end users to fully understand what [their] true requirements are".

With MARSS' GCC headquarters based in Riyadh (comprising more than 30 engineers, project managers, and its 100 per centowned operating subsidiary that provides level one and two support to end users), the company has been growing throughout its approximately five-year regional presence.

It aims to double its size over the next 12-18 months, with Balloch emphasising MARSS' commitment to establishing 'centres of excellence'. Through increasing end users' knowledge and awareness of their needs, "they're better placed to ask us questions... and judge what their next level of requirements are going to be," he elaborated.

Crucially, "what we're seeing across the GCC states is learning,

he continued, citing nations' variety of choice and increased expectation of localised production, support and transfer of technology – something MARSS' presence is helping fulfil as it builds on existing GCC states' capabilities to move into further growth phases.

"The GCC has probably been ahead of the West in terms of understanding the impending

need for AI, machine learning, flexibility, adaptability," he added, highlighting the early signs of a move towards a 'national shield capability'.

Ultimately, however, despite the industry moving into "a very competitive period," Balloch concluded that with government lobbying increasing, the UK is certainly "upping its game".



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entral to this transformation is Mazagon Dock Shipbuilders Limited (MDL), one of India's premier shipbuilding companies, which has long been at the forefront of naval defence manufacturing, MDL's success with projects like the newly-commissioned three frontline combatants - INS Nilgiri, INS Surat, and INS Vagsheer - demonstrates India's growing expertise in building indigenously designed and constructed warships, which has gained the attention of both domestic and

INS Nilgiri, is the lead ship of Project 17A stealth frigates, while INS Surat is the fourth and final ship of the Project 15B stealth destroyer class, and with the INS Vagsheer, India completes its Project P75 Scorpene submarine class.

international stakeholders.

According to Sanjeev Singhal MDL's director (finance) and CFO, who also holds additional charge as chairman and managing director, the company's recent achievements in shipbuilding

Expanding horizons underscore its readiness to take on larger roles in the global

defence market. "The successful commissioning of INS Nilgiri, INS Surat, and INS Vagsheer reflects our growing capabilities in naval construction," Singhal noted.

"These projects are a testament to the advanced technologies and expertise we have developed over decades. They not only strengthen India's defence capabilities, but also highlight our potential to cater to international customers."

Expanding into the global market

The global defence landscape is witnessing a significant shift, with growing demands for advanced naval vessels and platforms.

MDL, with its decades-long expertise, is keen to capitalise on this demand by expanding its exports of high-tech defence platforms.

"The global defence market is evolving, and while the commercial shipbuilding sector is facing a downturn, the demand for advanced naval platforms remains

robust," Singhal explained. "At MDL, we are strategically positioning ourselves to meet this demand. With our vast experience in integrating high-tech weapons systems and sensors for complex defence platforms, we are wellplaced to serve both domestic and international clients.

India's defence sector is undergoing a dramatic transformation. particularly in its naval capabilities, as the country accelerates its push for self-reliance in military technology, Vibhuti Agarwal writes

> MDL's strategy for global expansion includes engaging in government-to-government (G2G) agreements.

"The G2G route is a powerful mechanism for expanding our international reach. It allows us to secure long-term contracts with foreign governments while also contributing to India's strategic defence relations with other nations."

In addition to the G2G approach, MDL is actively participating in global tenders issued by foreign navies and is in discussions with various defence ministries to fulfil their shipbuilding needs.

"We have been in dialogue with foreign governments and naval forces about their requirements. This is a critical step in establishing MDL as a trusted partner in the global defence market," Singhal

maritime A

MDL has established a dedicated international marketing division for an increased thrust towards harnessing the export potential of its products such as warships ranging from patrol ships, corvettes, frigates. destroyers and others in the defence sector.

"In addition to constructing vessels, MDL is also ready to provide other services, like the design of warships, transfer of technology and imparting training in construction of large warships, he added. Currently, MDL is capable of building 10 capital warships and 11 submarines concurrently.

Infrastructure and technological advancements

To support its global ambitions, MDL is heavily investing in enhancing its infrastructure. A key project is the development of a greenfield shipyard at its Nhava Yard in Navi Mumbai.

Singhal revealed: "The greenfield shipyard at Nhava Yard is part of our long-term vision to expand our production capabilities. In the short term, we will use the existing infrastructure to support shipbuilding and repairs, while in the long term, the expanded facility will enable us to construct large vessels, submarines, and conduct major refits.

In line with these expansion plans, MDL is also planning to build a new floating dry dock with a 12,000-ton capacity. This will further enhance the company's ability to handle larger projects and serve international clients.

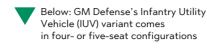
"The floating dry dock will significantly improve our capacity to build and repair advanced defence platforms, making MDL more competitive in the global market," Singhal noted.







Below: GM Defense's Next-Gen Tactical Vehicle – a game-changing mobility solution that delivers significant tactical capabilities



Below: The GM Defense-Tahoe PPV is powered by a 5.3L Ecotec3 V8 engine that produces 355 horsepower







This week at IDEX 2025, GM Defense (Stand 03-A09) is showcasing a range of its proven vehicles, from the next-generation tactical vehicle for the military to police pursuit vehicles (PPVs), reports Sam J Basch

Getting the wheels rolling

ccording to Steve duMont, president of GM Defense, the 'next-gen' vehicle is a game-changing mobility solution that delivers significant tactical capabilities by integrating GM's proven commercial technologies.

"This rugged and highly-capable diesel-powered vehicle offers tactical advantages, such as silent operations, exportable power, and increased range with extended mission duration, all while reducing fuel demand," he said.

The vehicle's silent drive and silent watch capability enables low acoustic and thermal signatures, which are paramount in highrisk operations like intelligence gathering.

Featuring a 2.8L Duramax turbo-diesel engine that can charge the battery twice over, it offers increased range and extended mission duration. Interesting, with 300 kWh of total energy, the 'next gen' can power tactical operations centres, maintenance points, high-energy-demand sensors and more.

GM has for a long while been at the forefront of transformative battery power technologies as evidenced by its support of several on-going research projects. In this way GM Defense is helping solve the military's energy and energy storage challenges.

The 'new gen' is based on GM's heavy-duty Chevrolet Silverado. As such, it uses 85 per cent commercial-off-the-shelf parts and safety features like roll-over protection, anti-lock braking, electronic stability control, and 360-degree cameras. It is designed to enhance readiness and capability on modern battlefields.

Ready and capable

Equally ready and capable on the battlefield is GM Defense's infantry utility vehicle (IUV). It has the off-road capabilities of the proven nine-passenger ISV designed for rapid ground mobility. Relying on its advanced commercial technology, GM created a modern, reliable tactical military mobility solution.

The IUV variant comes in fouror five-seat configurations. It also features a NATO pallet cargo bed for modular mission equipment, such as mortars, loitering munitions. C-UAS and more.

Weighing under 5,000 pounds (2,232 kilograms), the IUV can be deployed or inserted through low-velocity air drop from several military transport aircraft types, including Lockheed Martin's C-130 Hercules. It is also

internally transportable in various large helicopters or as a sling-load under a Sikorsky UH-60 Blackhawk.

Built for sustained operations in austere environments, the IUV can be maintained with accessible commercial parts obtained through GM's existing global supply chain.

Visitors can view GM Defense's IUV at Tawazun Council's booth CP-300.

For police pursuit vehicles (PPVs), GM Defense leverages its commercial truck platforms, like the Chevy Tahoe and Chevy Blazer.

PPVs are engineered to support the rigours of law-enforcement and on-road patrol.

On the GM Defense stand it is displaying the Tahoe PPV, powered by a 5.3L Ecotec3 V8 engine, which produces 355 horsepower and 383 lb-ft of torque.

The vehicle comes with a 10-speed transmission and features a heavy-duty, policerated brake system with six-piston Brembo front callipers and StabiliTrak electronic stability control system with traction control.

The Tahoe PPV includes safety features, such as HD rear vision camera, OnStar-embedded hardware, automatic emergency braking and rear park assist.

In January this year, GM
Defense announced that it
was providing next generation
Suburban Shield armoured
vehicles to the Qatar Armed Forces
and Special Forces Command.
The vehicles would be used for
protected diplomatic security and
VIP transport.

DuMont said the next-generation Suburban Shield offers the Qatar armed forces unrivalled performance, thanks to GM's advanced technologies.

"We engineered the Suburban Shield from the ground up as a protected vehicle using GM's world-class process and tools to deliver the reliability and quality expected from a GM vehicle," DuMont stated.

Whilst based on General Motors' full-size pickup truck and sport utility vehicle architecture, Suburban Shield includes a new body-on-frame chassis and suspension system designed to support increased vehicle weight and performance requirements.

GM Defense also provides customised Suburban Shield vehicles to the U.S. Department of State's Diplomatic Security Service (DSS).



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Getting boots on the ground

or rapid deployment of troops and equipment in a conflict zone, the military have for decades utilised parachutes, such as those produced by Czech company MarS (Stand 08-A20).

Since its establishment in 1949, the company has built a reputation for designing and manufacturing complete parachute systems and related equipment.

Its portfolio includes parachute sets for paratroopers, tactical teams, instructors and students, as well as cargo parachutes. In addition to ballistic and tactical vests, and bomb blankets, MarS manufactures electronic automatic activation devices.

"Most of our production, more than 80 per cent, is oriented towards military applications," said commercial director Tereza Marková. "The company's products serve armies and special forces in Europe and several Asian and African countries."

The MMTS-260 multi-mission tactical system comprises a 24.15sqm main canopy and a similar sized reserve canopy. With a maximum suspended weight of 160kg and speeds up to 278km/h, it is ideal for tactical operations.

The system accommodates various deployment methods, from static line and assisted opening to stabilisation fall and free fall, which ensure adaptability for diverse mission requirements.

For enhanced safety and operational flexibility, the reserve activation and extraction (RAX) system ensures rapid deployment of the reserve canopy.

The RAX system speeds up the opening of the reserve canopy and thus reduces the time between cutting away of the main canopy and fully opening of the reserve canopy.

MarS is also showing the OVP-12 SL-1, a steerable troop

parachute system designed for airborne operations. Supporting a maximum suspended weight of 160kg and operating at speeds of up to 250km/h, it is suitable for use in winds up to eight m/s. It requires a minimum exit altitude of 150 meters (492 feet AGL). With an optional versatile cargo system supporting up to 60kg, this parachute offers dependable performance and adaptability in a range of mission profiles.

"We also have the OVP-12 SL-3 version available, supporting a maximum suspended weight of 182kg, which operates at speeds of up to approximately 278km/h," Marková added.

MarS military products are catalogued within the NATO stock number (NSN) system.▲

MarS's Paradrop (above right) and Cargodrop (right) systems in action









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BRIEF HISTORY

he foundations of the Company were laid thirty years ago when the Laboratory for Jet Propulsion was founded at the Faculty of Mechanical Engineering of the University in Belgrade. Established in 1996, EDePro has grown into a successful, internationally renowned Company which is engaged in the research, development, production, and trade in the new and modernization of existing munitions and defence equipment, as well as in the application of high-tech solutions in hailstorm defence, as well as in other civilian applications.

For years, the EDePro Company has been among the leading organizations engaged in designing and producing turbojet and rocket propulsion systems of different types and applications. The flexibility in the design has enabled the accomplishment of high performances of the realized solutions, and, on the other hand, it has enabled the possibility of fast realization of projects and activities in the defence and related industries.

The Company's main effort is to rely on top-notch experts in the topical areas permanently and to pursue the philosophy of its original development, which results in a high level of efficiency in work and the quality of realized projects.

Today, the Company employs more than 400 highly educated personnel. They are representatives of a few generations of experts and specialists. Hence, EDePro employs many PhDs, Master of Science, and specialists in important fields for its operations.

Besides, several Company experts teach at the Faculty of Mechanical Engineering

of the University in Belgrade and within the postgraduate studies.

INTERNATIONAL SCOPE

Today, EDePro is a regional leader in propulsion systems solutions for solid unguided and guided rockets, turbo jet-propelled missiles, UAV aerial platforms, and the production of energy materials. Our engineering flexibility allows us to meet customers' expectations for high performance, quality, reliability, efficiency, and fast solutions for defence tech products

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- Research and development in the field of jet propulsion based on liquid and solid propellants;
- The Company EDePro produces more than 800 tons of thermoplastic composite rocket propellant annually for various rocket engines. In this way, the Company EDePro is the leading producer of solid rocket propellant in this part of Europe
- Design and production of low-output and thrust turbojet engines intended for UAVs, motor gliders, helicopters, and mock-up power plants;
- Development, design, and production of unmanned aerial vehicles for different applications;
- Development, design, and production of modern munitions and weapon systems and defence equipment;
- Overhaul and modernization of the

existing munitions and weapon systems;

- Design in-house, production, and testing of different guided missile and aerial vehicle platforms.
- Various training programs, expert, specialist, and scientific courses in the areas of the Company's expertise and transfer of different technologies.

The educational programs are represented by activities that are harmonized with the curriculum of the Faculty of Mechanical Engineering in Belgrade, and they are intended to educate and specialize research staff in the field of jet propulsion.

By using the advanced CAD/CAM design methods, the course attendants are presented with the latest design methods, and everything is done through practical work on real designs and development programs.

EDePro Company has technologically advanced laboratories for testing the characteristics of turbojet engines and rocket motors, solid rocket fuels, and the materials used in aircraft construction.

The Turbojet engine testing lab has an advanced platform for testing turbojet engines in realistic operational conditions. Modern acquisition and measuring equipment enables the measuring and recording a large number of parameters in real-

Therefore, these laboratories of EDePro Company are among the rare ones of this kind in this part of Europe.

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Pictured: Fiber optic guided missile system ALAS; TPE 200 turboprop engine, MLRS 400 mm and UAV helicopter



UCAVS are now becoming ship-shape

A new class of warship, housing potentially dozens of uncrewed aerial vehicles, is about to make its presence felt in several regions of the world. Alan Dron investigates

ncrewed aerial vehicles (UAVs) have sprung to prominence in both land and air warfare in recent years. Now, they are on the verge of making their presence felt in the naval world. Türkiye, China and Brazil have all demonstrated, or plan to bring into service, major vessels that operate UAVs as their main aircraft fleets.

How these vessels will deploy their air components remains to be seen – concepts of operations are still being worked out.

The conflict in Ukraine has seen miniature drones used in their thousands, and concerns have been raised that certain countries will shortly have the ability to deploy huge, coordinated swarms of small UAVs that will overwhelm air defences by sheer numbers.

Or, at the very least, they will force defenders to expend highly-expensive SAM stocks to shoot down adversaries that cost just a few thousand, or tens of thousands of dollars apiece.

Such very short-range UAVs are unlikely to play a role in future naval engagements, simply because their launch platform would have to get so close to its objective that it would itself become a target for opposition vessels and missiles.

However, longer-range UAVs will significantly extend the range and awareness of a navy that does not possess large aircraft carriers that can carry fast jets or airborne early warning aircraft.

Commissioned in 2023, the flagship of the Turkish navy, TCG Anadolu, is an amphibious assault carrier, but is also described as the world's first flat-top whose primary complement of aircraft consists of uncrewed combat air vehicles (UCAVs). The carrier can also, of course, carry helicopters, but reports say it can host up to 50 UCAVs, notably the Bayraktar TB3.

The TB3 can carry a payload of only 280kg, but that is enough to install several light, guided munitions or, probably more usefully, a range of interchangeable sensors, such as active electronically-scanned array (AESA) radar, electro-optical/infra-red (EO/IR) pods or electronic intelligence (ELINT) equipment.

Most importantly, it has an endurance of around 21 hours, so a small number of TB3s could easily mount a 24-hour picket several hundred kilometres from their mother ship.

Anadolu features a 12-degree 'ski-ramp' bow to help the UCAVs get into the air.

China, meanwhile, is pumping out new naval vessels at a quite astonishing rate. Among them is the Type 076 amphibious assault vessel. Launched last December, Sichuan is a vessel of more than 40,000 tons that has been designed from the outset to have a UAV-carrying capability.

Unlike the Turkish TB3 on board the Anadolu, the Type 076 seems destined to operate altogether more sophisticated UCAVs, such as the Flying Dragon-2, a stealthy, flying-wing design that analysts believe is designed for long-range strike against high-value targets such as vessels or ground installations.

Its weight, estimated at 22,000kg, with a 6,000kg payload, means that it cannot perform an unaided take-off. Rather, it will

make use of Sichuan's electromagnetic catapult.

Again, much remans unknown about the vessel and its UCAV complement. The Sichuan can also carry combat helicopters. In all, it would seem to be designed to be well-suited to take part in any operation by China to take Taiwan by force – a course of action that Beijing has said it will consider if the island democracy seeks to formalise its de facto independence.

Halfway across the world, meanwhile, Brazil has adapted the 'multipurpose aircraft carrier' Atlantico (the former British helicopter carrier Ocean) to have a UAV capability.

Aviation Week reported in January that Brazil's Stella Tecnologia was hoping to start testing its Albatroz UAS on board Atlantico later this year. Albatroz is a 500kg, twin-boom machine and has an endurance of 24 hours, around six times that of the helicopters that the ship will also embark.

This would undertake a variety of duties, including hunting for illegal fishing activities and search and rescue missions.

country focus

Charlotte Bailey finds out why UK's defence industry sees Middle East as key partnership market

The next big things: Britain expands IDEX presence

uilding on a continuous presence at the show spanning more than a decade, ADS is again looking to expand its attendance at IDEX this year; broadening the UK trade association's mission of "advancing leadership in aerospace, defence, security and space, to enable prosperity and secure growth".

With around 30 UK companies ioining the ADS pavilion at IDEX 2025 (a rise from last show's 20+), this highly sought-after stand space is now "at capacity which is great," explained ADS international business director Connie Mathiesen.

"It has been of huge interest, and hopefully, as we come out of this year's event, we might look to expand the presence we have for the future"

Although pitches are allocated on a first-come, first-served basis, "what we have tried to shift within ADS is how we promote and market and put those opportunities out there." she elaborated.

And given rising geopolitical tensions, it's easy to understand how one of the larger pavilions

"With the Middle East having been the largest market for UK defence exports (on average) over the last five years, an accolade only recently overtaken by **Europe, it nevertheless** remains "a keu market for the UK defence sector in terms of exports"

CONNIE MATHIESEN ADS

ADS hosts at global events continues to exemplify what Mathiesen describes as "a really good connector in the Middle East region".

With the Middle East having been the largest market for UK defence exports (on average) over the last five years, an accolade only recently overtaken by Europe, it nevertheless remains "a key market for the UK defence sector in terms of exports," she continued.

Indeed, 2023 UK defence security export statistics indicate the UK's defence export total stands at

tinues to shape capability demands and drive innovation adopted the world over. "At ADS, we are very proud of the support that we provide to Ukraine and offer our membership in building relationships." Mathiesen stated, adding that the situation is a "really unique learning curve for a lot of people".

£9.5bn (\$12bn), a figure which has

seen an 18 per cent growth in the

last 10 years, with a "majority" of

However, global conflict con-

that going to the Middle East.

Although acknowledging that different markets have different priorities, she added that the requirement for "development and manufacturing hubs who are ready to deliver quite quickly, but also at a very high level," remains elevated across the board. Additionally, "working at a more innovative, more rapid development level, and looking for very innovative solutions is what we're seeing".

With ADS currently representing just over 1,400 companies across four sectors (aerospace, defence, security and space), around 90 per cent of its membership is made up of SMEs; which, alongside the established primes, are key in providing the agility and creativity dynamic threat environments demand.

A presence in the ADS pavilion is particularly important in increasing smaller SME's exposure to the stakeholder community, with ADS "working with government stakeholders in ensuring we have the right conversations"; something Mathiesen believes is a "huge draw" to its members. Additionally, 'match-making' services (coordinated with UK government partners in-country) ensures ADS can facilitate direct introductions and "make sure [it] matches [its] companies and their capabilities with the right stakeholders at the

BAE Sustems

The specific layout of the UK pavilion – placing smaller companies close to the likes of BAE Systems - allows additional opportunity for interaction and synergy. "As a company with a long history and significant footprint in the Middle East, BAE Systems is continuing to develop technologies for our partners across the region." explained a spokesperson.

Whether combat air solutions (pictured facing page, top left), uncrewed aerial platforms or training solutions. BAE will be exhibiting a multitude of capabilities to "enhance the complete air power picture that is required in today's continually evolving threat landscape".

Having had "significant success" providing combat aircraft in the region (with Eurofighter Typhoons forming the frontline of air defence for many Middle East operators), "there remains a need for that combat air power with the capabilities to operate in a multiforce mix both now and into the future," explained BAE Systems.

Additionally, with uncrewed platforms "another area increasingly in focus" in the region, its T-Series product range of allelectric uncrewed aerial systems "offers an affordable alternative for heavy lift requirement for both civilian and military customers," while work to develop autonomous collaborative platforms is ongoing in response to complex mission requirements.

Complementing its systems is a firm foundation of training partnerships – for example, in the Kingdom of Saudi Arabia where BAE Systems' experts partner across air and naval forces.

Martin-Baker Ejection seat manufacturer Martin-Baker is the oldest

company (established in 1929)

participating within the ADS pavil-

ion, returning for its second IDEX

after previously joining the exhibi-

Promoting its latest US18E seat

F-16 Block 70/72), production

deliveries have started for custom-

ers of new aircraft (including Jor-

dan, Taiwan and Morocco), with

enabling the US18E to be retrofit-

ted into Block 15, 20, 30, 40, 50

Derived from the Lockheed

Martin F-35's US16E seat, this

new technology allows F-16 air-

while wearing helmet-mounted

crew to safely eject (up to 600kts)

displays (HMDs) for the first time.

range has also been expanded over

while the accommodation weight

Its modular design means

the seat can also be withdrawn

or installed without the need to

remove the F-16's canopy. Aircraft

the common F-16 interface also

tion in 2023.

and 60 aircraft.

the legacy seat.



(qualified for the Lockheed Martin Marlow Ropes Meanwhile, Marlow Ropes - which first exhibited at IDEX in 2009 and is returning for its seventh show - concurs that the strategically-located event helps it to "solidify and enhance" its presence not just in the Middle East but "also in other Asian countries such as India and Malaysia".

Mirage 2000-5 (F10OA).

Having made a preparatory visit to the region in October 2024, "There are a lot of opportunities for us to grow by gaining market share and offering a wider range of complimentary products to our existing clients and re-sellers," explained the East Sussex-based company, adding: "We want to find new clients from countries where our presence is limited

or non-existent, such as most of Africa, for instance".

This year, Marlow Ropes will be promoting a wider range of products targeting OEMs; promoting its range of defence vehicle towing. winching and recovery ropes; and displaying its naval range. This will complement a new larger catalogue launch, showcasing Marlow Ropes' new range of harnesses, gloves and its navy range of mooring ropes.

Cambridge Pixel Cambridge Pixel (pictured top right) may be a comparative newcomer to IDEX (having exhibited almost every year since 2017), but expects the show to "continue to grow and remain an important source of new business"

Highlighting how much of the technology innovation on display uses the radars, cameras and sensors that the company's software solutions support,

Cambridge Pixel believes the show is a great opportunity to meet and update international clients on its latest radar and sensor processing solutions. Plus, "exhibiting alongside other innovators in the UK pavilion helps [its] brand to be noticed as part of the British contribution to global defence and security," confirmed the company.

United Kingdom

Crucially, with the rapid pace of development in air defence and counter-drone systems having created a growing security threat, "we've seen a rise in customers needing new software to support upgrades of radars, cameras and other sensors that are needed to improve the detection and tracking of these emerging threats," explained head of marketing Alan Trojanowski.

As such, many of its products have been upgraded since the last show, including its 3D radar tracker, air situation display, and simulation software for radar and cameras.









timesaerospace.aero timesaerospace.aero Leonardo

Investment to modernise defence inventories will continue at pace in the Middle East, alongside an increasing focus on collaboration and developing sovereign capability. That's the view of Lorenzo Mariani, co-general manager of Leonardo, as he talks to Paul Derby about the importance of the region as a strategic market on the eve of IDEX

Leonardo says collaboration is key

ariani believes partnerships are fundamentally important, not just to Leonardo's presence in the region, but also based on long term vision plans for economy and social prosperity.

"Nations want to access to technology and innovation capabilities, professional skills and competences as soon as possible," Mariani said.

"Which is why we're seeing not only a strong inventory modernisation effort in many of the countries in the region, but also significant investment into initiatives to guarantee more sovereign and local industrial capabilities.

Mariani said that collaboration with local partners is central to Leonardo's plans to grow its activities in the Middle East. The company already has a strong presence, particularly in the UAE, Saudi Arabia, Qatar, Oman, and Kuwait, with long-term relationships across both civil and defence markets.

The company has more than 250 helicopters in service across the region performing commercial and defence/government missions, for example. It has also leveraged its capabilities in the naval sector, electronics, sensors and more recently in the cyber and space domains for customers in the Middle East.

Mariani said the company is committed to growth through collaboration: "We're already present through some of our international partnerships of course, such as Eurofighter, MBDA, and the NH90 via NHI. But it's wider

than that. We also have collaborative efforts and a regional presence through legal entities including regional offices or joint ventures like AWAS in UAE [with Abu Dhabi Aviation for the delivery of comprehensive technical support services for helicopters], Leonardo Aviation Services-LAS in Kuwait supporting its Eurofighter fleet or the recently signed MoU in Saudi Arabia which may pave the way for several initiatives."

With the world looking increasingly unstable and governments grappling with the need to invest more in security and defence, it is interesting to get Mariani's take on what that means for the future of the sector.

Are nations starting to think about defence differently? He detected a shift: "In my view, we are seeing the evolution of defence towards global security. What do I mean by that? It's about closer integration between cyber security, the protection of critical infrastructure and space technologies, for example. All of these are being empowered by rapid advances in predictive capabilities and advanced technologies, such as artificial intelligence, high-performance computing, and big data.

Hybrid threats

"This change is recognised by governments in the Middle East. They understand it is crucial to protect against the vast diversity and unpredictability of potential and hybrid threats and to respond to the continued convergence between the cyber and physical worlds," he said.

"There is a need to protect both digital and physical infrastructure as well as the environment. Cyber and space technologies are essential to respond to this scenario, either to prevent or counter emerging digital threats, or to provide continued homeland monitoring and surveillance, for example"

"There is a need to protect both digital and physical infrastructure as well as the environment. Cyber and space technologies are essential to respond to this scenario, either to prevent or counter emerging digital threats, or to provide continued homeland monitoring and surveillance, for example."

Does this play to Leonardo's strengths? "From our perspective, we are not only able to meet emerging needs in the more traditional air, land, and maritime domains, but also to deliver relevant solutions in the cyber and space domains, including through collaborative efforts," Mariani said.

Turning to Leonardo's plans to invest and grow in the Middle East, where does Mariani believe there are opportunities to collaborate further?

"There are several opportunities already in place, but we're keen

to explore more. And that's not only in terms of technical support and training capabilities. We're ready to evaluate local manufacturing and integratiion for major programmes. That would involve collaborating with partners in nations, which aim to develop their industrial and technology capabilities across aerospace, defence and security."

Mariani said Leonardo will be speaking to customers about a broad range of solutions and potential opportunities.

These include air defence; drones and counter-drone technologies; naval capabilities ranging from combat management system to sensors and naval armaments; maritime patrol capabilities; early warning systems; precision ammunition; battlefield and naval helicopters; and cyber and space technologies and air training.





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