



TIME TO TALK

GAMI governor's call for greater defence dialogue

The World Defense Show, this year in its second edition, will offer a breath-taking showcase of the ambition and growth of Saudi Arabia's operational and manufacturing base in the defence field, alongside delivering one of the globe's leading exhibition platforms for the global defence industry, said HE Ahmad Abdulaziz Al-Ohali, governor of the General Authority for Military Industries (GAMI).

Speaking to *Show Business* yesterday, Al-Ohali said: "Saudi Arabia's strategic location, abundant natural resources and leading industrial capabilities position us uniquely in the global defence landscape.

"This event is an ideal opportunity for industry leaders, policymakers and innovators to

collaborate and chart the course for a secure and stable future," he added.

"As we strive to achieve the Vision 2030 targets for a sustainable defence industry, we ensure that the World Defense Show serves as an opportunity to meet and build strategic partnerships with the giants of the defence industry worldwide."

The Kingdom is pursuing a transformation strategy that sees a rapid ramp-up of local manufacturing and a mounting number of partnerships with global defence businesses.

Al-Ohali said: "We continue to unlock promising investment opportunities in the Kingdom's military industries sector for international partners and investors through WDS.

"This comes at a time when the sector is experiencing a local surge in incentives, investment opportunities and a comprehensive

OPENING DOORS FOR COLLABORATION

HE Ahmad Abdulaziz Al-Ohali, governor of the General Authority for Military Industries (GAMI)

"As we strive to achieve the Vision 2030 targets for a sustainable defence industry, we ensure that the World Defense Show serves as an opportunity to meet and build strategic partnerships with the giants of the defence industry worldwide"

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ON P5



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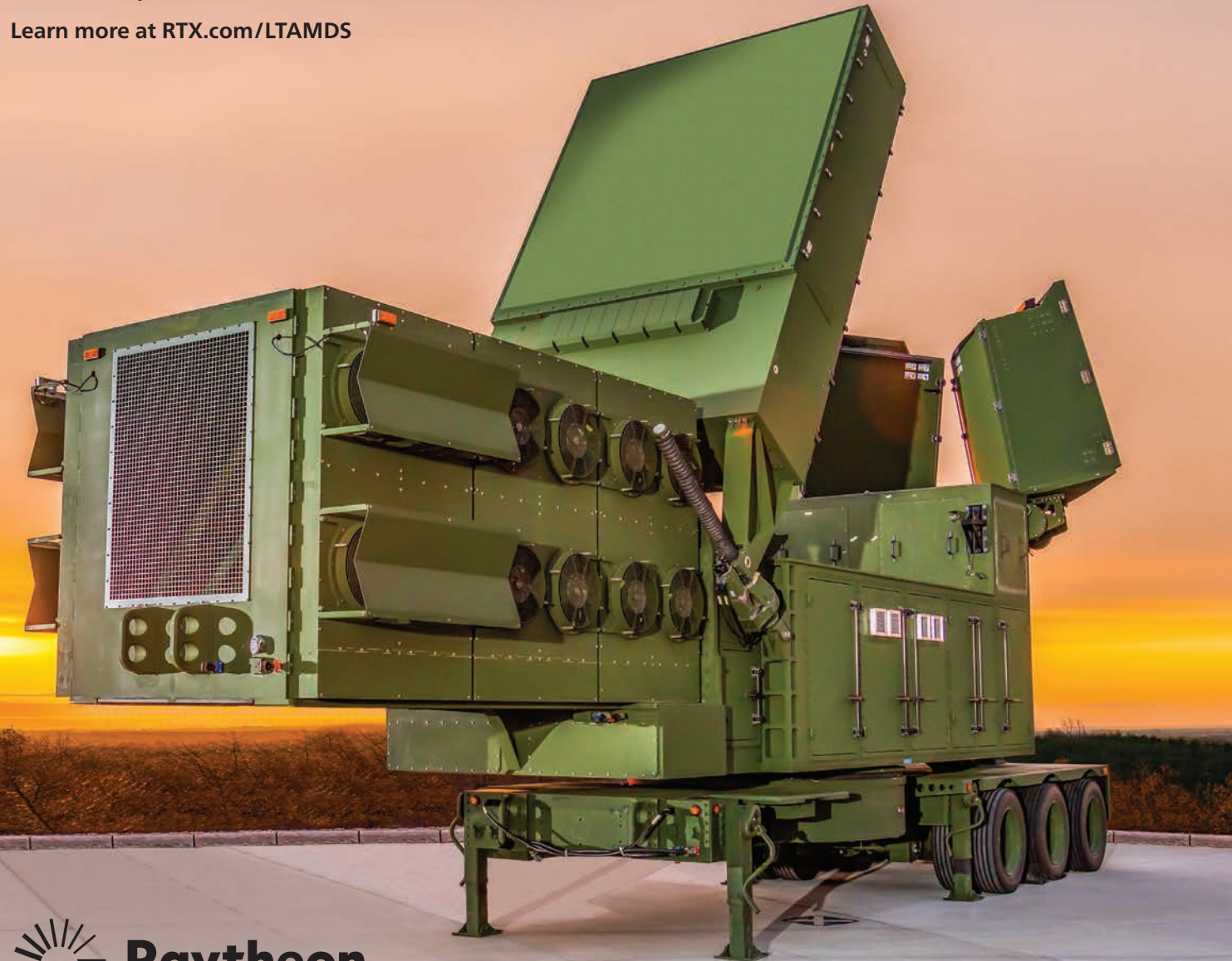


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GAMI governor's call for greater defence dialogue

strategy for human resources development.

“Currently, GAMI offers investment opportunities in the manufacturing of aircraft propellers for fixed-wing aircraft and drones, as well as main and tail rotors for helicopters.”

He said the Kingdom is making steady progress towards achieving self-sufficiency, with a target of localising 50% of the government’s spending on military equipment and services by 2030, in addition to exporting defence technology.

“We’ve seen the localisation rate increase from 4% in 2018 to 13.65% by 2022. Additionally, the number of licences issued for establishments to operate within the military industries sector has risen from five in 2019 to 265 by 2023, covering a range of military manufacturing, services and supply licences,” he said.

In his address at today’s Future Defense Leadership Forum, a closed event, Al-Ohali will tell the industry: “Your contributions play a pivotal role in fostering security and stability, which are the cornerstones for progress and prosperity. Together, we pave the way for our nations and people to thrive.” ▲

It’s a MRAP as upgrade unveiled at show today

UAE’s Edge Group is using WDS to launch the Mk2 of its upgraded JAIS 4x4 mine-resistant ambush protected (MRAP) vehicle.

This upgrading brings the entire Nimr product line into the second generation. “Completing the comprehensive update on the Jais Mk2 and across all our product lines is a significant landmark for Nimr,” said chief executive Abri du Plessis.

Supporting conventional, modern and asymmetric combat operations, the Jais Mk2 offers enhanced protection for critical systems and improved mobility within the same overall weight class. It features a

new modernised electrical system, larger payload, increased internal crew capacity and expanded external storage.

It also boasts a reduced thermal signature and electromagnetic interference (EMI) compliance, elevating overall efficiency.

“We specifically opted to launch the Jais Mk2 here at World Defence Show 2024, seeing Saudi Arabia is a strategically important market for Nimr.

It underlines our commitment to meeting the needs of key customers and propelling Nimr’s sustained success in the years ahead,” Du Plessis said.

Nimr started delivering the Jais Mk2 to customers in 2023. It is designed to provide an optimal balance between firepower, survivability, mobility and cost for modern, conventional and asymmetric operations.

The vehicle accommodates a motorised infantry section with a manned turret or remote weapons system.

Du Plessis said this milestone completes the upgrade of Nimr’s Ajban, Hafeet and Jais product line to the second generation, reaffirming the OEM’s commitment to delivering innovative solutions that align with evolving customer needs.



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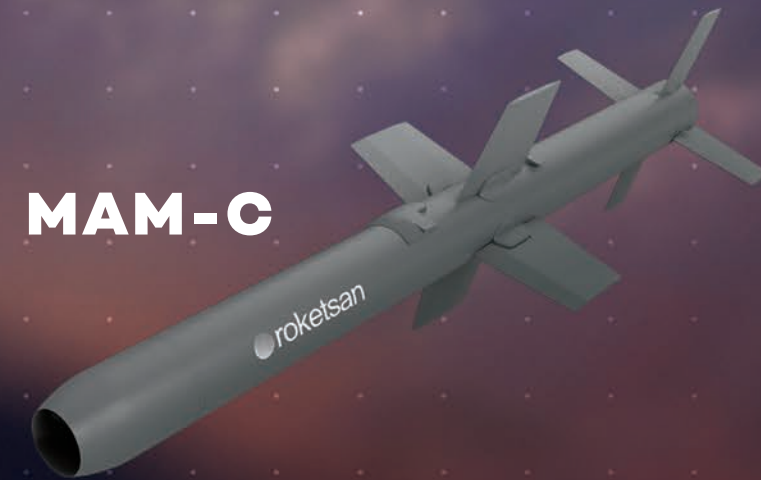
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The sky's the limit for display teams

The skies over WDS are set to be lit up by international aerobatics teams from Turkey and China flying edge-of-your-seat manoeuvres, along with the much-celebrated Royal Saudi Air Force Saudi Hawks.

The Turkish air force Turkish Stars (Turk Yıldizlari) fly six Northrop F-5A and a single dual-seat F-5B painted in the red and white of Turkey's national colours. The team, based at Konya air base in central Turkey, is a regular sight in Europe but rarely ventures to the Middle East.

WDS show-goers will be treated to two manoeuvres – team specialties – that illustrate the skill of the pilots who fly these veteran aircraft. Turkish Stars' feet commander Lt Col Kemal Koyunluoglu told the media last year: "Our solo leader flies through four of the other aircraft in front of the audience's eyes, a manoeuvre that requires courage and

is rarely seen in other teams.

"Another one sees the team leader slow-meet the main package of the other three jets, a special manoeuvre unique to the Turkish Stars, when the other three aircraft perform a roll," he added.

The People's Liberation Army Air Force August 1st aerobatic team is making its debut at WDS too, with six Chengdu J-10s. Their presence here represents the 10th overseas show the team has taken part in. The most recent was at Dubai airshow in November and reinforces the commitment of China and its aerospace company to the Middle East.

The aircraft departed their base at Yangcun on 29 January and were refuelled en-route to Riyadh by a new Xian Y-20 air-to-air refueller. The team made its first practice display three days later.



▼ The teams line up in preparation for the WDS daily flying programme

▲ Two J-10Cs of the PLAAF's August 1 aerobatic team go through a validation check on the eve of the show



MyDefence debuts 'novel' wearable UAS kit

Considering the threat posed by drones of all types, Danish OEM MyDefence (Hall 1 stand E8) is offering innovative counter-drone (UAS) technology.

"As a first-time exhibitor, we are confident the Middle East market opens many opportunities for us," said senior commercial director Hans Høyer. "Our solutions, especially the combat-proven

wearable UAS products are novel, as we constantly focus on reducing size, weight and power (SWaP), making ours the smallest currently available."

The wearable counter-UAS product consists of the Wingman series, small and compact radio frequency (RF) sensors working in conjunction with an omnidirectional antenna and the Pitbull

jammer series, making a complete detect-and-defeat solution to mitigate the threat of malicious drones.

MyDefence's vehicle and vessel counter-UAS solutions detect and mitigate remote controlled commercially available drones (UAS, UAV, RAPS etc) at long ranges – and often before the drone takes off.

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GIDS highlights variety in Pakistani offer

▼
GIDS chief executive Asad Kamal is proud to be showing off the Fatah II MLRS for the first time

Pakistan’s Global Industrial Defence Solutions (GIDS) is appearing at WDS with its biggest-ever stand.

As chief executive Asad Kamal revealed: “For us, Saudi Arabia is the biggest market; we have had a lot of companies interested in the localisation of our products. That is why there is such a lot of variety at the stand.”

Visitors will be able to see, for the first time, the company’s new Fatah II multi-barrel multi-launch rocket system – successfully test-fired in late December 2023 – the air-launched Taimoor cruise missile, ship-launched Harba-NG cruise missile, Shahpar II Block B armed drone, and Shahpar III armed drone.

Kamal said GIDS started developing Fatah II more than two years ago to meet a “burgeoning requirement in the region” for a system capable of neutralising big-value targets. The export version has a reported range of 290kms.

GIDS is expecting a lot of visitors and the chief executive is looking forward to the opportunity to meet Saudi delegations “representing decision-makers, the middle tier and young officers who are future generals of the army,



navy and air force”.

He said: “We want to showcase what Pakistan has done indigenously, and we are willing to transfer technologies or transfer production, to fulfil the aims of Saudi Vision 2030.

“The Middle East market is a natural friendly ally market to Pakistan.

“Despite having many allies from the West, we believe they will appreciate Pakistan as a valued future strategic partner.”

Azerbaijan is a good friend of Pakistan and is undoubtedly a good prospect, while GIDS is also keen to explore sales opportunities in Africa. Elsewhere, Kamal is excited about prospects in South America where Peru is already a customer.

SNT deepens Korea-Saudi ties in response to Vision 2030



Juhyun Son, director Special Business Department at SNT Motiv, shows off its latest small firearms

Korean firearms manufacturer SNT Motiv is at WDS 2024 seeking to extend its close cooperation with the Saudi government on small firearms into tank powerpack and drive systems and guns and artillery systems.

Juhyun Son, director Special Business Department at SNT, told *Show Business*: “We are responding to the government’s Vision 2030 ambitions and seeking to kickstart our already close cooperation with the Saudi government with the full support of the Korean government.”

SNT has been working with the Saudi government on small firearms since 2016 and is seeking

to expand its business ties into product maintenance, repair and overhaul (MRO).

At the show, SNT is showing off three new firearms. The K13 assault rifle is about to enter service with Korean special forces, while the K15 light machine gun has been in service with the Korean army for two years.

The semi-automatic STSR-23 sniper rifle is a new arrival at WDS and is waiting to be approved for service.

As it works on expanding its business base in the Kingdom, SNT is planning to open an office in Riyadh in the coming year, said Son.

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OPINION EDITORIAL

INTERVIEW WITH BERNARD ROUX, CEO OF THALES IN
THE KINGDOM OF SAUDI ARABIA AND CENTRAL ASIA

IN THE SPOTLIGHT: THALES'S STRATEGY IN THE KINGDOM

1 Can you share the key highlights of Thales's presence at WDS?

We are very excited to be at the second edition of the World Defense Show. This year, Thales is showcasing the latest range of cutting-edge solutions in air defense & air surveillance, SATCOM, cyber defense, naval & air communications, connectivity and mine warfare solutions.

Thales will showcase for the first time, outside France, the Integrated air missile defense (IAMD) system, a one-of-a-kind solution that can be adapted to the operational needs of the country in order to support detection, decision-making and neutralization of threats.

IAMD gives nations the ability to be as secure and effective as possible: from proactive intelligence-gathering in times of peace, to early warning of emerging threats, and fast and decisive response in times of crisis to ensure anti access-air deny missions.

This solution gives operational sovereignty and that is mission critical. Today, IAMD needs to be at the heart of a nation's defense strategy. It is of vital importance that all defense systems, whether they are land, sea, air, space or cyberspace, work together to provide the most useful intelligence.

As a dedicated systems integrator, we bring together the right elements so they work together seamlessly – whatever the legacy system, and no matter how complex.

Building on more than 50 years of experience in naval warfare, Thales is a global leader in underwater systems and electronic warfare, so you can come see some really innovative solutions at the Thales stand, such as the new generation of SonoFlash, which offers high tactical flexibility and opens up promising new opportunities for multistatic operations.

2 How does Thales address sustainability concerns in its operations and products?

Our sustainability performance is fully embedded in our corporate governance structure, monitoring our performance with respect to four key areas of action which helps us build a safer, greener more inclusive world. These are climate change, gender balance, ethics and compliance, and health and safety.

Our low-carbon strategy is based on CO₂ emissions reduction targets for 2030, which have been validated by the SBTi and are compatible with the objectives of the Paris Agreement.

We're striving for a 50% reduction in absolute CO₂ emissions related to its operational processes (Scope 1) and energy consumption



As a dedicated systems integrator, we bring together the right elements so they work together seamlessly – whatever the legacy system, and no matter how complex—Bernard Roux

(Scope 2) by 2040, and a 15% reduction in absolute CO₂ emissions related to its supply chain and the use of its products by customers (Scope 3).

We're also deploying eco-design for product innovation. 84% of new product developments in 2022 were designed following a partial or complete eco-design approach to reduce the volume, mass and integrated materials of products during their design phase.

3 What challenges do you anticipate for the defense industry, and how is Thales prepared to navigate them?

Over the last few years, we have seen a revival in product demand, and we expect this momentum to continue.

However, with that, there is an increase in demand for more sovereign, local technologies, and this is where we anticipate some challenges. The biggest one being attracting, nurturing and retaining talent, ranging from technicians and manufacturers to engineers.

I believe that there is only one way to navigate this challenge. Head-on, through knowledge transfer and by nurturing the youth. The Saudization Program, 'Nitaqat', which is aimed at mobilizing human capital to its full potential is an excellent example of this.

Thales has also been advocating internship and recruitment policies for young Saudi engineers and technicians in cooperation with universities across the country, such as Al Faisal University, Effat University, KAUST, Prince Nora university, and many more.

We have a lot of great programs in place, and I am confident that over the next three years, you'll see a lot more Saudi engineers at Thales.

4 Can you provide insights into your company's strategy for growth in KSA?

Saudi Arabia is a key market for the Thales Group, and we see a lot of potential for growth in the region.

One of the directives of the Saudi Vision 2030, is to localize over 50 percent of their military spending by 2030, and our growth strategy is to work with our clients in the country to achieve this goal.

Thales has been actively supporting Vision 2030 since its launch, making strides in localization of defense equipment and systems, development of local and cultural attractions, as well as contributing to digital transformation. Over the next few years, you will see us ramping up activity in all our domains.

A major milestone in our strategy was the establishment of SAMI Thales Electronic Systems, a Joint Venture with SAMI. The JV has an initial focus on Air Defense Systems, Missile Electronics, Radars, Communications Systems and Optronics programs, and holds the potential to tap into the entire Thales defense portfolio.

STES has already secured its first contracts and activity is progressing every day. The plan is to systematically grow in line with the activity, so that we are increasing localisation, investing in industrialisation, and creating jobs for talented Saudi nationals.

Simply put, we are here to build a future that we can all trust. ●

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RSAF livery to celebrate national day

For the past five years, the Royal Saudi Air Force has played a major part in celebrating Saudi National Day on 23 September, showing off its capabilities at major cities including Jeddah, Riyadh and Al Khobar with aircraft resplendent in special livery.

The four fighters painted for the 2023 event are part of the WDS static display – a Eurofighter Typhoon, Panavia Tornado, Boeing F-15S and Boeing F-15C.

In 2021, the jets were painted in stunning black art work with green tones, while in 2022 a three-tone grey matrix was being shown off.

Last year, as seen at the show, they were painted in an all-green livery with gold eagles on the nose, on the side of the fuselage and on top of the wings.



A group of specially marked RSAF fighters showing off their 2023 Saudi National Day markings

Fast boats from Estonia

Estonia's Baltic Workboats, which has delivered more than 200 vessels to 25 countries, is showing its large range of vessels at WDS. The company focuses on fast patrol and navy boats in the 15-70-metre range. Typical of the company's range is the Navy 45 WP, a 45-metre, wave-piercing multirole patrol vessel suitable for naval operations and offshore patrol work. Its hybrid diesel-electrical propulsion system can drive the vessel at 27-30kts, while in electric mode it can reach 10kts. Among the company's current range of work is a large-scale project to develop a fully autonomous multifunctional navy vessel.

Milkor UCAV shows its teeth

South Africa's largest UAV, the Milkor 380, forms the centrepiece of the company's Saudi subsidiary's stand at WDS, wearing full Royal Saudi Air Force markings, and carrying an array of advanced weapons.

Known as the Milkor UCAV in this armed form, the aircraft is ITAR-free, and has a 'payload agnostic' systems architecture, allowing the integration of weapons from any source.

The aircraft can undertake various intelligence, surveillance and reconnaissance (ISR) roles with payloads including Sigint/Comint systems, synthetic aperture radar (SAR), inverse synthetic aperture radar (ISAR) and an under-nose Wescam MX-15 electro-optical/infra-red (EO/IR) gimble.

For armed missions, the aircraft can carry 400kg under the fuselage and 230kg under each wing.

The aircraft at the show carries an Al Tariq-X glide bomb under the centreline. Al Tariq-X is a kit that can be fitted to US Mk 81 and Mk 82 series bombs, with global navigation satellite system (GNSS) guidance, GNSS with semi-active laser and GNSS with imaging infrared (including automatic target recognition) guidance, and with sophisticated

GPS anti-jamming solutions.

The aircraft also carries Desert Sting 25 glide weapons underwing, although it can also be armed with Halcon Desert Sting missiles or

Thales FZ602 rocket launchers – both on dual racks.

Powered by a turbocharged piston engine running on Avgas or Mogas, the aircraft has a maximum

endurance of 35 hours and a range of more than 2,000km, and is certifiable allowing autonomous flight even in unsegregated civil airspace.



CENTREPIECE

The RSAF Milkor 380 at the show carries an Al Tariq-X glide bomb under the centreline

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Customised solutions for defeating radio frequency (RF) based terrorist and extremist threats

ECM protection with a Scorpion sting

With a substantial contract in hand for its Scorpion electronic countermeasure (ECM) system, Allen-Vanguard (Hall 1 stand E38) is keen to discuss the capabilities of the system with WDS visitors.

Allen-Vanguard is widely acknowledged as a global leader in providing customised solutions for defeating radio frequency (RF) based terrorist and extremist threats. It has just announced winning a contract to supply 68 Scorpion ECM systems, accessories and spares to a NATO ally.

In addition to the hardware, Allen-Vanguard will also provide various support services, including a train the trainer (T3) package. This will ensure

end-users are fully equipped, trained and prepared to deploy this vital life-saving capability as needed with full operational autonomy.

With well over 500 sales globally, the Scorpion system is deployed for protection of troops, NGOs and other government agencies on every continent. It has a flexible, modular architecture with a wide range of power options, antenna configurations and carriage systems that make it suitable for myriad protection tasks.

Scorpion's hybrid, full-spectrum system with extensive threat band coverage, combined with advanced technologies, represents one of the most powerful responses to drone and

remote-controlled improvised explosive device (RCIED) threats.

"I am proud that Allen-Vanguard is supporting a key NATO ally with our life-saving Scorpion system," said business development director Stuart Wilson. "This equipment and the associated support services will ensure that the customer is fully equipped with the best possible capability to address the threats they may face both domestically and abroad."

The contract also provides for in-country technical support with staged visits spread over several years, during which the company will maintain the hardware and update the software to maximise the protection provided.

First Middle East showing for Korean submarine

South Korea's Hanwha Ocean Shipbuilder regards the Middle East as a significant target area for sales of its KSS-III diesel-electric submarine and is showing the type for the first time in the region.

Two KSS-IIIs are already in service with the Republic of Korea Navy (ROKN), with three more under order and the shipyard is now hunting for export orders.

"It's a state-of-the-art submarine, with air-independent propulsion (AIP) and lithium-ion batteries," said Sangwook Yoon, general manager, naval and special ship overseas marketing team, at Hanwha Ocean's naval shipbuilding business. Lithium-ion cells typically provide 160% of the range of standard lead-acid batteries.

The 3,600-ton KSS-III is capable of 20kts submerged and is notable for having up to 10 vertical launch tubes aft of the conning tower. The tubes can accommodate either anti-ship or land attack missiles. In addition, the vessel has six 533mm torpedo tubes, with 14 reload weapons.

WDS is the first event at which the vessel has been offered to the Middle East, Yoon said.

Hanwha Ocean built KSS-I submarines for the ROKN in the



late 1980s and delivered the first KSS-III Dosan Ahn Chang-ho – which was designed and built independently for the first time in Korea – in 2021.

The KSS-III is being proposed for the Canadian patrol submarine project. This is intended to find

a replacement for that country's four ageing Victoria-class vessels, which date from the 1980s and are rapidly running out of service life. The type has been problematic since being sold to Canada in the early 1990s by the UK where they were surplus to requirements.

Canada urgently needs new submarines, notably to patrol its vast Arctic waters, a region increasingly contested by Russia. Reports suggest only one of the four Victoria-class vessels has been able to put to sea operationally since 2021.

STATE-OF-
THE-ART SUB

The KSS-III model is on display at WDS

NEWS IN BRIEF

Nexter backs localised military industry

KNDS Group company Nexter is strengthening its partnership with the Saudi armed forces by supporting the development of the Kingdom's technological and industrial base, through close collaboration with local industries.

The company is at WDS showcasing a range of its combat solutions, including its latest vehicles such as the new VBCI MkII equipped with the T40 turret and the Jaguar combat and recce vehicle in service within the French army.

It also supplies the French with the RapidFire naval turret, armed with its 40mm CTA gun and optronics made by Thales.

Also being displayed are its state-of-the-art ammunition solutions, including the LU 211 and LU 220 family of high explosive projectiles for legacy and new-generation 155mm artillery systems, Sabir 155mm precision guided ammunition and Shard 120mm armour-piercing APFSDS tank ammunition.

Nexter's products which have been in service in the Royal Saudi armed forces for several years include the Caesar artillery system and the Narwhal naval remotely operated 20mm turret.

First outing to WDS by Qatari NH90



One of the new NH90 NFH helicopters in Qatari colours on display

The Qatar Emiri Air Force has sent one of its new NHIndustries NH90 NATO frigate helicopter (NFH) variants to the show, marking the type's WDS debut.

The NH90 helicopter is enjoying mixed fortunes at the moment. Australia has just grounded and retired its fleet, scrapping the aircraft for spares, while Norway terminated its NH90 programme in 2022, and demanded a full

refund, and Sweden has also announced plans to retire the type prematurely.

But other operators are enjoying more success with the aircraft, including the QEAF, which operates both major variants.

Qatar announced its intention to acquire the NH90 in 2014, and signed a contract for 28 NH90s (16 NH90-TTHs for tactical transport and 12 NH90-NFHs for maritime duties) at the Dimdex

defence exhibition in 14 March 2018. The purchase was finalised in 20 August 2018, for a total of \$3.7 billion, covering the agreed number of NH90s, with an option for six more of each type. The first aircraft were handed over in March 2022.

The NFH helicopters serve with No.8 Anti Surface Vessel Squadron while the TTHs are in service with No.9 Multirole Squadron, both units being based at Doha.

Security role for Saudi H145

One unusual rotary-winged star of the static display is an Airbus Helicopters H145T-2, wearing the characteristic blue and grey colours and Security Aviation titles of the Saudi Arabian Presidency of State Security.

It is a relatively recent acquisition of the national security body which was created in 2017 by merging a number of existing agencies and which operates a significant helicopter fleet in support of the Kingdom's

counterterrorism and domestic intelligence efforts.

As such, it is the successor to the General Civil Defence Agency, part of the Saudi Ministry of Interior.

A long-serving fleet of Kawasaki Vertol KV107IIA-SM Vertol helicopters has given way to 16 Sikorsky S-92A helicopters, which have since been augmented by Sikorsky S-76Ds and S-70i Black Hawks, with Schweizer 434s for training, and four fixed-wing CASA C295Ws.

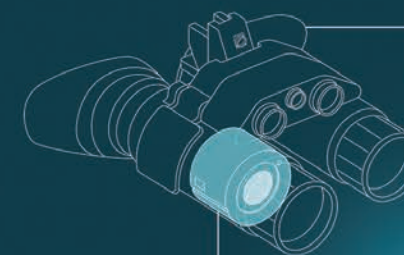
This H145T-2 wears the markings of the Presidency of State Security

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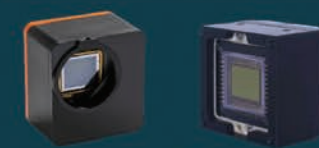
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- بدءًا من الأشعة فوق البنفسجية وحتى الأشعة تحت الحمراء الطويلة الموجات (Long Wave InfraRed, LWIR)، بما يشمل أيضًا نطاقات الأشعة تحت الحمراء المرئية والقصيرة الموجات (Short Wave InfraRed, SWIR)
- حلول متطورة للتصوير مصممة بمواصفات مثالية للحجم والوزن والقدرة (Size, Weight and Power, SWaP)
- كاميرا معززة فائقة الحساسية مخصصة للاستخدام في ظروف الإضاءة الرديئة بفعل الأجواء المعتمة



Xenics



UAE sets sights on Milrem’s record RCV programme

UAE armed forces are set to acquire what’s described as the world’s largest combat robotics programme under a contract with Milrem Robotics.

Milrem, a leading European developer of robotics and autonomous systems and now part of the Edge Group (UAE Pavilion Stand P1), announced before WDS that it will be supplying tracked robotic combat vehicles (RCVs) and unmanned ground vehicles (UGVs) to the UAE.

This order to the UAE Ministry of Defence, comprising 20 tracked RCVs and 40 THeMIS UGVs, is part of a first operational trial programme. A larger order will follow on its completion.

Edge acquired a majority stake in Estonia-based Milrem Robotics in 2023. Specialising in the development of intelligent UGVs, robotic warfare analysis and solu-

tions, and concept of operations (ConOps), Milrem has customers in 16 countries worldwide.

Under terms of the contract, Milrem Robotics will lead an experimentation and trial programme aimed at integrating unmanned ground capabilities into the UAE armed forces’ arsenal, where they are intended to support mechanized units. Milrem will also provide comprehensive training and supervision.

The initiative is seen as a significant step towards enhancing the UAE armed forces’ combat capabilities.

The tracked RCVs will be fitted with 30mm MK44 cannons; THeMIS combat units will carry 30mm M250LF remote weapon stations (RWS) and indirect fire systems, as well as THeMIS observe units with radar and camera systems, including shot detec-



Milrem Robotics’ THeMIS system is to be acquired by the UAE armed forces

Edge Group

tion capabilities.

Kuldar Väärsi, Milrem Robotics chief executive, believes the Edge Group’s investment has opened new avenues for his company in the region and further afield.

“Initiating the world’s largest combat robotics programme with the UAE Ministry of Defence not only demonstrates the competitive edge of our solutions, but also highlights the strategic value of incorporating advanced robotic systems into force structure,

thereby enhancing their combat capabilities and operational efficiency.”

Milrem describes its THeMIS as a multi-role UGV intended to reduce the number of troops on the battlefield. Its open architecture enables it to be rapidly configured from a transport function to weaponised combat capability, ordnance disposal, or supporting intelligence operations, depending on the nature of the mission.

Co-operation creates new corvette

Naval-industrial cooperation between the UK and Sweden is to be stepped up in the form of a new agreement between the countries’ shipbuilding and combat systems specialists.

Under a strategic agreement signed between Babcock and Saab at last September’s DSEI exhibition, the two companies will pool their capabilities by exploring the development of a new advanced corvette of around 100 metres’ length.

The joint development will benefit from Babcock’s expertise in platform design and integration and Saab’s expertise in naval combat management systems and composite structures.

The partners said that the new corvette will be “a highly capable and adaptable surface combatant aimed at meeting the needs of international customers. Babcock and Saab intend to jointly market the new design to worldwide

export markets.” The new design falls between Babcock’s 138-metre, 7,000-ton Type 31 frigates for the Royal Navy, which are now under construction, and the Royal Swedish Navy’s Visby-class stealth corvettes, built by Saab subsidiary Kockums, which come in at 73 metres and just 650 tons.

Sweden plans to order four new Luleå-class surface warships – larger than the Visby class – for delivery around 2030, but it seems that the new Babcock-Saab design will not be a contender.

“We see an interest from customers world-wide for this size and also a gap in the existing offers on the market, recognising the capabilities we can offer on a ship of that size,” Saab said in a statement.

“Saab has exemplary knowledge derived from across our naval portfolio to contribute to corvette design and an expertise with corvettes based on our pedigree and

our closeness to naval customers.”

Regarding the tie-up with Babcock, Micael Johansson, Saab president and chief executive, said: “We have complementary capabilities and resources, including expertise, technologies and market presence that can enhance our competitive advantage when combined. By combining our capabilities and resources, we

recognise the potential to leverage each other’s strengths.”

Babcock chief executive David Lockwood commented that the new relationship with Saab “recognises the potential to jointly offer a wider range of integrated solutions to international customers and builds on the strong cultural and technical links between the two Groups.”



The Saab Group of companies has previously built the Visby-class of stealth corvette for the Royal Swedish Navy. The planned new corvette will be significantly larger

Saab

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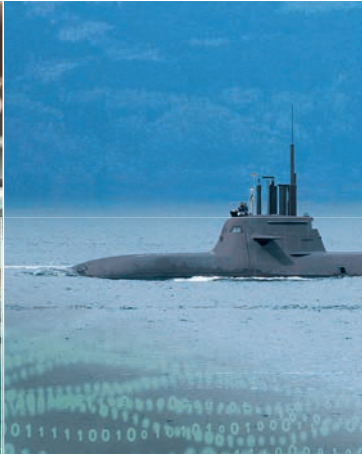
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Heavy Duty Flyer 72: A robust, versatile solution for rapid deployment

The Flyer 72 heavy duty (HD) ground mobility vehicle in operation with some of the world's most elite armed forces, including the UAE presidential guard, is on display at Flyer Defense (Hall 1 L5.3) this week.

Flyer vehicles are designed to increase ground mobility, allow rapid deployment into contested areas, and enable military ground forces to move quickly for extended distances and over difficult terrain.

"With the Flyer 72 HD we offer a platform with an incredible range of configurability," said Robert Rice, director of business development.

It is part of a versatile family of highly mobile and modular ground mobility platforms, including the Flyer 72 light duty (LD), all boasting an extensive range of customisation options.

Modular design

"Flyer Defense is committed to delivering cutting-edge solutions that seamlessly integrate unparalleled mobility, payload capacity, and modular design," said Rice.

By way of example, in October last year, the Flyer 72 multi-purpose mobile fire support system, nicknamed 'The Beast', was revealed. Bristling with an

array of advanced systems to enhance counter-unmanned aerial systems (CUAS), radar detection, fire support, and firepower capabilities, this specialised configuration is a finely tuned version of the Flyer 72 HD.

Besides being airdrop certified, the HD is air transportable in various fixed wing transport aircraft, is internally and externally air transportable by the Boeing CH-47 Chinook helicopter, which

takes up to two vehicles internal or external.

"Our vehicles are engineered for the diverse and demanding needs of military operations," said Rice. "They feature exceptional mobility, facilitating swift navigation through some of the most challenging terrain."

With an impressive 1:1 payload capacity, the Flyer 72 HD excels in harsh conditions including the desert, emerging as

a reliable choice for operations in arid, sandy, and mountainous landscapes.

"Flyer Defense has been a steadfast partner for the US army, special operations forces, and global allies," said chief executive Oded Nechushtan. "We are excited to showcase our capabilities in Saudi Arabia and demonstrate our commitment to offering lightweight tactical wheeled vehicles to expanded markets."



Besides being airdrop certified, the HD is air transportable in various fixed wing transport aircraft

Arquus builds industrial cooperation



KEY PLAYER
The Arquus VAB Mk3: ideal for Middle East terrain

The VAB Mk3 infantry fighting vehicle displayed by Arquus at the French pavilion in Hall 1 is a good example of successful industrial cooperation. Arquus has already collaborated with a country in the Middle East to modernise an entire fleet of this vehicle.

Since its creation, Arquus has positioned itself as a key and sustainable player in design, production and maintenance of systems and tactical armoured vehicles.

The Arquus VAB Mk3 presented at WDS is part of a family of 6x6 medium vehicles that offer high-level performance in terms of mobility, protection and payload. This allows it to fulfil missions ranging from troop transport to

fire support, backed by latest-generation systems.

Over many years the VAB Mk3 has been extensively tested on various terrains, including in the Middle East. The Middle Eastern VABs benefit from performance improvements in drivetrain, braking capabilities and steering elements.

The VAB Mk3 presented in Riyadh with a John Cockerill Defense CP WS25 turret is a modular vehicle that can be configured in many versions to best meet customer needs.

Its low silhouette and compact size enhance the vehicle's stealth and practicality in rugged or mountainous terrain.

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Hercules still going strong at 70

The versatile Lockheed Martin C-130 Hercules tactical airlifter is 70 years old in August and its career is far from over.

To date 540 examples of the latest model, the C-130J Super Hercules, have been delivered, on the back of orders for more than 600 of the variant.

Even more impressive is the 2.8 million flight hours the C-130Js have flown, and then when you consider the 20 million flying hours the whole Hercules fleet has notched up over those 70 years, you can understand why Lockheed Martin's Tim German said on the eve of WDS: "It's an incredible aircraft!"

In the Middle East region, 11 countries fly the C-130J, six of them – GCC allies Kuwait, Oman, Qatar and Saudi Arabia, as well as Iraq and Israel – factory-fresh examples. Bahrain operates two former RAF C-130Js.

Unmatched

"We have 26 C-130 operators across the globe – it's unmatched in the tactical airlift market," said German.

"There is a global presence, proven results, NATO compliance and in the Middle East there is interoperability between partner nations.

"The competition still has a long way to go to reach 2.8 million flight hours and needs to reach some significant operational qualifications and certifications."

The Royal Saudi Air Force's fleet

of 39 aircraft is the biggest outside of the USA. The UAE also has substantial numbers with its mixed fleet that includes the L100.

There have been notifications of more Kuwait, Saudi and UAE orders in the past, but as German noted it is up to customers to reveal orders.

"We can't talk openly when it

comes to foreign military sales (FMS) contracts and can't discuss these under the government-to-government agreements until the aircraft turns up in-country.

"Some operators want to talk about expanding their fleet but we don't generally talk about that because the countries prefer not to.

"You can understand that

because of what's happening in the neighbourhood," said German.

The Hercules look has changed little over the years; German says that is why customers are happy to upgrade them.

There is worldwide support for the C-130, with 15 service centres and heavy maintenance centres all over the world.



MAGNIFICENT 70

A Qatar Emir Air Force C-130J Hercules departs WDS on the eve of the event opening

Arabian Aerospace

Saab signs three-year deal for GlobalEye support

Saab has signed a three-year deal with the UAE Ministry of Defence to provide in-service support for the GlobalEye airborne early warning and control (AEW&C) currently operational.

The contract, worth around \$190 million to cover maintenance and logistics support, as well as training services, will run until 2026.

Carl-Johan Bergholm, head of Saab's business area Surveillance,

said: "This agreement solidifies Saab's role in ensuring that GlobalEye remains mission-ready. We look forward to further strengthening our partnership with the UAE air force and air defence and providing long-term local support."

The UAE became the GlobalEye launch customer when it ordered two of the latest-generation AEW&C aircraft in November 2015; it exercised an option for a

third aircraft in February 2017. All three were delivered between April 2020 and February 2021, shortly after the announcement of a follow-on order for two more.

The fourth aircraft made its first flight on 3 April 2023 and should be nearing the end of its trials campaign, with delivery to the UAE expected in 2024.

The fifth aircraft made its first post-modification flight on 23 November and is also likely to be

delivered this year.

GlobalEye is an advanced multi-domain AEW&C solution with an array of active and passive sensors that provide long-range detection and identification of objects in the air, at sea and over land.

By providing real-time information to units in air forces, armies and navies, GlobalEye enables enhanced situational awareness of the surrounding areas and early detection of threats.

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Focus on Boeing

Potential recapitalisation of several of the Saudi armed forces' aircraft fleets is being watched closely by Boeing

Boeing has high hopes for WDS

Boeing comes to WDS with hopes for future orders in several fields. The Royal Saudi Air Force has been a long-term operator of the E-3A Airborne Warning and Control System (AWACS). The aircraft, with its distinctive rotodome above the fuselage, is based on the Boeing 707 and is now distinctly elderly, with the five examples having been delivered between 1986-87.

The aircraft have been progressively updated – and the basic military Boeing 707 design has shown its extreme longevity in the KC-135 Stratotanker role, with many aircraft having passed a half-century in service – but it has to retire at some point and Boeing is interested in promoting the E-3's successor, the E-7 as a replacement.

"The RSAF is always looking at improving mission readiness and the AWACS is an ageing fleet," president of Boeing Saudi Arabia, Asaad Al Jamoai noted.

Further modernisation of the E-3 is, of course, a possibility, but any aircraft approaching 35 years of age will need increasing amounts of maintenance to keep it operational.

Boeing also plans to push the benefits of the latest version of the F-15 Eagle, the F-15EX, an advanced variant of Saudi Arabia's F-15SA.

Like the E-3, the F-15 has been around for a long time – the first prototype flew in 1972 – but it has been significantly upgraded over the years. The F-15EX has digital fly-by-wire flight controls, a new electronic warfare (EW) system and an all-glass digital cockpit, as well as an open mission systems architecture.

Within the past year, Indonesia has signed an MoU to purchase 'up to 24' F-15EXs as it strengthens its armed forces in the face of increased Chinese assertiveness in the Pacific region. A sale has still to be finalised.

Boeing is also seeking to interest Poland in the aircraft, as that country also embarks on a major arms build-up in light of the conflict in neighbouring Ukraine. The third F-15EX made its first flight in November last year and operational testing is proceeding.

As well as the F-15s, Boeing supplies significant numbers of several helicopters to the Saudi armed forces, including AH-64 Apaches,

Saudi Arabia's increasingly elderly E-3A AWACS fleet could be a suitable candidate for the successor E-7 – seen here in Turkish air force colours



AH-6 'Little Birds' and CH-47 Chinooks. Boeing AH-64 Apache attack helicopter, notably with a view to remanufacturing existing AH-64D models into the AH-64E, which has new capabilities including more powerful engines, new transmission and the ability to control uncrewed aerial vehicles.

As well as supplying the hardware, an increasingly important area of Boeing's activity in Saudi Arabia is maintenance, repair and overhaul (MRO), said Al Jamoai. "MRO is always on the rise because of the multiple acquisitions across both sides of the business, com-

mercial and defence. If you have an MRO industry for aviation, there are some commonalities between the two."

A joint venture was signed at the first WDS in 2022 between Boeing and Saudi Arabian Military Industries (SAMI) to undertake MRO work on helicopters. A major objective of that joint venture is to allow more MRO work to be undertaken in-country, shortening supply lines and enabling work to be done more quickly than if the aircraft have to be sent overseas.

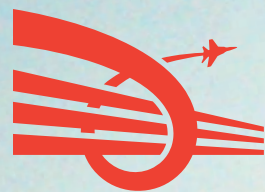
At the time of the signing, SAMI's CEO, Walid Abukhaled, said that "The maintenance of the rotary fleets operated in the Kingdom by the different forces represents a major opportunity for localisation and development of new sustainable skills."

"Much of this work is currently outsourced to the US or Europe, while aircraft numbers in the Kingdom are expected to double over the next 10 years."

Boeing is also engaging with Saudi authorities to develop opportunities in the space sector, said Al Jamoai. "We've been working with the Saudi Space Commission and we've identified several areas of collaboration with respect to human capital development, training and space missions. We've formed a task force to start distilling a list of projects that can go into those three areas." ▲



Boeing is now flying the third prototype of the F-15EX, the latest variant of the long-lived F-15 Eagle



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Egyptian micro frigates

Egyptian naval upgrade nears completion

The new class of four MEKO A-200 ENs will form the Egyptian navy's "new central combat platform"

Germany's ThyssenKrupp has built and delivered the first three of Egypt's four new frigates in record time, reports Alan Dron

The Egyptian navy is approaching the culmination of a project to upgrade its surface fleet, with the last of an order for four MEKO A-200 EN frigates now being fitted out.

The first three vessels – Al Aziz, Al Qahhar and Al Qadeer – were built in Germany by ThyssenKrupp Marine Systems (TKMS). The fourth vessel, Al Jabbar, was constructed in Egypt at Alexandria shipyard, in collaboration with the German company.

The class of four vessels will provide a welcome boost to Egypt's fleet. Several of its current frigates – four US-built Oliver Hazard Perry-class and two Knox-class – are between 45-50 years old and must now be close to retirement.

Egypt received the first MEKO-A200, Al-Aziz, in October 2022, while Al Qahhar followed in May 2023, before the December 2023 handover of Al Qadeer.

As the third of the vessels, Al Qadeer, was handed over and then sailed to Alexandria in December last year after its delivery voyage from Germany, the Egyptian navy's commander-in-chief, V Adm Ashraf Ibrahim Atwa, noted the rapid pace of deliveries, with the first three vessels having been handed over in just 14 months: "These repeated visits for the handovers are the actual proof of the extent of cooperation and friendship between the Arab Republic of Egypt and the Federal Republic of Germany," he said.

At the handover of Al Qadeer in Bremerhaven, TKMS chief executive Oliver Burkhard said all

three vessels had been completed in record time. Production work on Al Qadeer began with the first steel cutting in autumn 2020, followed by keel laying in March 2021, launching in April 2022, and naming in October 2022.

The final ship in the class, Al Jabbar, was launched during the Egyptian Defense Expo in December 2023 and is expected to be delivered to the navy in late 2025.

The new class of four MEKO A-200 ENs will form the Egyptian navy's "new central combat platform", says TKMS. "Each ship will possess an extensive range of both defensive and offensive capabilities."

The vessels are around 121 metres long, with a beam of 16 metres and displacement of around 3,700 tons. They have a maximum speed of at least 29kts, produced by a combined diesel and gas (CODAG) propulsion unit of two MTU 16v 1163 diesels and one GM 2500 gas turbine.

This arrangement gives them a range of 7,200 nautical miles/13,357km at economical cruising speed of 16kts.

The vessels are designed to have

"ThyssenKrupp has produced A-200s for several nations. That has resulted in the basic design being steadily refined over the years, together with traditional German values of engineering quality and reliability"

low radar, infrared, acoustic and magnetic signatures to improve their survivability.

The vessels have a well-rounded armament, consisting of a Leonardo 127/64 LW 127mm main gun plus several remotely controlled 20mm cannon, an anti-ship armament of eight MM-40 Exocet Block Three missiles, 32 vertical launch system cells for MBDA VL MICA NG surface-to-air missiles, plus two twin launchers for MU90 Eurotorp torpedoes for close-range anti-submarine work.

Importantly, the vessels also have space for two embarked helicopters, which considerably

increases the ships' potential radius of action against hostile submarines. They are also likely to have the capability to embark an uncrewed aerial vehicle (UAV), which will further increase their utility.

The class also operates a towed-array sonar plus a Thales NS-110 4D active electronically scanned array (AESA) radar.

Analysts have described the vessels' fit-out as high-end, with good-quality electronics and a versatile equipment fit. With a complement of around 120, they will also not overly strain the service's manpower resources. Like many modern major units, they also have the capability to carry a party of special forces troops – thought to be around 50 in this case.

ThyssenKrupp has produced A-200s for several nations. That has resulted in the basic design being steadily refined over the years, together with traditional German values of engineering quality and reliability.

Once all are delivered, they will join three modern Franco-Italian FREMM frigates as the nucleus of Egypt's frigate fleet. ▲



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Air defence systems

Stopping armed drones or missiles is at the top of the agenda for most Middle East militaries. Alan Warnes reviews the threats and counter-measures

Countering airborne threats

Measures to stop armed drones and missiles

Bahrain, Saudi Arabia and the United Arab Emirates have all been targeted by the Iranian-backed Houthi militia in recent years, leaving them with an urgent need for air defence systems.

Many will remember the events of 14 September 2019, when drones and low-altitude cruise missiles fired by Houthi militias attacked Aramco's Abqaiq and Khurais oil facilities. The Kingdom's air defence systems were unable to stop that assault.

The UAE has experienced similar attacks, the most recent in January 2022, while Bahrain is continuously on alert to such threats.

The Houthis were seeking vengeance against the Saudi-backed alliance's attempts to stop the spread of their version of Shia Muslim rule across Yemen. Now they are firing their weapons at land and sea targets in support of the people of Gaza, and Saudi Arabia has helped with shooting them down.

The US has deployed both the Lockheed Martin terminal high altitude area defense (THAAD) and Lockheed Martin Patriot advanced capability-3 (PAC-3) missiles to the Middle East, to defend its own interests and those of its allies.

In August 2022, the US Defence Security Co-operation Council (DSCA) announced the approval of a \$3.05 billion purchase request from Saudi Arabia for 300 Patriot MIM-104E guidance enhanced missile-tactical (GEM-T) ballistic missiles to replenish its dwindling stock of Patriots.

In late October last year, the US deployed a THAAD battery to Saudi Arabia, while Patriots were

sent to Kuwait, Qatar, Jordan, Iraq and Saudi Arabia.

Patriot or PAC-3 is an easily-deployable air and missile defence system designed to intercept aircraft, ballistic missiles, cruise missiles, aircraft and drones. The THAAD is designed to intercept short-, medium- and intermediate-range ballistic missiles. In 2022, a THAAD recorded its first operational kill against a ballistic missile launched at the UAE by the Houthis.

The issues that all counter-air systems face is that 'one size doesn't fit all.'

Cheaper solutions

Firing a \$500,000 Patriot missile at a \$10,000 drone is a considerable financial burden, and cheaper solutions are now being acquired. The UAE and Saudi militaries also operate Sky Guard radar-directed guns. Effective in many scenarios, they were no good during the 2019 Aramco attacks.

The UAE signed a \$3.5 billion contract on 16 January 2022 to acquire South Korea's Cheongung

II missile systems designed to engage enemy aircraft and ballistic missiles. They are likely to replace the existing MIM-23 Hawk medium-range missile systems

It's not always about the hardware though; developing procedures to counter uncrewed aerial systems (UAS) is equally important.

That is what Red Sands Live Fire Exercise 23.2 was trying to prove at the Shamal-2 range in north-eastern Saudi Arabia last September. Aimed at strengthening military relations between the US and Saudi Arabia, the event showcased different technologies aimed at defeating a variety of attacks.

Several participants and systems were engaged in the exercise, including MARSS with its innovative NiDAR technology. Jeff Tipton, business development director in defence at MARSS, commented:

The issues that all counter-air systems face is that 'one size doesn't fit all'

"Through our involvement in the live exercise, we were able to demonstrate the effectiveness of our live NiDAR command-and-control centre to the US CENTCOM Commander, as well as the Chief of General Staff of the Royal Saudi Armed Forces and his component commanders."

Easy-to-use

During the exercise, NiDAR was presented via an easy-to-use interface on a single touch-screen, demonstrating its ability to integrate data from multiple sensors into a single tactical picture – presenting the information required to control and respond to threats.

Col Robert McVey, director of the Red Sands Integrated Experimentation Center, said the US had been working closely with its Saudi partners to develop "air-to-air counter-UAS tactics, techniques and procedures".

In one scenario a Royal Saudi Air Force F-15 and US Army Central AH-64 Apache attack helicopters worked together to defeat the UAS threat. ▲

Fire from a US Army M-LIDS during Red Sands Live Fire Exercise 23.2 conducted by the Saudi Arabian Armed Forces and US Army Central



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Jon Lake reports

UK moves in on new Saudi Typhoon order

The collision of a number of factors appears to have set the scene for the resuscitation of a long moribund Saudi Typhoon order

Since Saudi Arabia's initial acquisition of 72 Eurofighter Typhoons, delivered between June 2009 and June 2017, there has always been the expectation of further orders of up to 96 more Typhoons. Finally, obstacles to a deal have started to melt away.

Many blamed a German block on arms exports to Saudi Arabia, imposed in 2018, for the impasse. Such a block was significant, as though any Saudi Typhoons would come from the British final assembly line, parts and components are manufactured in all four Eurofighter partner nations: the UK, Germany, Italy and Spain.

High level lobbying failed to change German government policy on the issue. But industry and UK Ministry of Defence (MoD) insiders reported that the German block had been just one factor in halting the planned deal, and that the RSAF was 'holding out' for a Typhoon with the cutting edge ECRS.Mk 2 AESA radar and a large area display (LAD) in the cockpit.

Negotiators reportedly insisted on having the same configuration

as RAF Typhoons, to ensure that the RSAF was not left operating an 'orphan' variant. It was thus the slow progress with the ECRS.Mk 2, as well as the German block on Typhoon exports, that was responsible for the stalemate.

Reports of "discussions" between Dassault Aviation and Saudi Arabia about a potential sale of the Rafale fighter to Saudi Arabia, briefed by Sebastien Lecornu, France's minister of the armed forces, on 23 October, may have had an impact.

It remains unclear whether there was a genuine interest in acquiring the Rafale, or whether this was intended as a means of applying pressure on the UK and the Eurofighter consortium.

Either way, obstacles to the Saudi Typhoon deal have started to melt away.

On 1 November, BAE Systems installed the first ECRS.Mk 2 prototype radar in a Typhoon test aircraft, after months of testing in its 'roof lab' facility, demonstrating real progress and the maturity of the new active electronically scanned array radar.

The new ECRS.Mk 2 radar has an innovative repositioner which gives an unmatched 'field of regard', and a wideband multifunction array that provides unequalled passive detection and electronic attack capabilities against airborne targets and surface emitters. This makes the ECRS.Mk 2-equipped Typhoon a formidable force multiplier, and is effectively "putting a fifth generation sensor on Typhoon," says Andrew 'Blyty' Mallery Blythe, BAE Systems' Typhoon operational requirements manager.

The new radar represents the tip of the iceberg. Under the so-called Medulla project, BAE Systems is already running its new unified mission computer on a test rig, with a LAD, a Striker II helmet integrated, and with the ability to integrate new software apps. The

Medulla processing architecture promises to allow BAE to update mission data in flight through datalinks.

And on 7 January, German foreign minister Annalena Baerbock announced the decision to drop the German export block, explaining that the new policy had been motivated by Saudi Arabia's constructive position towards Israel following the Hamas attack on 7 October, including the interception of missiles launched at Israel by Houthi forces in Yemen.

There is a quiet optimism that the RSAF might soon be operating an advanced new Typhoon variant. Paul 'Mufti' Smith, BAE Systems' head of business development, European campaigns, said: "The Royal Saudi Air Force is operationally experienced and has good mixed force capabilities.

"I think the journey they've been on in terms of electronic warfare, mission data expertise and all of that background development has meant that they've been successful with Typhoon against tricky, difficult air targets, including little UAVs... And the experience they've had so far in Typhoon sets them up nicely to make that bridge into Fifth Gen sensors." ▲

Andrew Mallery-Blythe, wearing a Striker II helmet, in the Medulla cockpit rig, with a Large Area Display and auxiliary High Integrity Panels



BAE Systems

The prototype ECRS.Mk 2 radar was fitted to a Typhoon test aircraft on November 1 last year, but this was not announced until just before the show! It is expected to fly in July



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Partnerships

Vision 2030 has opened the door for many partnerships. South Africa's OTT Group has taken that opportunity and inked an agreement with Saudi company Rakaa

OTT drives a new route to growth with Saudi firm

OTT Technologies and ADG Mobility, part of the OTT Group of South Africa, have announced a partnership with Rakaa Security and Military Supplies of Saudi Arabia at WDS2024 (Stand XD3).

Integral to the partnership is a commitment to develop innovative and practical solutions to align with and enable the Kingdom's Saudi 2030 vision. As Rakaa Security and Military Supplies states: "We provide strategic advice and a roadmap to help our new partners in the Saudi market."

With almost 70 years of collective military vehicle development and global support experience, OTT Technologies and ADG Mobility came together during 2021, along with LMT Products, to create the OTT Group – the largest 100% privately-owned military vehicle development and manufacturing entity in Southern Africa.

Rakaa Security and Military Supplies specialises in the delivery of security and military equipment to all Saudi government agencies, including various branches of the armed forces and police. The company aims to remain at the forefront of the continuous economic changes in the Kingdom and the Gulf region, as well as on a global level.

Under this partnership, the South African group envisages transfer of technology and growth of its Saudi partner. This will be achieved through new 'clean sheet' programme developments to specific end-user requirements.

Additionally, the partnership is set to embark on service life extension plans such as upgrades, and the localisation of upgrade services and support for legacy equipment, as well as supply, support, and local manufacture

of some existing tried-and-tested vehicles.

Dr Stefan Nell, group managing director of the OTT Group, says each one of the constituent companies brings significant designs and experience, "providing not only innovative design and development capabilities, but also battle-proven products already in service in the international market, notably also in the Middle East region."

The companies in the partnership take pride in their complementary skill sets that include engineering, simulation, prototype development, and advanced automotive and destructive testing.

Furthermore, they have capabilities in industrialisation and manufacturing, as well as an after-market support network coupled with their advanced manufacturing reputation.

With a well-established manufacturing record over many decades, the OTT Group has a strong customer base with hundreds of specialised and mine-protected vehicles operational in conflict areas around the world.

The group says the vehicles on offer are purpose-designed and built with the highest levels of protection, as certified in international blast and ballistic tests.

The vehicles also meet the exceptional high mobility challenges in the typical Middle East region where sustained 55°C ambient conditions occur. The driveline and cooling systems have been fully signed off, above and beyond these requirements, by the respective engine and transmission OEMs.

OTT Technologies brings a world-class reputation for extreme levels of mine and

ballistic protection in the design of traditional mine-resistant ambush protected (MRAP) vehicles. It is one of only three companies worldwide with a UN long-term agreement (LTA) for this class of vehicle. Moreover, some of the company's latest vehicles have received accolades for having performed exceptionally well during the gruelling UAE summer trials.

ADG Mobility has formidable design development and testing capabilities, coupled with many significant global partnerships. Its product development experience ranges from multiple 4x4, 6x6 and numerous third-party 8x8 solutions.

The OTT Group's display on the Rakaa stand at WDS2024 will feature examples of most of its modern production-ready vehicles, as well as the latest group developments. ▲



◀ One of the OTT Group's MRAP vehicles in action

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Five South African defence companies, all part of Reutech Applied Electronics, are building a solid footprint in the Middle East, notably also in Saudi Arabia. Sam Basch reports

Reutech eyes regional growth

The joint participation in WDS2024 of Etion Create, Dynateq International, Reutech Radar Systems, Reutech Communications and Fuchs Electronics underscores the success in the region of their group, Reutech Applied Electronics (Stand F4.2).

"From the time we signed a number of significant contracts in this region in recent times, Etion Create has now established a presence here, specifically in Saudi Arabia," said Tobie van Loggerenberg, executive business development manager. "Etion Create now has a strong relationship with a major Saudi defence electronics company, which is manufacturing our proven CheetahNAV vehicle navigation system that is operational in a number of Saudi military vehicles."

This is part of Etion's localisation strategy in the Kingdom that will continue to be incrementally rolled out, notably with additional innovative products, he said.

On display at WDS2024 is the company's smaller Cheetah Compact, as well as a rugged keyboard and a set of routers. These devices form part of a new battlefield management system designed to meet a specific Saudi requirement.

Etion Create expects the Cheetah Compact and rugged keyboard to be as successful as its CheetahNAV, which is proving effective in the harsh and extreme battlefield environments of the Middle East.

"We firmly believe our products, now produced locally, will meet the stringent requirements of the Saudi armed forces," Van Loggerenberg said.

Like Etion Create, Reutech Radar Systems has also established a solid footprint in the region. The company is expanding its market share, notably with its surveillance and tracking radars.



Reutech Radar Systems' RIS 100X Passive DF receiver in action

Anthony Green, systems and solutions specialist, says the company's product line-up includes ground-based and naval radars for both surveillance and fire control applications.

"Our RSR 906 system could be deployed against ground targets such as vehicles and dismounted troops, as well as aerial targets and in coastal surveillance against surface vessels," he said. "As an air surveillance radar, it can designate targets, such as aircraft and drones, to a fire control system."

The lightweight and compact fire control RTS 3200 can receive target designation from external sources, such as the RSR 906 surveillance radar. "Having acquired the target, it can output high data rate tracking to weapon systems, such as guns or missiles," Green said.

The company's RSR 610 radar is a fixed-panel non-rotating surveillance radar for application against ground targets, drones, and small fast-moving water-borne targets. Its compact nature makes

it suitable for a vehicular role.

For protection of land vehicles, the RSR-150 3D radar sensor can rapidly acquire and track multiple incoming projectiles, such as rocket-propelled grenades, and also detect and track sniper fire.

For its part, DynaTeq International's product range is designed, engineered, and manufactured to operate in harsh environments, such as those found in the Middle East.

Successful export

Its Rogue and Super remote controlled weapon system (RCWS) for various calibres have been successfully exported for many years.

Business development head Deon Botha said: "Our latest RCWS offerings are the Land Rogue LITE fitted with a 7.62mm weapon and gunshot detector for APCs or minesweepers, and the 12.7mm Sea Rogue-S 2023, which is ideal for installation on fast interceptor vessels."

Reutech Communications

offers a range of new-generation communication systems, comprising wideband software-defined combat net radios (CNR). A user-definable cryptographic module provides full autonomy for both encryption and hopping algorithms.

Other features include embedded data link capability, enabling network centric warfare.

Fuchs Electronics, first-time exhibitor at WDS, is internationally renowned for its innovative electronic fuzes for various types of ordnance. These include fuzes for mortar and artillery systems, including artillery rocket systems, naval and air weapons, as well as grenade launcher systems and air burst programmers.

"Our tube and air-launched ammunition products give users the leading edge in operational efficiency and force multiplication," said Henry Abrahams, business development executive. Fuchs Electronics recently celebrated 60 years in the defence industry. ▲



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Gulf air forces see results of spending spree

Orders and deliveries of the latest and best-equipped fighter jets are giving Gulf region air forces formidable air power. Alan Warnes assesses the fleet growth

Out of the blue weeks just before WDS came good news for BAE Systems and Saudi Arabia's fighter fleet. After five years of stalemate, the German government indicated on 7 January that it would lift its block on a Eurofighter Typhoon sale to Saudi Arabia (see page 43 for more details).

If – finally – the memorandum of intent (MoI) signed with the Saudi government in 2018 for 48 Eurofighters does come home, the BAE production line will be running until late in the decade.

The Eurofighter final assembly line at BAE Warton had all but closed with the last 10 of 28 Qatari examples expected to be delivered within the next year. Italy's Leonardo should deliver the remaining 14 of 28 Eurofighters ordered by Kuwait in the same time frame.

In Munich, the Airbus assembly

line was opened in May 2023 with new orders from the German air force, including 38 examples in Project Quadriga and 15 equipped for electronic combat, and Madrid should be functioning soon with Spanish air force requirements for 20 and 25 examples under the Halcon I and II programmes respectively.

While this all might be good news for BAE Systems, it could be too late to halt the Dassault juggernaut which is hard at work trying to woo Riyadh with the sale of 54 Rafales.

The UAE and Qatar have both bought the Rafale, and Dassault could have considerable sway in the region if the Saudis did go down the route of operating three different types, as the Qatari Emiri air force (QEAF) does with its Boeing F-15QA, Rafale and Typhoon mixed fleet.

Boeing sent the F-15EX (or

rather two QEAF F-15QA Ababil, which the F-15EX is based on) to the Dubai airshow last November. The twin-engined fighter impressed spectators with its manoeuvrability and power, although it is unclear what the UAE and Saudi Arabia governments thought.

Historic contract

The UAE of course wants to replace its F-16E/Fs within the next decade and both the Lockheed Martin F-35 and Boeing F-15EX are options. The 50+ Mirage 2000-9s are being replaced by 80 Dassault Rafales, in a "historic contract", as former French defence minister Florence Parly put it, said to be worth \$17bn. In financial terms, it was the largest contract Dassault had ever signed.

The UAE Rafale purchase, com-

● CONTINUED ON P52



QATAR

The QEAF has 28 Eurofighter Typhoon Tranche 3s on order, with 18 delivered so far

CONTINUED FROM P51

prising 55 EU single-seaters and 25 DU dual seaters to the standard F4 variant, will give the UAE the most advanced evolution of the jet, which the French air force (FASF) and naval aviation have ordered.

The Rafale F4 is set to improve the type's connectivity into today's net-centric operations with new satellite communications equipment and new intra-patrol data-links, new communications servers, and software-enabled radios.

It will also boast new weapons such as the MBDA Mica NG air-to-air missile and 1,000kg Safran AASM Hammer air-to-ground modular weapon, RBE2 radar and data link as well as increased artificial intelligence.

The first F4 was delivered to the FASF in March 2023; deliveries to the UAE are expected to start in 2026. The UAE's order for 80 Rafales added to a 2016-17 spending spree among its Gulf neighbours Bahrain, Kuwait, Qatar and Saudi Arabia. Altogether the five air forces will take 400 new multi-role combat aircraft.

The Royal Bahrain Air Force (RBAF) was the first customer of the new Lockheed Martin F-16C/D Block 70. A \$1.2bn deal for 10 single-seat F-16Cs and six F-16Ds was announced on 25 June 2018, adding to the 20 surviving F-16C/Ds already operational. The Block 70 incorporates a new AN/APG-83 active electronically scanned array (AESA) radar, upgraded displays, new avionics suite and advanced weapons. The life of the new-build jets was also being extended to 12,000h instead of 8,000h.

The first example, F-16D 1611, made its maiden flight on 24 Janu-

UAE

F-16E/Fs have been serving the UAE since 2004. This dual-seat F-16F taxis out for departure



Alan Warren

The UAE's order for 80 Rafales added to a 2016-17 spending spree among its Gulf neighbours Bahrain, Kuwait, Qatar and Saudi Arabia. Altogether the five air forces will take 400 new multi-role combat aircraft

ary 2023 from Lockheed Martin's new Greenville plant in South Carolina. After officially being rolled out on 23 March, the aircraft was flown to Edwards AFB, California, for flight testing, and will be delivered to Bahrain in 2024. The RBAF Block 70s will be the first to be fitted with the L3Harris Viper Shield electronic warfare system.

The Kuwait air force (KAF) has 28 Eurofighter Typhoons and 28 Boeing F/A-18E/F Super Hornets on order. The \$9bn Typhoon deal, signed on 5 April 2016, covers 22 single-seat and six twin-seat aircraft. They are being built to the latest Tranche 3 (P3EB) standard, with the new Captor E-Scan AESA radar.

The latest four are to be delivered to Ali Al Salem air base in late October; 13 Typhoons are already flying there.

The KAF also purchased 22 single-seat F/A-18Es and six F/A-18Fs in the US Navy's Block 3 standard, during 2017, with Boeing awarded a \$1.16bn contract in June 2018.

The Block 3 variant will include upgrades to the Raytheon AN/

APG-79 AESA radar; an infrared search and track (IRST); 'shoulder-mounted' conformal fuel tanks (CFTs) and new enhanced General Electric F-414-400 engines. However the 28 Block III Super Hornets still remain in the US due to the delay in infrastructure work at the KAF's new Ahmed Al Jaber air base caused by the Covid-19 pandemic.

The QEAF ordered an incredible 96 new fighters, involving three different cutting edge jets, between 2015 and 2017. In April 2015, the QEAF ordered 24 Dassault Rafale EQs, boosted in December 2017

by an additional 12 previously on option. The first was delivered in June 2019. Qatari Rafales are equipped with the Sniper targeting pod, the first time a foreign system has been adopted for the French jet.

On 14 June 2017 Boeing announced the QEAF was set to purchase 36 F-15QA (Qatar Advanced) Strike Eagles, a variant of the F-15E tailored to Qatari requirements. Most are now delivered. The \$12bn deal also included US-based lead-in-fighter-training for the F-15QAs.

Finally in December 2017, BAE Systems announced a sale of 28 Eurofighter Typhoon Tranche 3s to Qatar worth approximately \$6.8bn, leading to the first aircraft being delivered to Tamin air base on 27 August 2022. The aircrews and ground personnel have been training with the joint RAF-QEAF unit, 12 Squadron at RAF Coningsby and were deployed to Qatar for the World Cup last November.

Earlier in 2023, the Qatar government agreed to sell its 12 surplus Mirage 2000-5DDA/EDAs, in operation since 1997, to the Indonesian air force. The deal had been frozen until after the presidential elections on 14 February.

The Royal Saudi Air Force boasts the best-equipped and funded armed forces in the Gulf region, operating a mix of F-15S Strike Eagles and Eurofighter Typhoons now supplemented by 84 new F-15SAs. All of the 68 F-15S examples have been upgraded to a similar F-15SA standard by Riyadh-based Alsalam.

The RSAF completed the delivery of its 72 Typhoons in June 2017. ▲

SAUDI

The RSAF has already taken delivery of 72 Eurofighter Typhoons and may now be on track to receive 48 more



Alan Warren

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Defence giant Lockheed Martin has been active in Saudi Arabia for close to 60 years and Brig Gen (Rtd) Joseph Rank, now the chief executive for Lockheed Martin in Saudi Arabia and Africa, tells Alan Peaford he is keen to see the solid relationships continue

Solid partnership as Lockheed Martin blooms in the desert

Joe Rank was born in the very year that Saudi Arabia received its first C-130 aircraft from the then Lockheed Corp. The multi-role transporter has a special place in Rank's heart as it was the first aircraft he jumped from in his days as a paratrooper. "It's a beautiful plane and I love it," he says.

That love affair extended to the Gulf region. His first experience was deploying to Saudi Arabia, Kuwait and Iraq as part of Operation Desert Shield/Storm.

The relationship continued as he progressed through the US military and his roles changed. Overseas diplomatic postings followed as defence attaché to the UAE, Jordan, Lebanon and Yemen where he was accredited to the host nations as the senior US military officer representing the Secretary of Defense and responsible for building partner capacity including execution of more than \$20 billion in US equipment and training.

He was recalled to the Pentagon and served as acting deputy assistant Secretary of Defense for Middle East policy, directly advising the Secretary of Defense.

No wonder then, retiring as a brigadier general, he was snapped up by the largest of the USA's defence contractors and posted to the area he knows so well.

He is a great fan of the Saudi Vision 2030 and has been driving the changes through against a long-term background of solid partnerships with the host country.

"Our model is a little bit different from some of the other industrial partners," Rank said. "We don't just stand up a big building. What we do is invest in local companies and build their capability, so they can be the industrial partners in the Kingdom."

"We have Lockheed Martin experts inside, doing quality control, showing them how to build canisters, showing them how to build launchers, doing things that are important and what the Kingdom needs. And that is really ramping up now."

Frankly, that takes a lot of our time. But it's really exciting."

Rank said many people underestimate the wealth of talent that exists in the region and in Saudi Arabia in particular.

"There's more talent here than anywhere else. I've met families where you've had three generations of PhDs. Extremely smart and talented people."

As the aviation and defence strategy in the Kingdom is being implemented, a battle for talent is developing. Rank is confident that Lockheed Martin will continue to attract young Saudi skills.

Shifting paradigm

"Last summer, we had an exciting programme and we had three Saudi female engineer interns working on a project using artificial intelligence to detect flaws in paint applied to aircraft – particularly aircraft flying faster than the speed of sound. That paint has to be really secure. Some of the things that they helped us discover are now being used by Lockheed Martin."

Rank said the shifting paradigm now sees an emphasis on building content in the Kingdom. "We're working with AEC, which is part of SAMI, and we also work with AIC Steel in Jeddah and a number of other companies."

The heritage of the C-130 lives on, but Lockheed Martin has expanded its product line and those partnerships to get greater involvement from the Kingdom. From radars to helicopters, from counter-drone activities, to full command-and-control capabilities – and beyond.

"Space is an exciting proposition in the region," Rank said. "Saudi Arabia's leadership has declared that this is going to be a priority. We have the opportunity to partner and work with the Kingdom on a very secure communication satellite, which I think is just the first of many new opportunities that we're hoping to have in the Kingdom." ▲

"Space is an exciting proposition in the region. Saudi Arabia's leadership has declared that this is going to be a priority. We have the opportunity to partner and work with the Kingdom on a very secure communication satellite, which I think is just the first of many new opportunities that we're hoping to have in the Kingdom..."

Brig Gen Joe Rank, Lockheed Martin's regional chief executive with a focus on partnership



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