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Defence, Aerospace, Homeland Security News

## IDEX Testifies Tremendous Growth of UAE Defence



*Jadara Equipment and Defense Systems's Stall at IDEX 2023.*

The 16th edition of IDEX 2023 and the 7th edition of NAVDEX 2023 and the accompanying International Defence Conference (IDC) has kicked off at the Abu Dhabi National Centre. Held under the patronage of His Highness Sheikh Mohamed bin Zayed Al Nahyan, President of the UAE, the latest edition, which coincides with the 30th anniversary of the launch of IDEX, is the largest in the history of the event, forecast to attract wider global participation from all continents of the world.

ADNEC Group, in cooperation with the Ministry of Defence, is organizing the two

exhibitions, which provide an international platform to showcase the latest innovations in the international defence sector, and a global forum to showcase the sector's developments in advanced technology and equipment. It is also an opportunity to establish strategic partnerships between major companies specialized in the defence and military industries from around the world.

The latest editions of IDEX and NAVDEX are of particular importance and are generating great interest as they are the largest in the history of the exhibitions at all levels, and come as a culmination of a 30-year success story. The two exhibitions

are a global platform for decision-makers and experts to learn about the latest technologies and innovative equipment that contribute to achieving and sustaining world peace, and the current edition of the two exhibitions is witnessing a record turnout by major international companies specialized in the defence industries sector, in addition to delegations and specialists from all over the world, which is a testament to the strategic position enjoyed by these events and their role in shaping the features and future of the defence industries sector on all levels.

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**RPG-32**  
**"NASHSHAB"**  
PORTABLE GRENADE LAUNCHER



**UAV**  
**"SHAHEEN"**



**QUAD-2**  
**"NASHSHAB"**  
ON PANTERA VEHICLE



**QUAD-1**  
**"NASHSHAB"**  
MULTIPURPOSE REMOTELY  
CONTROLLED QUAD-1 ON GROUND



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The UAE has achieved a prominent position in the defence industry, becoming a destination for leaders, decision-makers, and experts from all over the world. The Ministry of Defence's support for IDEX and NAVDEX is part of the UAE's efforts to keep up with the developments of the Fourth Industrial Revolution, and achieve a knowledge-based economy and sustainable development in various sectors. Over the past 30 years, IDEX and NAVDEX have witnessed a remarkable development in the number of local and international participants, as well as an accelerated growth in the volume of announced deals, and the number of official international delegations participating in the event.

IDEX and NAVDEX are accompanied by the International Defence Conference (IDC 2023) at the ADNOC Business Centre, organized by ADNEC Group in cooperation

with the Ministry of Defence and in strategic partnership with Tawazun Council. The IDC attracts a wide range of leaders, high-level officials, and representatives of defence, security, and academic institutions and companies in the region and the world, to discuss and exchange ideas on the latest advanced technologies.

The Conference, which is held under the theme "Adaption, Exploration, Transformation: Reimagining Security, Society, and the Human Experience in an age of Disruption", attracts more than 1,800 participants with a growth rate of more than 25% compared to the previous edition, and will include 4 panel discussions on the economic and social implications and risks of adopting modern technologies, talent development and human capital management, and the impact of technologies on the future of technologies. Defensive operations.

The current edition is expected to attract more than 130,000 visitors including VIPs, decision-makers, and specialists from all over the world, with a growth rate of 209% over the 2021 edition. The current edition also witnesses the holding of NAVDEX for the first time in the new ADNEC Marina Hall, which has an area of more than 10,000 square metres, and is the largest of its kind in the Middle East. This has contributed to the growth of the number of exhibiting companies in the current edition of NAVDEX by 206% compared to the previous edition, and the total area of the exhibition increased by 35% to reach 57,000 square metres.

Huge Participation after Pandemic  
While, the number of exhibiting companies jumped to 1,350, up 50% compared to 2021, the number of companies increased by 285% compared to the first edition in 1993. The number



of participating countries increased to 65 countries, up 10% from 2021 and 200% compared to the first edition. The total area of the exhibition rose by 20% from 2021 to reach 165,000 square metres. The current edition witnesses participation of 180 national exhibiting companies – 16% of the total exhibitors.

The UAE have the largest pavilion spread across 23,700 square metres, followed by Türkiye and USA pavilion. The number of official delegations increased to 350 delegations from different countries from around world, with a growth rate of 191% compared to the previous version. Around 9 new countries are participating for the first time in the two exhibitions: Uzbekistan, Ireland, Nigeria, Montenegro, Kuwait, Lithuania, Bangladesh, and Monaco.

The current edition of NAVDEX witnesses the participation of a number of naval vessels and ships from 8 countries: Pakistan,

Bahrain, Britain, Italy, China, Kuwait, India, along with the UAE. These vessels are on display at ADNEC Port as well as Zayed Port, and features many marine vessels participating in the exhibition.

The show saw the addition of Hall 13, adding over 2,200 square metres and the creation of a 1,500 square metre startup zone hosting 82 companies from 25 countries. The number of exhibiting companies at NAVDEX grew by 206% compared to 2021, total area of the exhibition increased by 35% to reach 57,000 square metres.

The participation of a number of naval vessels and ships from 8 countries -Pakistan, Bahrain, Britain, Italy, China, Kuwait, India, and UAE- is a highlight. International Defence Conference attracts more than 1,800 participants with a growth rate of more than 25% compared to the previous edition.

The Grand Stand area at the Abu Dhabi National Exhibition Centre and the Water Canal area of ADNEC Marina will also witness many live demonstrations of the latest equipment and vehicles, some of which will be displayed for the first time, which will contribute effectively to demonstrating the practical capabilities of these vehicles and marine vessels in various defence classes and applications.

The current edition of IDEX and NAVDEX will host the first edition IDEX and NAVDEX Talks, a series of interactive panel discussions that attract key thought leaders, policymakers, social media celebrities, researchers, and thinkers to attend strategic sessions and highlight the most prominent products, solutions, and innovative technologies that can shape a safe future for all.

# RAFAEL's Enhanced TYPHOON C-UAS Capabilities & 6th Gen. Naval SPIKE NLOS on Display



RAFAEL arrived at NAVDEX after completing a unique live fire demonstration with successful interception rates. RAFAEL's TYPHOON RCWS, successfully demonstrated Counter-UAS (C-UAS) capabilities in a series of tests and scenarios conducted in the last month. These new capabilities will be shown with footage of various interceptions at sea.

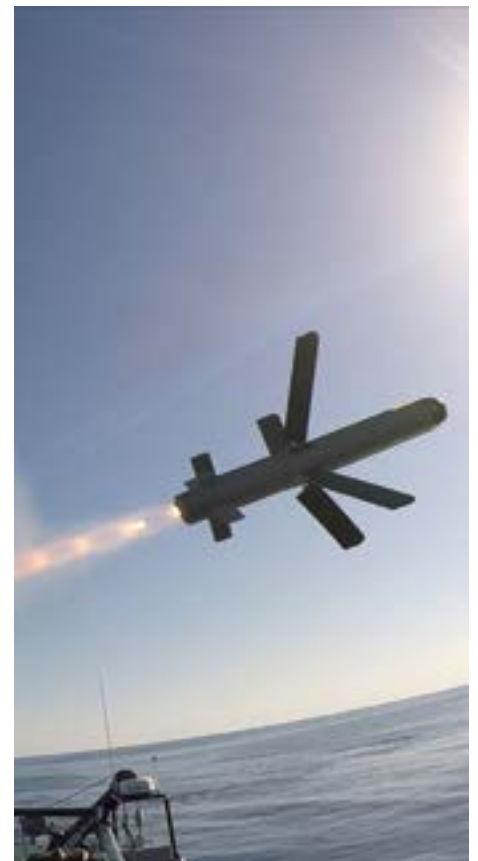
As a world leader with a global install base of more than 750 medium caliber Stabilized naval RCWS Systems, RAFAEL is offering its TYPHOON Mk30-c and TYPHOON 25 mm class (in service with several navies around the world, including the US navy) as a solution for airborne, marine, and shore-based threats, including C-UAS.

In late 2022, RAFAEL announced that it had been awarded a major contract with a leading Asian navy for its TYPHOON Mk30-c, as well as the commissioning of its TYPHOON and mini-TYPHOON RCWS onboard FAIC-M / SHALDAG Mk5 vessels in the Philippine navy as part of a complete RAFAEL combat suite. TYPHOON RCWS has recently demonstrated its improved C-UAS capabilities using AI-powered Automatic Fire Correction and ATR to effectively defeat small and medium UAS. This is all made possible by incorporating a diverse mix of synchronized smart multi-spectral sensors, weapons, and intelligent effectors that translate to very high hit accuracies.

RAFAEL's new Naval SPIKE NLOS (non-

line-of-sight) 6th Generation missiles will also be showcased. These new missiles can turn any OPV or patrol boat into a highly effective combat vessel, with advanced capabilities against all naval and coastal threats. Naval SPIKE NLOS provides pinpoint accuracy with a maximum range of 32 km, using electro-optical guidance and advanced fire control. This combat-proven system is operational in various navies worldwide and is compatible with a range of warheads, including High Explosive Anti-Tank (HEAT), Penetration Blast Fragmentation (PBF), with warhead detonation control, and fragmentation. SPIKE family systems have been sold to 39 countries worldwide, including 19 NATO countries.

Another innovative system showcased is the C-GEM shipborne off-board RF Active Decoy (RFAD) system which protects naval vessels from anti-ship missiles through electromagnetic spectrum manipulation. C-GEM jams and deceives threats from multiple directions, independent of ship maneuvers.



# Leonardo reinforces strategic relationships across the Middle East at IDEX



Leonardo, the Italian-headquartered international aerospace and defence leader, is showcasing its capabilities in the IDEX exhibition from 20 to 24 February (ADNEC – stand 06-B07). The company will be promoting its portfolio of land, naval and airborne electronics; training platforms and services for aircraft pilots, cyber and defence operators; military fixed and rotary-wing crewed and uncrewed platforms.

“With offices based in Abu Dhabi, for nearly fifty years Leonardo has supported the United Arab Emirates’ naval, land and air operations with our technologies – explained Vincenzo Romano, General Manager of Leonardo’s branch in the UAE. In fact, approximately 90% of the VVIP rotorcraft fleet of UAE is made of Leonardo helicopters, more than 100 of which are operating in the country, and more than 40 UAE Navy’s ships are equipped with Leonardo naval systems, including combat management and defence systems, naval radars, fire control systems, missile electronics and military radios. Our goal, as Leonardo, is to further strengthen our strategic partnership with the UAE and, building on our proven track record as a global provider of innovative technology, to increase our cooperation with Emirati national companies and institutions. In this framework – concluded Romano –, we want to collaborate with Emirati industry for the design and development of a national Combat Management System for new and legacy vessels.”

Collaborations with the UAE also include secure communication applications, space technologies, training aircraft, and the recently announced agreement with Khalifa University to set-up a Cyber Security Academy in their campus in Abu Dhabi. Based on Leonardo’s Cyber Trainer platform, the Academy will offer complete cyber security certification and training programs, as well as special initiatives designed to meet the needs of UAE organizations.

With cyber defence as one of main

topic of Leonardo’s participation in IDEX, company’s offering includes the training of cyber security operators and the digital infrastructures’ resilience assessment against potential cyberattacks, thanks to its Cyber Range platform. Leveraging on virtualization and interoperability, Cyber Range offers advanced scenario set-up and high fidelity attack replication capabilities. In the context of cyber defence, Threat Intelligence plays a crucial role, allowing the monitoring, identification and analysis of cyber threats, and providing support for immediate response, remediation and containment actions in order to minimise the impact of attacks. Ongoing monitoring, adequate analysis and incident resolution are additional key factors, achieved through the services of Leonardo’s Global Security Operation Centre.

Cyber threat intelligence information and data coming from real-time cyber security monitoring and management can be integrated into Leonardo X-2030 platform. On show at IDEX, X-2030 is a ‘command, control, communication, cyber and intelligence’ solution, capable of correlating vast amounts of data from disparate sources (such as satellites, drones, cameras, databases and social media) in real-time. X-2030 provides an integrated view of the operational environment, also bringing benefits in terms of optimising field resource and allowing to anticipate, withstand, and adapt to adverse conditions, stresses, attacks, or compromises.

Leonardo’s leadership in the development of aircraft and training technologies and services is well represented by its

M-346FA, the Fighter Attack version derived from the M-346 Advanced Jet Trainer (AJT), the most advanced “Lead-In Fighter Trainer” aircraft on the market. Whilst keeping the same outstanding training capabilities already proven by the M-346 Advanced Jet Trainer, including the Embedded Tactical training System, Helmet Mounted Display (HMD) and Weapon System Officer training capabilities, the M-346 fighter attack variant includes specific avionics equipment and airframe provisions for supporting Air-to-Air and Air-to-Ground combat roles. The M-346FA is the right solution to complement more expensive assets capable of “download” from the front line fighters a large part of their missions at a fraction of cost per flight hour. The M-346FA, already in service with the first international export customer, is attracting a growing interest in all geographical markets where many Air Forces already expressed strong interest for the operational capabilities as well as advanced training effectiveness provided by this new capable multirole-platform made by Leonardo.

IDEX will give Leonardo the chance to highlight its Mirach 40 (M-40), the uncrewed target drone for armed forces training. Its ability to convincingly mimic a variety of aircraft and missiles, simulating radar, infrared (IR) and visual threats, allows Armed Forces to ‘shoot down’ the reusable M-40 in realistic scenarios. Developed in-house by Leonardo using commercial components, the M-40 is readily exportable and is part of the company’s successful Mirach family which also includes the M-100/5 V2.

# Paramount Unveils Brand Evolution at IDEX , as leader of Portable Defence Manufacturing Solutions Globally



Paramount, the global aero-space and technology company with a 29-year track record of developing defence solutions in challenging environments around the world, is participating in IDEX.

Headquartered in the UAE , Paramount is charting new territory, evolving from a legacy manufacturer to a technology-driven, future-focused OEM. Its brand evolution celebrates the company's upcoming 30 year anniversary and its move towards a 360 degree technology solutions provider, leveraging its extensive and proven IP base to enable defence industrialization within its customer countries

Founder of Paramount, Ivor Ichikowitz stated: "Over the past 30 years, the world has changed significantly, and so has our trajectory. Our new logo is in line with the

growth and development of the company and positions us well into the future.

"Our brand evolution reflects our transformation into a complete technology company. We are focused on designing, engineering, prototyping, industrialization, assembly and certification of ingenious, 360-degree, battle-proven defence solutions that fit each of the local markets we serve." Ichikowitz said.

Founded in South Africa in 1994, Paramount has manufactured and supplied armoured vehicles, aircraft, naval vessels, sensors and other technologies to more than 25 countries

across the globe. The company operates in Africa, the Middle East, Europe, the Americas, Central Asia and Southeast Asia.

Among Paramount's current technology priority areas is the expansion of its autonomous or optionally-manned capability based on its existing portfolio of air, sea and land assets platforms. Additionally, the company is increasing its comprehensive range of unmanned aerial systems (UAS) technology.

"Today, the majority of projects that we do around the world relate to either evolving technology that we've already developed for the unique requirements of each country, or using our wide-ranging IP and expertise to develop new products that solve specific operational requirements." Ichikowitz added.

Paramount offers portable, in-country manufacturing and transfer of technology, skills, and licensed IP. This approach enables countries to develop independent defence capabilities, creating local jobs and supporting the domestic economy while protecting territorial sovereignty and maintaining peace and stability.

As the industry's leading portable defence manufacturing solutions provider, Paramount is well-positioned to help governments worldwide achieve their strategic goals. The company's holistic solutions approach integrates licensed IP with extensive land, sea & air capabilities to enable governments to develop fully integrated independent defence solutions in-country.





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Paramount has a proven track record of building successful industrial partnerships and actively seeks global partnerships with governments and other industrial partners or national champions to broaden its international footprint further. The company has expanded globally through a number of strategic acquisitions, joint ventures, global partnerships and various product innovations.

Steve Griessel, Group CEO of Paramount stated: "In the current geopolitical environment, defence industrial autonomy is one of the most important considerations for any government. Paramount's relevance in regions like the Middle East is increasing substantially. We remain one of the few

organisations in the defence industry worldwide, with the depth and breadth of capability across several domains, who has as its business model the sharing of technology and the development of domestic industrial capability.

"Paramount has the advantage that over the past 29 years we have invested the time and funds to develop the base technology and to develop battle proven certified products. This adds huge value to our industrial partners who are able to have a running start by partnering with us on portable production to fast track defence industrial capability."

The company has a global presence of offices in various countries including the United Arab

Emirates, South Africa, United Kingdom, USA, Nigeria, Ghana, Cyprus, Kazakhstan and Greece. Its aircraft, vehicles, autonomous systems and naval vessels are manufactured at various manufacturing sites around the world.

"Our objective for the next five years is to expand portable production across five or six production facilities around the world. It's time to use the building blocks of our success to create the platform for our expanding global growth. Our brand messaging and the Paramount logo has evolved to reflect and position Paramount for the next 30 years." Griessel concluded.

# We have to minimise foreign dependence for our defence needs: PM Narendra Modi



Raksha Mantri Rajnath Singh terms the facility as a testament to India's growing indigenous capabilities and Government's resolve to achieve 'Aatmanirbharta' in defence

*Prime Minister Dedicates to the Nation HAL Helicopter Factory, India's Largest, at Tumakuru, Karnataka*

Prime Minister Narendra Modi dedicated to the nation Hindustan Aeronautics Limited (HAL) Helicopter Factory at Tumakuru in Karnataka on February 6, 2023. He took a walkthrough of the Helicopter Facility and Structure Hangar and unveiled the Light Utility Helicopter (LUH). The factory is India's largest helicopter manufacturing facility and will initially produce LUHs.

The LUH is an indigenously designed and developed three-ton class, single engine multipurpose utility helicopter with unique features of high manoeuvrability. Initially, this factory will produce around 30 helicopters per year and can be enhanced to 60 and then 90 per year in a phased manner.

Addressing the gathering the Prime Minister said, Karnataka is a land of saints and sages that have always strengthened the Indian traditions of spirituality, knowledge and scientific values. He lauded the talent and innovation of Karnataka's youth and said the manufacturing sector's strength is manifested in products from drones to Tejas fighter planes. "Double-engine government has made Karnataka the first choice of investors," the Prime Minister asserted and illustrated the point by the HAL project dedicated today, for which he had laid the foundation stone in 2016 with a pledge for reducing foreign dependence for defence needs.

The Prime Minister expressed delight that hundreds of arms and defence equipment are being manufactured in India which are being used by the Armed Forces.

"From advanced assault rifles to tanks, aircraft carriers, helicopters, fighter jets, transport aircraft, India is manufacturing it all," the Prime Minister remarked.

Throwing light on the aerospace sector, the Prime Minister pointed out that the investment made in this sector in the last 8-9 years is five times the investment made before 2014 plus 15 years prior.

The Prime Minister underlined that Made in India arms are not just supplied to the armed forces but the defence exports have also grown manifold when compared to the years before 2014. He emphasised that hundreds of helicopters are going to be manufactured in this facility itself in the near future which will give rise to businesses worth Rs four lakh crore. "When such manufacturing units are set up, it does not just strengthen the Armed Forces but also creates employment and self-employment opportunities," Modi remarked as he underlined that small businesses near the helicopter manufacturing facility in Tumkuru will get empowered.

The Prime Minister emphasised that with the spirit of 'Nation First' success is assured. He talked about revamping and reforms in the working of the public sector enterprises as well as opening up opportunities for the private sector.

The Prime Minister referred to the recent propaganda to target the government in the name of HAL and said that falsehood, no matter how big, frequent or high, is always defeated in the face of truth. "This factory and the rising strength

of HAL has exposed the purveyors of falsehood. Reality is speaking for itself," he said and added that today the same HAL is making modern Tejas for the Armed forces and is a centre of global attraction and bolstering India's 'Aatmanirbharta' in the defence sector.

In his address, the Raksha Mantri lauded the Prime Minister's visionary leadership, saying that it has fuelled the rise of a 'New India' which has the ability to illuminate the world with its light. He stated that India has been a major centre for production and export of silk, cotton & steel and it has now embarked on a journey to become a global hub in manufacturing, especially in the field of defence. He described the HAL Helicopter Factory as a testament to the country's growing indigenous capabilities and the Government's unwavering resolve to achieve 'Aatmanirbharta' in defence manufacturing.

Rajnath Singh also called the inauguration as a tribute to the innumerable heroes and freedom fighters of Karnataka who sacrificed their lives to protect the nation. He added that the facility is a reflection of the Swadeshi movement inspired by leaders like Father of the Nation Mahatma Gandhi. "The Swadeshi movement, which started a century ago, was the first phase of our independence. That was National Movement 1.0. Our vision of 'Aatmanirbhara Bharat' is the second phase. It is National Movement 2.0, through which we are moving fast towards



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The Raksha Mantri stressed that under the Prime Minister's leadership, the Armed Forces have marched ahead in the defence of the nation with renewed vigour and enthusiasm. Not just the soldiers, but scientists, engineers, machinists, technicians, MSMEs, individual innovators, start-ups, industrial workers and all other sections are contributing to national security and socio-economic empowerment of

the country, he added. Rajnath Singh stated that while the Armed Forces are at the borders, every citizen is behind the scene supporting and encouraging them. The HAL Helicopter Facility is a proof of that collective resolve, he said.

#### About HAL Helicopter Factory

The Greenfield Helicopter Factory, spread across 615 acres of land, is planned with a vision to become a one-stop solution for all helicopter requirements of the country. After initially producing LUHs, the factory will be augmented to produce other helicopters such as Light Combat Helicopters (LCHs) and Indian Multirole Helicopters (IMRHs). It will also be used for Maintenance, Repair and Overhaul of LCH, LUH, Civil Advanced Light Helicopter (ALH) and IMRH in the future. Potential exports of civil LUH will also be catered to from this factory.

The HAL plans to produce more than 1,000 helicopters in the range of 3-15 tonnes, with a total business of over Rs four lakh crores over a period of 20 years. Besides generating direct and indirect employment, the Tumakuru facility will

boost the development of surrounding areas through its CSR activities with large-scale community centric programmes on which the company will spend substantial amounts. All this will result in improvement in the people's lives in the region.

The proximity of the factory, with the existing HAL facilities in Bengaluru, will boost the aerospace manufacturing ecosystem in the region and support skill and infrastructure development such as schools, colleges and residential areas. Medical and health care would also reach the community residing in the various nearby Panchayats.

With the establishment of facilities like Heli-Runway, Flight Hangar, Final Assembly Hangar, Structure Assembly Hangar, Air Traffic Control and various supporting service facilities, the factory is fully operational. This factory is being equipped with state-of-the-art Industry 4.0 standard tools and techniques for its operations. This factory will enable India to meet its entire requirement of helicopters without import and giving much needed fillip to the Prime Minister's vision of 'Aatmanirbhar Bharat' in helicopter design, development, and manufacture.

Karnataka Chief Minister Basavaraj Bommai, Ministers of the state government and senior officials of Ministry of Defence were among those present on the occasion.

# IDEX 2023 pictures





# H3 Grob Aircraft France - GAF

- **Unique Intelligence, Surveillance & Reconnaissance Mission Systems.**
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**G**ROB AIRCRAFT FRANCE (GAF) is part of the internationally renowned GROB AEROSPACE GROUP, one of the world's leading suppliers of training systems for military pilot training. GAF is based at Jonzac Airport near Bordeaux, France, and is well positioned in the French aerospace industry.

The company's core competence lies in the manufacture and implementation of high-performance ISR solutions for intelligence, surveillance and reconnaissance.

Currently, the company offers two interesting solutions that are unique in their flexibility. The first is the GAF ISR-Pod System, developed in-house, which is perfectly suited for mobile installation for a wide range of aircraft types and covers almost all requirements of a comprehensive ISR system.

The GAF ISR-Pod System is a platform-independent solution that can be quickly and easily implemented on both new and existing aircraft. It is a highly efficient and durable solution that is clearly appreciated by international government customers.

With this POD system, even smaller fixed- or rotary-wing aircraft can be transformed into state-of-the-art reconnaissance systems. The only requirement is the attachment of a standard 14" NATO mount to attach the POD.

The ISR POD is delivered turnkey with GAF mission software and offers an integrated sensor package with LEONARDO PicoSAR AESA radar, HD EO/IR system (e.g. WESCAM MX-10 or Trakka TC-300), INS/

GNSS and mission server/recorder.

An integrated MIMO-LOS data link system with cooperative tracking antenna enables interference-free long-range connectivity to remote command bases (up to 250 km) and networked data exchange with multiple stakeholders in the air and on the ground. Encrypted voice transmission over IP with PPT and call groups enables convenient and secure communications.

A 4x4 truck-based ground control station is available for use in the harshest environmental conditions.

The ground control station provides a self-contained and secure environment for the crew. It is housed in a standard 20-foot container and has a dual AC, diesel heating and power generation system.

It can be transported by a standard container truck, unloaded by two people without additional support, and even airlifted by a C-130.

It houses all environmental control systems, functional mission systems, operator consoles, and a 12-m-high retractable mast with tracking antenna that remains concealed inside the container when not in use.

It is a POD-based, platform-independent solution that can be installed on many turboprop platforms such as Cessna 208, Kodiak or King Air 200/300 series.

ICARUS ISR includes all elements and components of the ISR mission system: structural and electrical integration, functional hardware and software, and a comfortable operator environment in the cabin.

The sensor suite includes large multi-

range radars (e.g., Hensoldt, Leonardo, Thales) for maritime remote sensing, high-resolution imaging, air-to-air detection, and ground moving target display.

Additional sensors for SIGINT and geospatial surveying/mapping can augment the system. Integrated into a Cessna 208 B Grand Caravan, the GAF ICARUS ISR C208 is an extremely capable platform that can be transformed from pure cargo, medical or VIP transport into a full ISR platform.

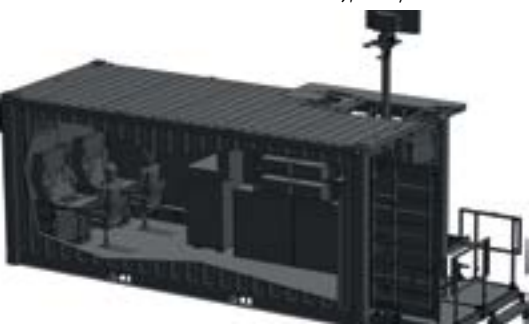
The ICARUS ISR C208 is the ideal utility vehicle for demanding missions, high payloads and short, rough runways, while offering single-engine economy and simplicity. With its performance and STOL characteristics, the aircraft outperforms many other single-engine turboprops, regardless of conditions or mission.

Implementing the ICARUS system on the KING Air 200- or 300-series would benefit from greater range, higher altitude and faster speed through two engines, making it an ideal solution for long-range maritime surveillance missions.

GROB AIRCRAFT FRANCE's complete solutions also include pilot and ground crew training in Europe, as well as on-site training in the respective areas of operation.

Responsiveness, flexibility, high availability and comprehensive service support for all aircraft and all systems are GAF's top priorities.

The GAF team consists of experienced engineers, system developers and pilots and covers the entire expertise of special mission aircraft in all areas.





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# Aims to Expand its Aerospace Capabilities in the UAE



Boeing is very committed to the UAE and the company has been in the Middle East for around four decades. “We are very pleased to be back here at IDEX. The last few years have been tough due to the pandemic and we wanted to meet our customers. We are happy to be able to be here and see the success that IDEX has turned back into with more people, companies and technologies”, said Rick Lemaster, International Business Development leader for Middle East, North Africa, Turkey Global Sales & Marketing, Defence, Space & Security, Boeing Defense, Space & Security. Rick Lemaster is responsible for leading and supporting international sales campaigns for the breadth of Boeing’s defence products and services across the Middle East, North Africa, Turkey. He oversees in-country teams in the region and pursuit of hundreds of foreign military sales and direct commercial contract opportunities, while based in Arlington VA. Speaking to Arabian Defence, he talks about Boeing’s operations in the Middle East region and the plans to expand business.

## **Rick Lemaster**

*International Business Development leader -Middle East, North Africa & Turkey, Boeing*

## **What are the range of products showcased by Boeing at IDEX 2023?**

We have a number of products on display at this year’s expo. For example the Integrator, which is our unmanned aircraft system, which is essentially a long-range intelligent surveillance reconnaissance platform that allows intelligence to be collected and disseminated. We have the full-size model displayed here.

We also have the small-scale models of our Chinook helicopter. It contains a fully-integrated, digital cockpit management system, Common Avionics Architecture System (CAAS) Cockpit and advanced cargo-handling capabilities that complement the aircraft’s mission performance and handling characteristics.

The CH-47F Chinook is a true multi-role, vertical-lift platform with the primary mission of transporting troops, artillery, equipment, and fuel. The current CH-47F/MH-47G modernisation programs will ensure this tandem rotor helicopter remains in the Army fleet through the 2030s. Chinooks serve the armed forces of 19 countries around the world and the customers include Australia, Canada, Greece, Italy, Japan, Netherland, South Korea, Spain, UAE, UK and USA

The latest modernisation initiative known as Chinook Block II is a testament to the robustness of the Chinook’s original design and its 55-year legacy of technological advancements. With these new capabilities, Boeing is ensuring that the iconic H-47 remains the most reliable, capable and ready medium-to-heavy-lift helicopter into the 2060s and beyond.

We also have the T-7A Red Hawk, which is an all-new advanced pilot training system designed for the US Air Force that will train the next generation of fighter and bomber pilots for decades to come. The Red Hawk builds off the legacy of the Tuskegee Airmen, paying tribute to the legends of the past and the heroes of the future.

The aircraft is a flexible, modifiable solution that adapts easily to people, software and systems so future technologies can be easily implemented, pilots can adjust to their personal preferences and the entire system can be applied to other missions. By adapting to changing technologies and learning methods, and by downloading more expensive training, the T-7A produces better prepared pilots in less time. The T-7A’s design includes provisions for growth as requirements evolve for additional missions such as an

aggressor, light attack / fighter variant.

Another highlight of our display is Boeing KC-46 Multi-role Tanker, of which we have delivered around 68 tankers so far to the US Air Force. The KC-46 is the world’s most advanced aerial refuelling aircraft, serving the US Air Force and its allies. The wide-body, multi-role tanker can refuel all US allied and coalition military aircraft compatible with international aerial refuelling procedures, any time, on any mission, and can carry passengers, cargo and patients whenever and wherever needed.

The ability to detect, avoid, defeat and survive threats using multiple layers of protection allows the KC-46 to operate safely in medium-threat environments. With unmatched operational flexibility, the KC-46 is a mobility game changer. We also hope the USAF will buy more of the KC-46 as it is really fit for what the force is looking to do. We have resolved the issues with the aircraft already. We also have several other weapon systems on display here at IDEX.

We are very pleased to be back here at IDEX. The last few years have been tough due to the pandemic and we wanted to meet our customers. To be able to be here and see the success that IDEX has turned back into with more





people, companies and technologies.

**How committed is Boeing to the UAE and its defence sector?**

We are very committed to the UAE and we have been here for around four decades. We are very pleased that the Emirates are using a number of our products here. We sold Apache attack helicopters, CH-47F Chinook multi-role helicopters, and C-17 Globemaster strategic transport aircraft to them.

In the UAE we are looking to grow our aerospace capabilities and work with the local industry in order to meet both defence as well as commercial aviation needs. I think the partnership we are building here is something we continue to invest in and be part of in the decades to come.

**Could you share the market overview of Boeing's business in the Middle East Region?**

The Middle East Region is a very

important part of the overall global trend we see. Roughly 30% of Boeing's defence market is outside of the United States and of that the Middle East is certainly a substantial portion. But as we are seeing around the world there are many other areas that are also increasing. In the past year we have seen that there are no certainties. Many countries are making sure that they have established a suitable defence posture in order to protect what they have. We hope that Boeing will continue to be a part of it both in the Middle East and all over the world.

**What are the company's plans to expand its footprints in the UAE region?**

We are working with the companies in the UAE. For example, the companies like Strada, who we have been able to help create and allow them to continue to build their capabilities. Through our investments here and working with them,

they have been able to become one of our top suppliers to Boeing commercial aircraft programmes. So that works in two ways; it allows us to create more capabilities here in the UAE both for supplying Boeing but also to other companies. It also allows us to make sure that the Emirates' contribution to our 787 programme helps us to sell more 787s. So it is a real win for the Emirates and the United States.

Another example would be the activities we are doing here with some of the next-generation startup companies. They are looking to develop new capabilities, often very innovative approaches, to solving problems. Boeing is very pleased to have invested in these companies and contribute to Emirates' aerospace sector. It is like we are investing in the future of the Emirates' aerospace technologies.

**What's new with Boeing Sustainability in the defence sector? What are the plans to proceed towards a zero carbon future?**

We are making positive steps on our push to get to Zero Carbon footprint by the mid-2030s. You can see that as you look across the different measures that we have taken for sustainability. We are tracking to reduce the overall consumption of electrical power and making sure it is renewably sourced. We are looking to reduce our water consumption, waste product generation and overall carbon footprint all areas we can control in our factories.

We are trying to ensure that the aircraft we design and build are more fuel efficient and they can run on alternative fuels like sustainable aviation fuel, which has a much lower carbon footprint.



# HAL and Safran move forward in the partnership for the IMRH engine

Safran Helicopter Engines and Hindustan Aeronautics Limited (HAL) have signed a workshare agreement for the joint development of the engine intended for the future 13-ton IMRH (Indian Multi-Role Helicopter) and its naval version DBMRH (Deck Based Multi-Role Helicopter). This agreement follows the MoU (Memorandum of Understanding) signed on 8th July 2022 and stipulates the sharing of activities within the joint venture where both parties have agreed on an equivalent repartition. In particular, HAL will take part in the design, development, and production of some of the core engine components, which is a breakthrough achievement in terms of expertise and know-how in the country.

This workshare agreement was signed by Florent Chauvancy, Safran Helicopter Engines EVP Sales and Marketing, and K Ramesh, General Manager, HAL Aero Engine Research and Design Centre, in presence of C B Ananthakrishnan, CMD, HAL and Franck Saudo, CEO, Safran Helicopter Engines.

The development of the IMRH helicopter continues, and a 1/3 scale model was displayed by HAL at Aero India 2023. Discussions are also continuing with the Indian Armed Forces on the operational



requirements for this new helicopter. Availability of an indigenous engine will enhance the self-reliance content on the platform and demonstrates the commitment of both Safran Helicopter Engines and HAL to the Indian Government's vision of "Atmanirbhar Bharat", or achieving self-reliance - particularly in defence technologies.

C B Ananthakrishnan, CMD, HAL stated that: "The joint development of high power engine is a new milestone in HAL's ever-growing capabilities in the sector with a competent partner like Safran Helicopter Engines. We are confident of making the engine meet the highly stringent and demanding requirements of Indian Defence customers".

Franck Saudo, CEO, Safran Helicopter Engines commented, "We are very proud

to be associated with such an important program of HAL and very happy to once again support HAL, our partner for decades. While this program will bring many advanced technologies to the Indian aerospace ecosystem and to HAL, it will also provide the Indian Armed Forces with state-of-the-art solutions".

Safran and HAL will continue to work on the development of this joint venture in the coming months, which is intended not only to develop an engine for the IMRH, but also for other helicopters.

Safran Helicopter Engine & HAL also agreed on the condition for the transfer right to HAL for manufacturing of 7 critical Forging and Casting raw parts, for further enhancement of Indigenous Content (IC) in Shakti Engine of ALH/ LCH.29999

## RAFAEL Inaugurates UAE Facility

RAFAEL participating at IDEX & NAVDEX after RAFAEL's President & CEO M.G. (Ret.) Yoav Har-Even inaugurated the new office in an intimate ceremony with Emirati and Israeli officials, ushering in the historic occasion. Har-Even was joined by Amir Hayek, Israel's Ambassador to the UAE, as well as by representatives from the UAE Government and industry.

RAFAEL's new office will enable the company to explore opportunities in the region, utilizing its culture of collaboration, excellence and innovation to create relationships with governments, customers and defense industry leaders. The Abu Dhabi office joins the ranks of RAFAEL's global network of operations.

"We are encouraged by yet another concrete step in strengthening RAFAEL's ties with the UAE. We can now say that we have built the bridge to the United Arab Emirates



**Maj. Gen. (Ret.) Yoav Har-Even, RAFAEL President & CEO.**

by this inaugural investment and are excited to continue to expand the relationships that have been cultivated thus far"

Gearing up for IDEX 2023, RAFAEL will be exhibiting an array of defense solutions and innovative technologies, some for the

first time at the UAE, including the IRON BEAM high energy laser weapon system (HELWS). The IRON BEAM HELWS is designed to augment the capabilities of air defense systems like the IRON DOME.

Beyond the array of advanced air defense solutions like the DRONE DOME and the SPYDER, RAFAEL has expanded its portfolio and upgraded systems to meet emerging threats. The SPYDER air defense system has been upgraded to allow for the counter ballistic missile capability through an extended range of the Derby LR missile.

Another first at the UAE based exhibition will be RAFAEL's NLOS Mission Task Force (NMT), which utilizes the world's first 6th generation missile, the SPIKE NLOS. This will be displayed at the RAFAEL booth alongside manned and unmanned systems that are supported by Artificial Intelligence.

# EDGE to Showcase Large Portfolio of Advanced Technology and Defence Solutions at IDEX 2023



- EDGE to have the largest presence as event's official Strategic Partner
- Over 100 products and solutions will be showcased with a strong focus on advanced autonomous and unmanned systems

EDGE is marking its second appearance at the International Defence Exhibition (IDEX 2023), and the Naval Defence Exhibition (NAVDEX 2023), with the largest presence at the event, underpinning its position as one of the world's leading advanced technology groups spanning both the defence and civilian realms.

As the official Strategic Partner, EDGE will highlight its aim to significantly up-scale UAE-made future technology and defence capabilities with a showcase of over 100 state-of-the-art products, solutions, and services in the areas of autonomous systems, smart weapons, land systems, naval systems, arms and ammunition, electronic warfare, secure communications and precision engineering.

Mansour AlMulla, Managing Director and CEO of EDGE, said: "This will be EDGE's second participation at IDEX since launching three years ago, and the event this year will be the perfect opportunity for us to fully demonstrate the phenomenal progress EDGE has made in a relatively short period of time. The diverse range of technologically advanced products and solutions now available from across our portfolio of 20 companies is testament to these achievements.

"As we continue to bolster our sovereign capabilities, and expand our global footprint through exports and valuable partnerships,

IDEX remains the most effective platform for EDGE to demonstrate its high quality innovative offerings across the air, land, sea, and cyber domains, with a clear focus on Autonomous and Unmanned systems, Smart Weapons and Electronic Warfare."

In addition to new product launches, EDGE will place a major focus on sophisticated autonomous and unmanned systems, showcasing the QX family of autonomous loitering munitions, GARMOOSHA rotary-wing unmanned aerial vehicle (UAV) and SCORPIO unmanned ground vehicles (UGV). HALCON's HUNTER series of loitering munitions will also be on display, including the HUNTER 2-S swarming UAV, which features powerful artificial intelligence (AI).

In the Smart Weapons domain, EDGE will exhibit the AL TARIQ line of long-range precision-guided munitions (PGMs), HALCON's DESERT STING line of air-to-surface precision-guided glide weapons and SKYKNIGHT air defence missile. Land Systems on display include the AJBAN and HAFEET ranges of tactical military vehicles, and the RABDAN 8x8 Ambulance variant. Under Naval Systems, EDGE will display a broad portfolio of ADSB's inshore and offshore patrol vessels, and tactical interceptors.

Featured in the Arms & Ammunition domain are the full range of CARACAL's

high quality firearms as well as LAHAB DEFENCE SYSTEMS medium and large calibre munitions. Representing Electronic Warfare, SIGN4L will exhibit a full suite of products, including counter-drone, convoy protection, and homeland security solutions. Communications is set to include KATIM's ultra-secure communications and collaboration applications, smartphones and GATEWAY network encryptors.

Training & Services will be displayed through a variety of facility models and solutions, including BEACON RED's suite of national security enhancement services, training solutions, and RANGE ON WHEELS cyber testing range; JAHEZIYA's full scope of defence, consultation, firefighting and emergency response training solutions; and HORIZON's helicopter pilot training portfolio. Lastly, EPI's expansive range of Precision Engineering, machining, treatment, and assembly solutions will be exhibited, while AL TAIF will depict their Land Maintenance, Repair and Overhaul (MRO) and comprehensive lifecycle support capabilities.

Attendees of IDEX can visit EDGE and its portfolio of companies at Hall 5, stand A05 – C10 at the Abu Dhabi National Exhibition Centre (ADNEC) between 20 to 24 February, 2023.

# Bharat Dynamics Limited – The Force Behind Peace



Akash Weapon System

Bharat Dynamics Limited (BDL) was established as a Defence Public Sector Undertaking under the Ministry of Defence Government of India on 16 July 1970 in Hyderabad, India to manufacture missiles for the Indian Army. Over the years, the Company has evolved into a multi-product, multi-located enterprise serving the multiple defence requirements of the Indian Armed Forces.

**B**DL manufactures Anti-Tank Guided Missiles (ATGMs), Surface- to- Air Missiles, Air-to-Air Missiles, Air-to-Surface Weapons, Launchers for ATGMs, Test Equipment, Underwater Weapons and Counter Measure Systems. BDL also provides its services for Refurbishment & Life Extension of vintage missiles. The Company is also making in-roads into new areas such as drone delivered pay loads like Bombs and Missiles, Mines etc.

After establishing itself as the backbone of India's missile armoury with advanced missile systems and buoyed by 'Make in India' policy and 'Ease of Doing Business' approach of the Government of India, BDL is shifting gears to take a leap from making weapons for Indian Armed Forces to manufacturing weapons for armed forces of friendly countries of the world by leveraging indigenous technology.

BDL offers a distinct array of products for export to friendly nations. These include Anti -Tank Guided Missiles (Man Portable Anti - Tank Guided Missiles, Amogha - III Nag, Konkurs - M), Surface-to-Air Missiles (Akash Weapon System),

Air-to-Air Missiles (Astra Weapon System), Air- to- Surface Weapons (Smart Anti - Air Field Weapon & HELINA), Torpedoes (Light Weight Torpedo & Heavy Weight Torpedo) and Counter Measure Systems (Counter Measures Dispensing System & Anti - Submarine Warfare Suite).

BDL has already forayed into the Export Market by exporting Light Weight Torpedoes to a friendly foreign country. The Company is also in receipt of leads from several countries for its exportable products.

To cater to the growing demands and need to offer state of the art weapons to the Armed Forces, BDL is augmenting the resources for infrastructure developments and emphasis is being given to optimally invest for modernization requirements. Thrust is being given to explore tie-up with foreign OEMs for new weapons for potential Transfer of Technology, in addition to DRDO programmes.

BDL has three manufacturing units, out of which, two are located at Hyderabad and Bhanur in Telangana and one at Visakhapatnam in Andhra Pradesh. BDL is setting up three additional units, one at

Ibrahimpatnam in Telangana, second one at Amravati in Maharashtra and third one at Jhansi in the UP Defence Corridor.

Giving a new impetus to its endeavours to enhance its current market position, BDL has adopted key strategies focussing on the following.

## Expanding Infrastructure

The Company intends to continue to invest in infrastructure. The upcoming manufacturing facilities at Jhansi, Ibrahimpatnam and Amravati will enable the company to cater to the growing demand of its customers. These manufacturing facilities shall be utilised to manufacture SAMs and other new generation missiles and armament.

## Automation

BDL has been constantly upgrading its manufacturing technologies and processes to state-of-the-art including industry 4.0, Robotics operated workshops, latest Surface Mounted Devices assembly lines and maintains highest quality standards in its products by adopting to best QA





practices. The pursuit results into reduction in production cost, benchmarking of productivity norms and modernization of management system and less dependence on imported technology. The Company intends to automate its production systems where feasible to increase the productivity.

#### Focus on Research & Development

BDL intends to increase its R&D activities to develop innovative products for its customers. BDL's R&D expenses have also grown up significantly over the past few years. The Company believes that development of new products will enable it to diversify its offerings and mitigate product dependencies. The Company has also established the missile development group with the objective to design and develop missiles. BDL is developing Artificial Intelligence based products. Thrust is also being given to efforts towards Innovation of in-house developed products. Synergy is being maintained between the industry and academia to sustain balance between experience and knowledge industry.

#### Improving Processes

The Company also intends to carry out process improvements, with the aim of improve our productivity and efficiency of its operations and thereby lower costs.

#### New Generation Weapons

BDL intends to leverage its experience to develop weapons such as new generation SAMs, ATGMs, Air to Air Missile System and heavy weight torpedoes which will enable the Company to further increase its revenues. BDL is also the joint development partner-cum production agency with the DRDO for the next generation of ATGMs, Air to Air Missile and SAMs. BDL has also entered into several MoUs and non-disclosure agreements with various companies for developing new products and transfer of technologies.

#### Indigenization

BDL is giving thrust on indigenization as a measure to achieve self-reliance in its

manufacturing and offer competitively priced products to its customers. In the foreign collaboration programs that BDL has entered into, the company has been successful in indigenizing several items, over and above the contracted indigenization content percentage with the support of OEMs. The average percentage of indigenization across BDL is between 80 to 90 percent.

During its over five decades of journey, BDL has graduated from being a missile manufacturer to a Weapon System Integrator. While BDL is relentlessly contributing to make the Indian Armed Forces self-reliant, it is also to endeavouring to export its 'Made in India' products to friendly countries to safeguard their boundaries with futuristic weapons.

The quest for technological excellence has been the guiding principle of BDL and living up to the sobriquet, 'THE FORCE BEHIND PEACE'.



Konkurs - M Anti-Tank Guided Missile



Nag Anti-Tank Guided Missile



Astra Weapon System



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# INTELLIGENT ISR SOLUTIONS FOR UNPREDICTABLE THREADS

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