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TAWAZUN COUNCIL FOR DEFENCE ENABLEMENT

الإمارات العربية المتحدة

United Arab Emirates

NATIONAL DEFENCE INDUSTRIES STRATEGIC FORESIGHT 2025

IN THE NAME OF ALLAH, THE MOST GRACIOUS, THE MOST MERCIFUL

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Foreword

Our Esteemed Partner,

The United Arab Emirates has forged a proud legacy of national development, building a resilient economy, strengthening its sovereign capabilities, and advancing its position as a global hub for innovation, security, and strategic influence. Across global competitiveness indices, the UAE has consistently ranked among the world's leading nations, a testament to the vision, commitment, and enduring ambition of our leadership and people.

Preserving and advancing these national achievements requires more than economic success; it demands a strong, sovereign, and future-ready defence industrial base. Sustainable security and strategic autonomy are the ultimate guarantors of enduring prosperity, resilience, and sovereign decision-making.

Guided by the vision and directives of His Highness Sheikh Mohamed bin Zayed Al Nahyan, President of the United Arab Emirates and Supreme Commander of the UAE Armed Forces, the UAE has laid the foundations of a comprehensive and unique defence and security ecosystem. Through the leadership of the Ministry of Defence, the operational excellence of the UAE Armed Forces, and the strategic direction of national institutions, the achievements of national champions have evolved into a catalyst for innovation, industrial development, and strategic resilience.

It is with this proud legacy and forward-looking vision that I present to you the National Defence Industries Strategic Foresight 2025 — a significant milestone in our collective journey. This document captures our shared aspirations for the future of the national defence industry, articulates the priorities that will guide our next phase of growth, and sets the foundation for the comprehensive National Defence Industries Strategy (NDIS) that will follow.

As a strategic foresight instrument, this document is not intended as a final strategy, but as a dynamic framework — a call for collaboration and dialogue, preparing the ground for a vibrant, adaptive, and inclusive national strategy. It underscores our belief that in a rapidly evolving geopolitical and technological environment, agility, innovation, and proactive engagement are indispensable to achieving sustainable success.

The next phase requires sharper focus and greater unity—prioritising sectors where sovereign capability is non-negotiable, ensuring leadership in innovation, and reinforcing industrial competitiveness. This foresight marks the beginning of a broader national journey that will frame the priorities, address the challenges, and harness the opportunities ahead.

Through this document, I extend an open invitation to all stakeholders — to our national leadership, industry champions, academic institutions, innovators, entrepreneurs, and international partners — to join us in shaping the future of the UAE's defence and security industries. Together, we will enhance our strategic autonomy, accelerate economic diversification, and solidify the UAE's standing as one of the world's most dynamic, resilient, and future-ready defence ecosystems.

I am confident that this document will serve as a catalyst for collective action, inspiring new ideas, igniting partnerships, and guiding us toward realising the UAE's ambition of becoming a global model for defence excellence and industrial leadership.

Let us embark on this journey together — with unity, determination, and a steadfast commitment to our nation's enduring vision.

With my best wishes for your continued success and excellence.

Dr. Nasser Humaid Al Nuaimi

Secretary General, Tawazun Council For Defence Enablement

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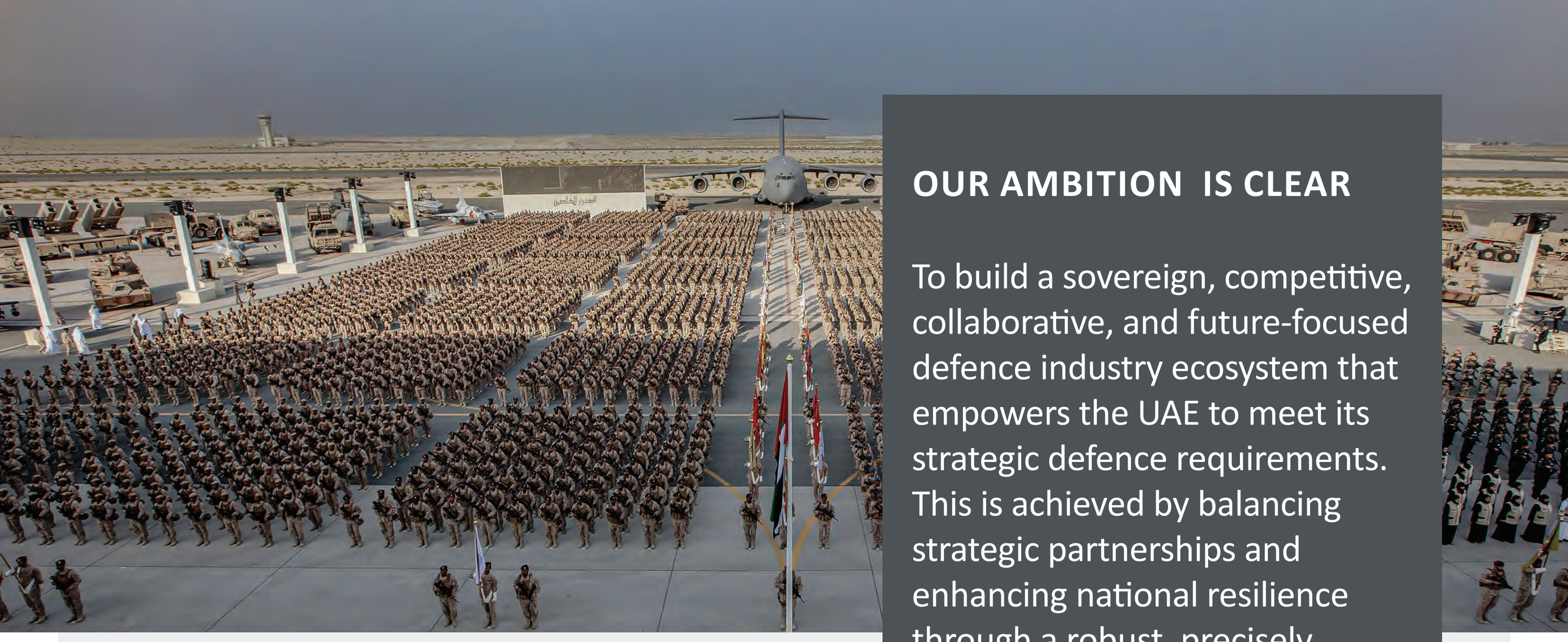
Introduction



OUR AMBITION IS CLEAR

To build a sovereign, competitive, collaborative, and future-focused defence industry ecosystem that empowers the UAE to meet its strategic defence requirements. This is achieved by balancing strategic partnerships and enhancing national resilience through a robust, precisely crafted approach.

The UAE's defence industry stands today at a pivotal turning point. Over the past decade, we have laid robust foundations—establishing globally competitive national champions, advancing indigenous technologies, and positioning the UAE as a credible and trusted player on both the regional and global stages. Today, we build upon this progress, embarking on a new chapter to consolidate achievements and chart a clear path forward through the first formal strategic document for the national defence industry.

The National Defence Industries Strategic Foresight 2025 serves as a blueprint for this next phase. It is designed to articulate a distinct and essential strategic direction—one that catalyses national momentum and lays the groundwork for a comprehensive National Defence Industries Strategy (NDIS).

Anchored in stakeholder engagement and a whole-of-ecosystem approach, this foresight document ensures strategic agility, empowering the UAE to swiftly adapt to technological advancements, market dynamics, and evolving national priorities, all while maintaining a coherent and forward-leaning national vision.

In crafting this foresight, we draw inspiration from global best practices across leading defence and industrialised nations. Strategic foresight and vision-setting have proven indispensable in steering national strategies, aligning diverse stakeholders, and reinforcing international readiness. With this spirit, the UAE signals its ambition to emerge not only as a regional leader but as a global hub for defence innovation and manufacturing—while remaining a cornerstone of regional stability.

As we advance sovereign capabilities, accelerate innovation and R&D, support local manufacturers, and reinforce resilient supply chains to mitigate long-term dependencies, we remain confident that these strategic efforts will light the path toward achieving national defence security.

The UAE is uniquely positioned to capitalise on its world-class infrastructure, open and stable investment environment, proven ability to scale high-technology solutions rapidly, and a strong national commitment to future industries. A broad range of national institutions have already demonstrated the UAE's ability to deliver at global standards, building a solid foundation for sustainable growth and innovation leadership.

The next phase demands sharper focus—prioritising sectors where sovereign capability is non-negotiable, ensuring innovation leadership, and driving industrial competitiveness. This foresight marks the first step in a broader national journey, setting the foundation for the forthcoming National Defence Industry Strategy (NDIS), which will frame the priorities, challenges, and opportunities ahead.

By mobilising efforts across government, industry, academia, and international partners, the UAE will enhance its strategic autonomy, accelerate economic diversification, and solidify its standing as one of the world's most dynamic, resilient, and future-ready defence ecosystems.

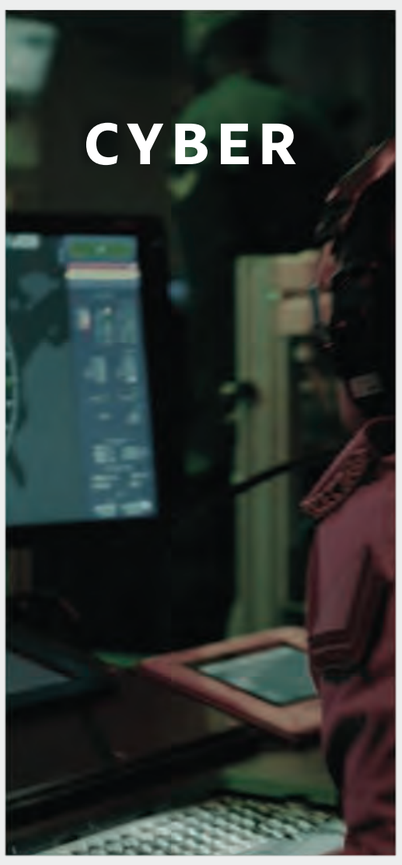
03

Global Trends Transforming Defence

GLOBAL TRENDS TRANSFORMING DEFENCE

Throughout the last century, and even more so in the last two decades, global understanding of industrial development has undergone a fundamental shift. As the defence sector becomes increasingly embedded within broader national industrial ecosystems, global megatrends that once seemed peripheral to defence are now driving its transformation, reshaping how nations think about, and invest in their defence industries and capabilities. The largest such trends are not only shaping new priorities but redefining the very foundations of industrial landscape, capability development, and operational readiness.

Warfighting Domains



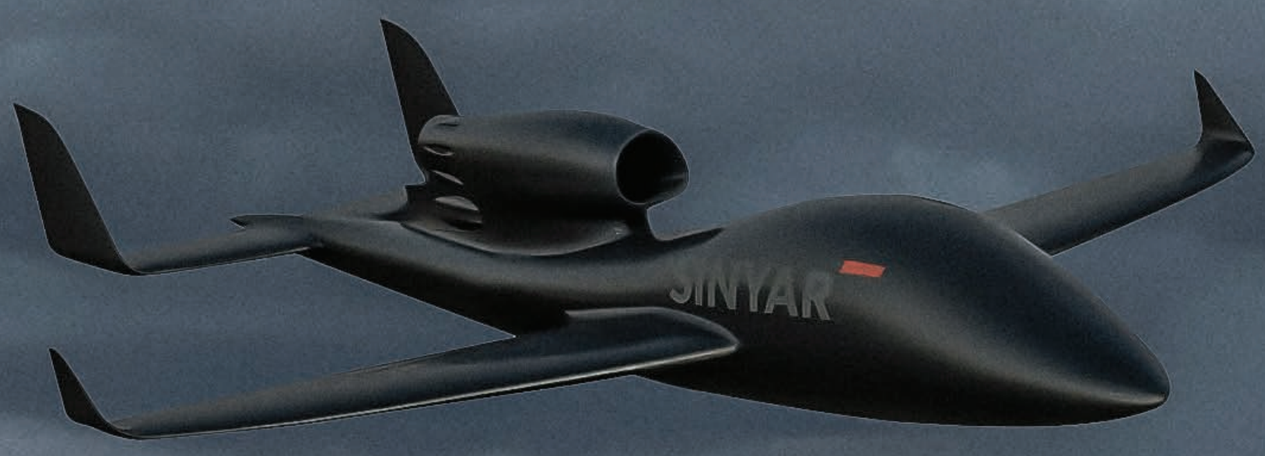
Technology and Innovation

The defence industry's nature offers significant advantage to those who proactively innovate and change. Today, next-generation AI, autonomous platforms, cyber warfare, and data-driven C4I enable world-class military capabilities. These developments are revolutionising the speed, precision, and adaptability of tactical military operations, while also altering the strategic economics of defence R&D and manufacturing. They accelerate national priorities towards creating a powerful force multiplier for defence capability and industrial growth alike.

Evolving Domains

The traditional defence focus on Land, Sea, and Air has broadened to include Cyber and Space; both of which are now core rather than discretionary.

Cyberattacks and anti-satellite operations are increasingly integrated into national defence strategies, and military doctrine is evolving to embrace these increasingly contested domains. Consequently, forward-looking leaders are reshaping defence capability requirements to enable greater integration of all five domains, with data and advanced analytics ideally moving seamlessly among them to strengthen operational advantage.



Geopolitical Factors

Fast-shifting power dynamics, rising regional tensions, and growing emphasis on strategic self-reliance are hallmarks of today's world. Traditional alliances are being tested, new blocs are emerging, and countries are reevaluating their roles within an increasingly complex, multipolar globe.

These trends are prompting nations to reassess economic and industrial dependencies, strengthen local capabilities, and seek new forms of bilateral and multilateral collaboration.

Supply Chain

Global supply chains are facing mounting pressure due to the convergence of factors including geopolitical fragmentation, resource competition, trade protectionism, and climate-related disruptions. The more complex, interdependent nature of today's value chains intensifies risks associated with single-source suppliers, long lead times, and limited visibility.

In response, countries are rethinking supply chain strategies with renewed emphasis on resilience, agility, and localisation. Tactics include diversifying supplier bases, investing in domestic manufacturing, adopting digital supply chain tools, and forming strategic partnerships to reduce exposure to external shocks.

War for Talent

Competition for highly skilled talent is intensifying across industries. As automation transforms traditional jobs and roles, and emerging technologies create entirely new ones, nations and industries are in an unprecedented race to attract, retain, and upskill individuals with advanced technical capabilities. Capabilities with AI, robotics, data science, etc. are in especially high demand, and the global supply of qualified talent is not keeping pace.

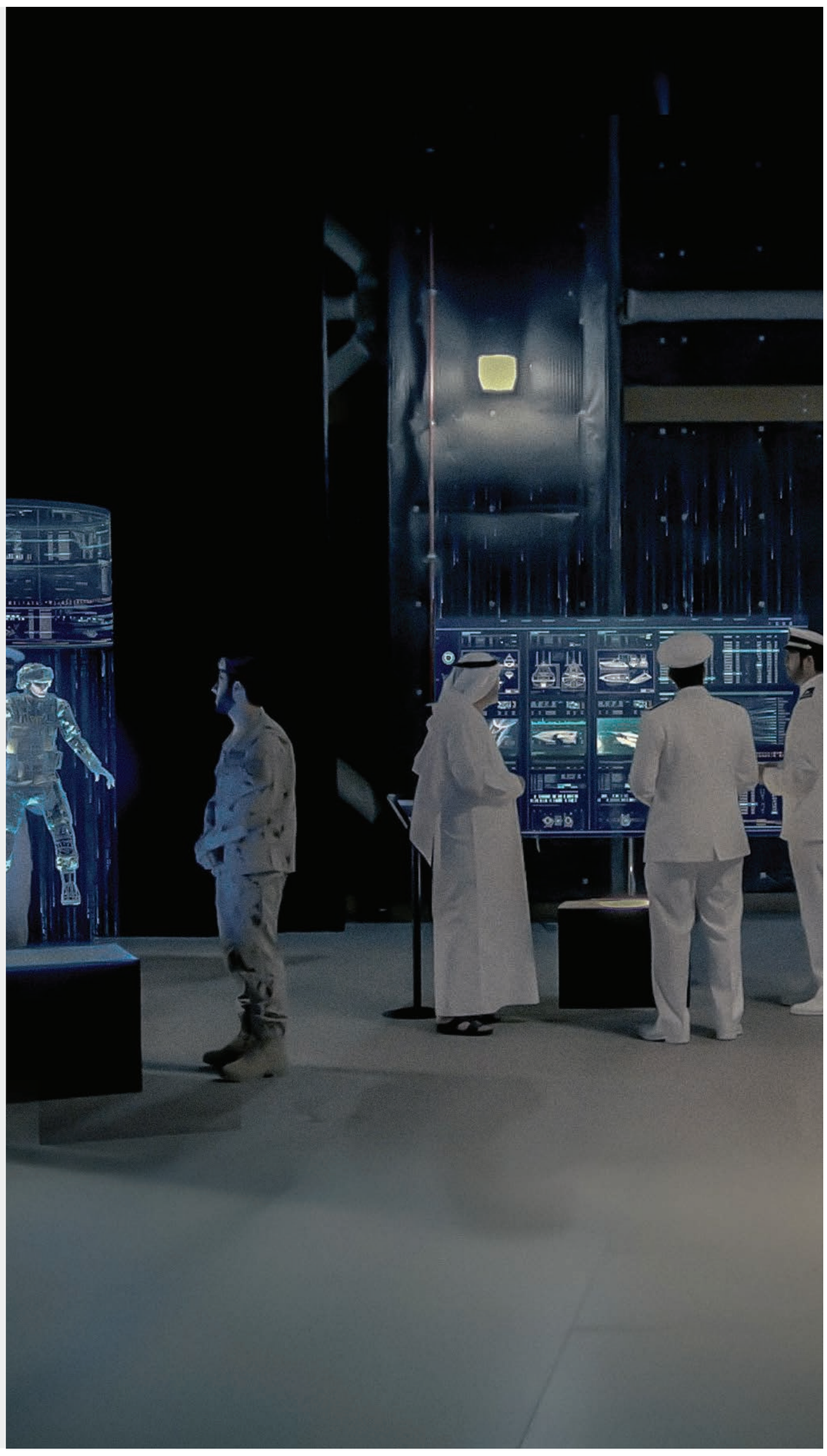
The concurrent rise of human-machine teaming and augmented intelligence is transforming the face of the workforce, requiring a blend of deep technical knowledge, adaptability, and digital fluency.

In this fast-shifting context, future success will hinge on the ability to build and sustain a workforce capable of operating at the intersection of innovation, complexity, and national ambition.

TREND 1:

TECHNOLOGY AND INNOVATION

Technology has always played a pivotal role reshaping the global spectrum of warfare, and redefining strategies, capabilities, and threats. This spectrum ranges from low-level operations with minimal capital intensity to high-level operations demanding large-scale resources. Across this range, technology and innovation is driving rapid advances in defence capabilities, spanning civilian-driven military innovation, precision warfare technologies, and integration of artificial intelligence in defence operations, as described below.

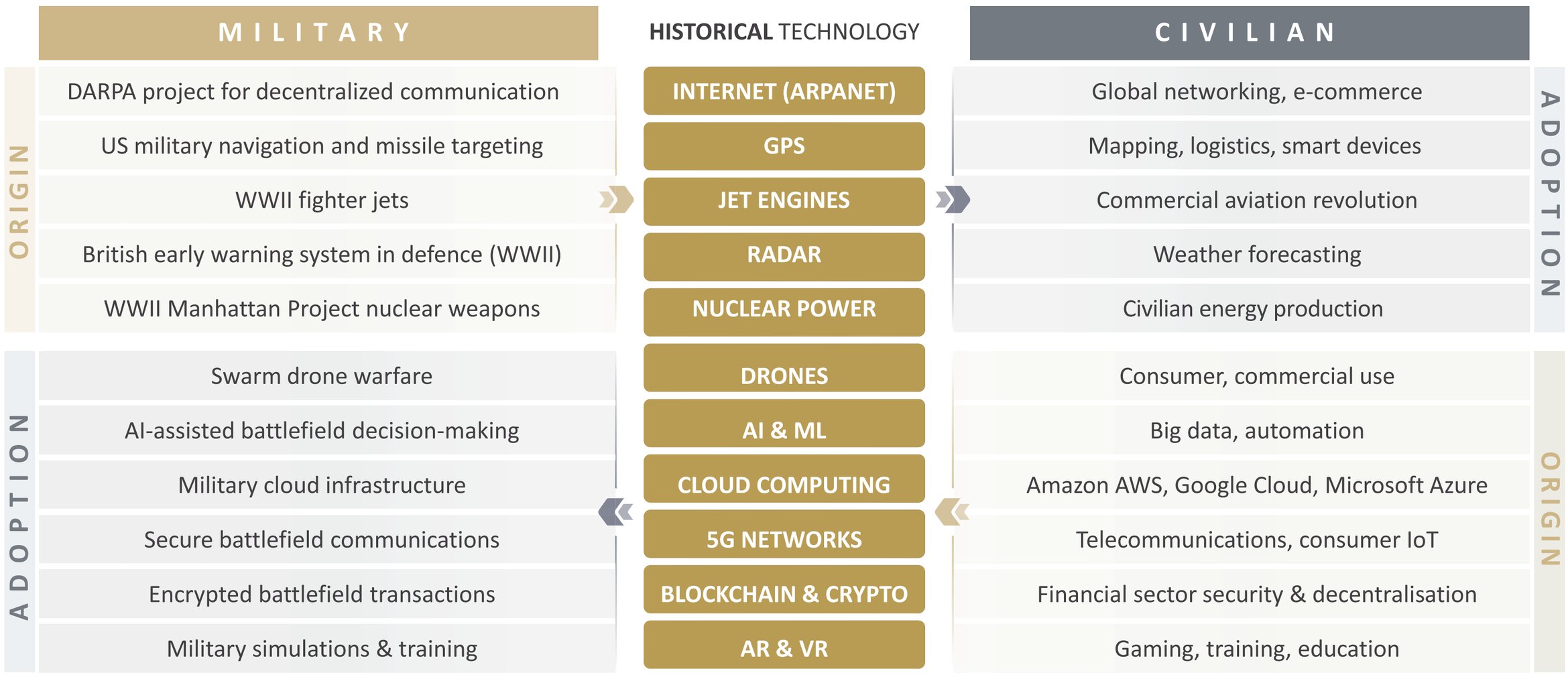


1. CIVILIAN INNOVATION IN MILITARY APPLICATIONS

For much of the 20th century, military R&D was the primary driver of global technological innovation. Breakthroughs such as radar, jet engines, the internet, GPS, and nuclear energy originated in defence laboratories and soon powered widespread civilian applications. Defence ministries and agencies drove the pace of technological advancement, with access to significant budget and long-term research timelines that commercial sectors could not match.

Over the past two decades, however, this dynamic has shifted fundamentally. Civilian innovation driven by the private sector, especially tech giants and fast-scaling startups, now outpaces military-led R&D. As illustrated in the figure on the next page, technologies such as AI, autonomous vehicles, drones, quantum computing, machine vision, and commercial space systems are being developed primarily for civilian or dual-use markets before military adaptation, making civilian tech central to the evolution of military capability.

Moreover, conventional models of long cycle, bespoke technology development are being disrupted. Defence firms can no longer rely solely on proprietary systems and defence-only R&D pipelines operating in isolated ecosystems as they are now competing and collaborating with agile, fast scaling commercial players. In many cases, defence companies must integrate external innovations to remain relevant, rather than build from scratch. This dynamic means a trade-off: while commercial firms can deliver innovation, many have never operated in classified, high-security, or export-controlled environments, adding significant complexity to promotion of compliance, security, and quality assurance.

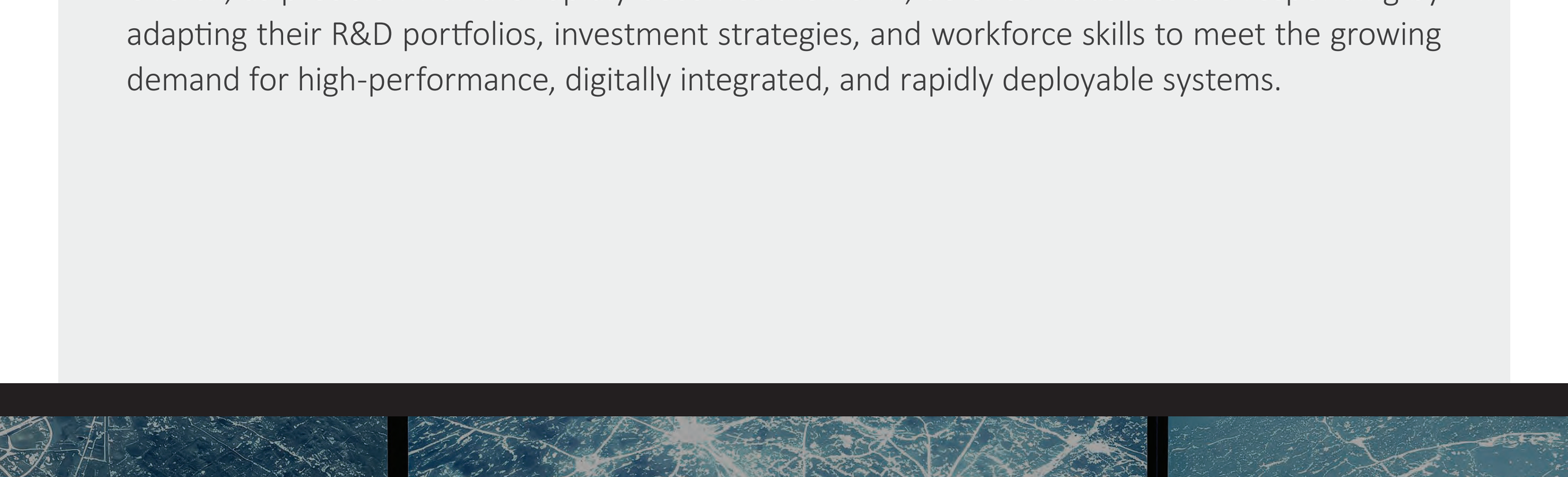


2. PRECISION WARFARE

Modern civilian applications of AI and geospatial technology enable unprecedented precision for targeting in both time and space. Advances in sensor technology, targeting systems, data fusion, and smart munitions can substantially minimise collateral damage.

These developments have reshaped expectations across the defence industrial base and emphasis is shifting toward highly specialised, digitally integrated systems that require close integration between hardware and software. As such, production strategies are evolving to support modularity, rapid iteration, and system-level compatibility. In parallel, the ability to secure and manage sensitive data streams is becoming key for operational success.

Overall, as precision warfare rapidly becomes the norm, defence industries are responding by adapting their R&D portfolios, investment strategies, and workforce skills to meet the growing demand for high-performance, digitally integrated, and rapidly deployable systems.



3. ARTIFICIAL INTELLIGENCE IN DEFENCE

Once considered an emerging technology, AI has become a foundational element of modern defence systems, fundamentally reshaping how capabilities are developed, deployed, and sustained. Global investments in AI continue to rise sharply and its projected market value of $1 trillion by 2031 reflects its anticipated centrality across all sectors including defence.

Increasingly, the competitive edge is represented not by the physical platform itself, but by the embedded AI algorithms and engines that drive autonomous behavior, enable adaptive targeting, and support realtime decision-making. This shift is changing how systems are designed, procured, and upgraded.

The rapid fast adoption of AI is also expanding the defence industry's traditional boundaries. Companies that focused solely on mechanical or aerospace systems are now expected to develop or integrate sophisticated AI capabilities. This is driving new demand for partnerships with tech firms, cloud providers, and data analytics specialists, blurring the lines between defence contractors and civilian technology providers.

This trend generates significant pressure on resources. AI development and deployment require massive computing resources, secure data environments, and increasingly energy-intensive processing power. These demands are beginning to strain traditional defence R&D and production models, most of which have not been optimised for the pace or scale of software-based innovation. For the defence industry and national industrial bases, matching AI ambitions with scalable, sovereign infrastructure is becoming a critical enabler of long-term capability development, requiring ecosystem-wide alignment around AI integration.

Figure: 1
TOTAL COPRPORATE INVESTMENT IN AI, WHICH HAVE GROWN SIGNIFICANTLY IN THE PAST DECADE

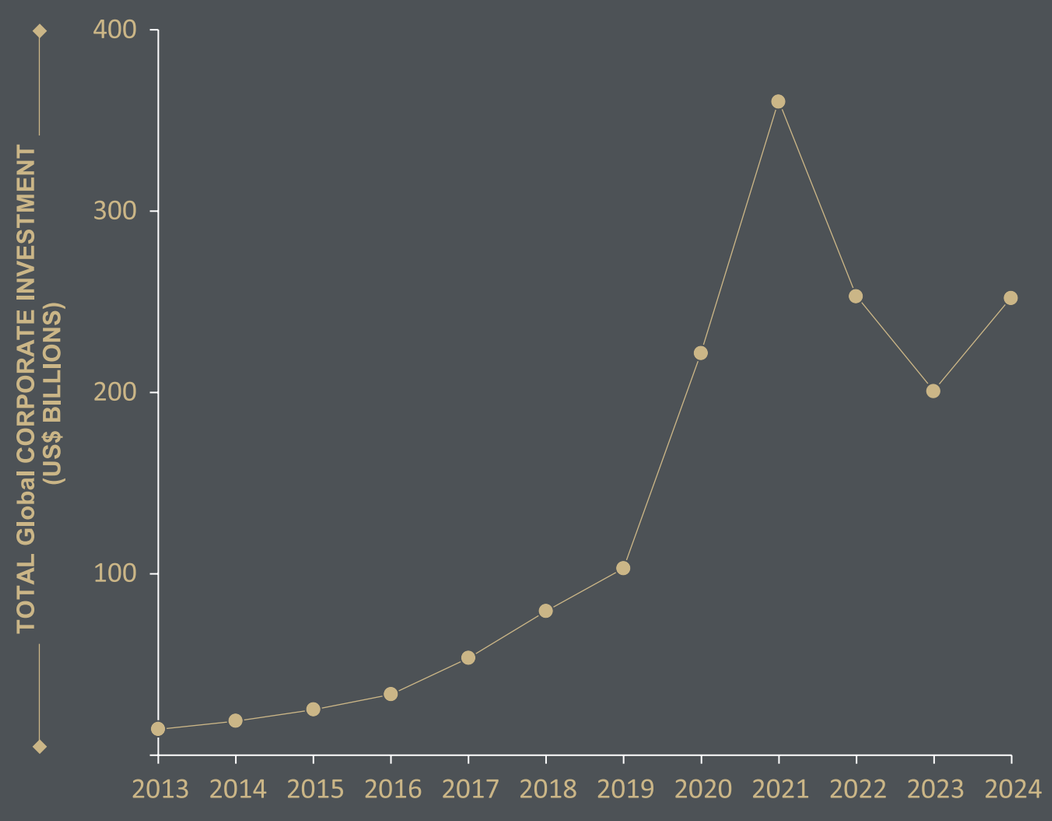
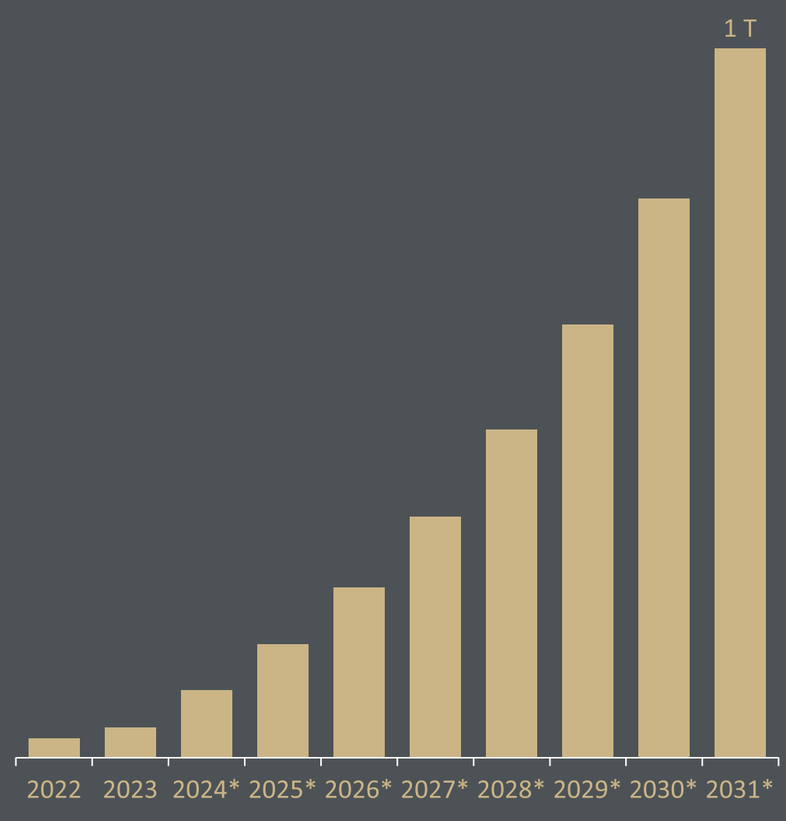


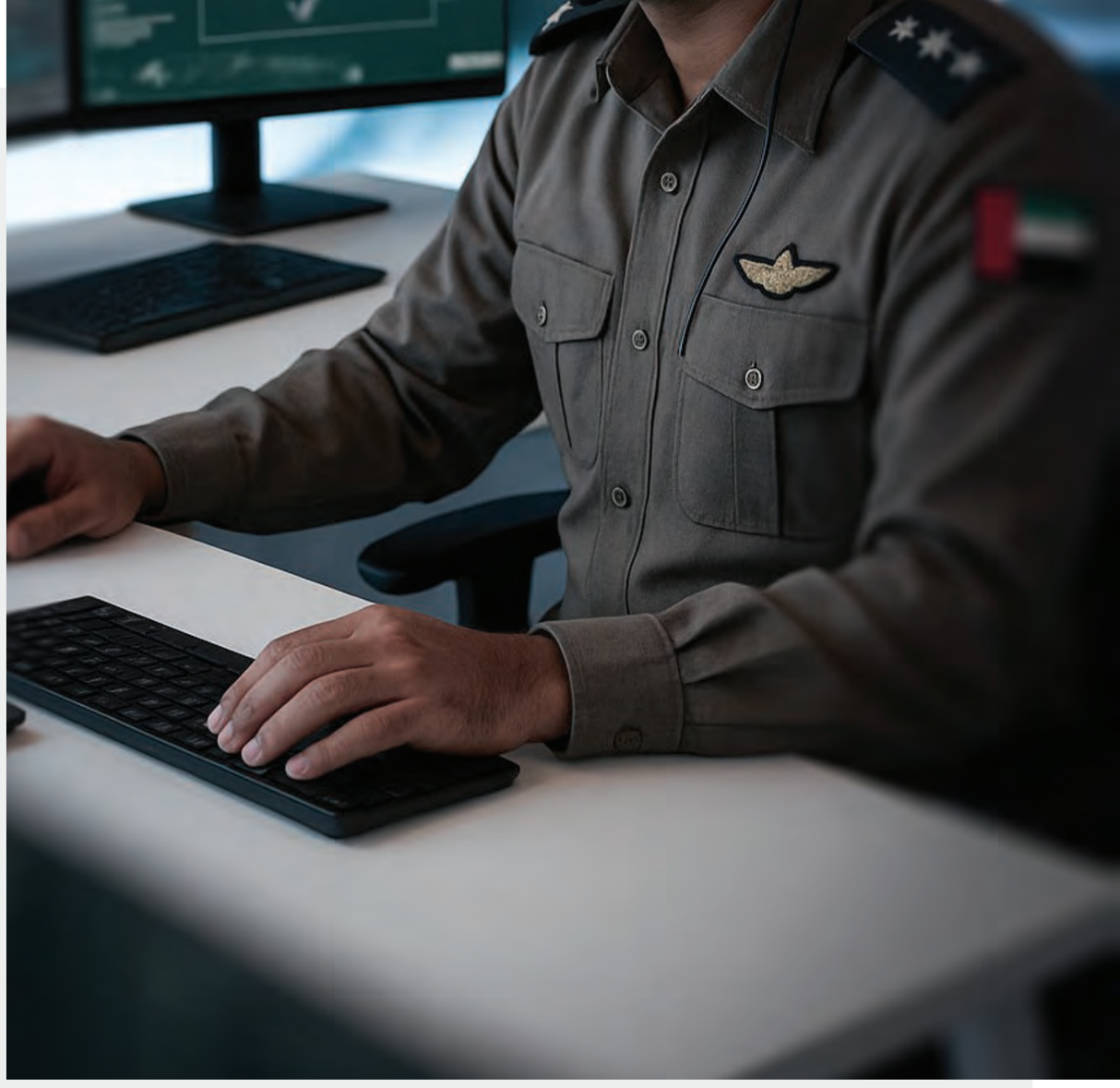
Figure: 2
ARTIFICIAL INTELLIGENCE (AI) MARKET SIZE WORLDWIDE UNTIL 2030 (US$)



TREND 2:

EVOLVING DOMAINS

As the definition of traditional defence domains broadens to include Cyber and Space, there is a need to understand how to not only drive the relevant synergies including these new domains, but also to position them as strategic differentiators for nations as a whole.

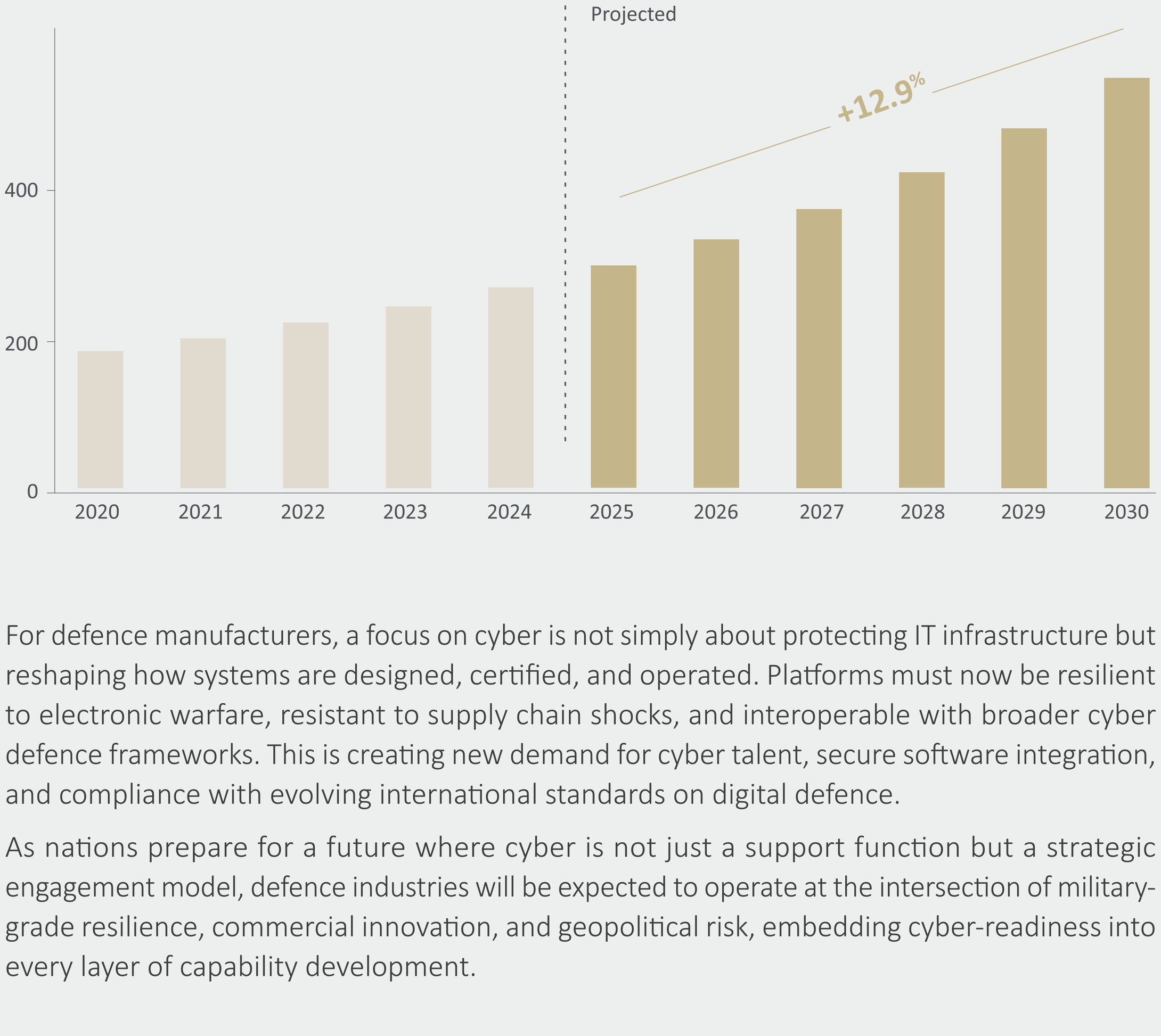


1. CYBER

Cyber has evolved rapidly into a pivotal warfighting domain, no longer in the background of conventional military operations but now central to national security and strategic deterrence as the lines between physical and digital battlefields blur. Strategic investments in cyber are rising sharply and are expected to grow almost 13% annually over the next five years. Governments and defence organisations are prioritising development of sovereign cyber tools, defensive architectures, and incident response capabilities, while also expanding partnerships with the private sector to access cutting-edge solutions, all this with the aim of gaining a strategic advantage.

Figure: 3
A CONTINUED GLOBAL INCREASE IN CYBERSECURITY SPENDING BY GOVERNMENTS AND COMPANIES IS EXPECTED

Global Cyber Security Market (US$ million) (2018 to 2030)



For defence manufacturers, a focus on cyber is not simply about protecting IT infrastructure but reshaping how systems are designed, certified, and operated. Platforms must now be resilient to electronic warfare, resistant to supply chain shocks, and interoperable with broader cyber defence frameworks. This is creating new demand for cyber talent, secure software integration, and compliance with evolving international standards on digital defence.

As nations prepare for a future where cyber is not just a support function but a strategic engagement model, defence industries will be expected to operate at the intersection of military-grade resilience, commercial innovation, and geopolitical risk, embedding cyber-readiness into every layer of capability development.

2. SPACE

Space is rapidly emerging as one of the most strategically consequential domains in modern defence. Once the domain of scientific exploration and basic communications, space has become central to military intelligence, operational coordination, and long-range precision targeting. The nations that control access to, and functionality within space will increasingly define the balance of power on Earth. In this new environment, space superiority is not just a matter of prestige, but a core element of national security, requiring sovereign capabilities and resilient infrastructure. As such, nations worldwide are increasing their investment in space based defence capabilities to drive strategic advantage and operational effectiveness

Advancements in launch systems, satellite miniaturisation, and propulsion technologies have dramatically reduced the cost and complexity of accessing space. The result is a proliferation of satellites, many operating in Low Earth Orbit (LEO); they have enhanced real-time situational awareness, expanded global communications reach, and enabled persistent monitoring of terrestrial and space-based activities. Concurrently, the satellites have increased space debris and signal congestion, and created new risks around orbital security, interference, and kinetic and cyber-based satellite threats.

Technological innovation is also reshaping the design of space systems. Miniaturisation of hardware, has enabled smaller, lighter platforms to deliver increasingly sophisticated functionality. Meanwhile, the emergence of proliferated constellations, comprising distributed satellite systems, enhances resilience against kinetic attacks. Technologies like beamforming and optical communication are also expanding battlefield connectivity and tactical coordination in environments where this wasn't previously possible.

Going forward, the ability to develop or participate in resilient, space-based capabilities, whether for surveillance, secure communications, or navigation, will be a key determinant of technological competitiveness. These provide the UAE with the opportunity to accelerate defence industrialisation, strategic autonomy, global influence, and not to mention the need for Intelligence Surveillance and Reconnaissance (ISR) sovereignty. The UAE is the regional leader in the Space industry and there is an opportunity to grow into a key global leader by accelerating applications in AI and Data analytics, growing downstream industries, and leveraging a whole of ecosystem approach.

Strategic prioritisation of niche areas within space, aligned to national defence needs and industrial capabilities, can help ensure and accelerate defence readiness. Yet the breadth, cost, and complexity of potential applications make it essential for nations to carefully prioritise areas of engagement; that will enable more effective sequencing and integration of space initiatives into broader defence and technology strategies.

TREND 3:

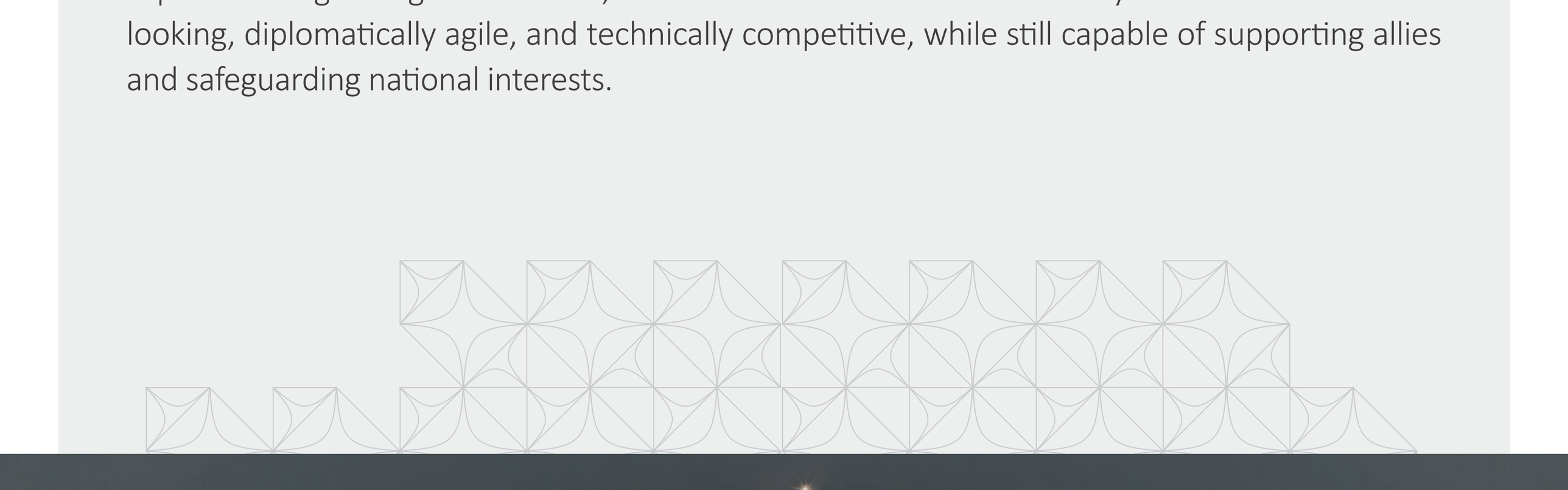
GEOPOLITICAL FACTORS

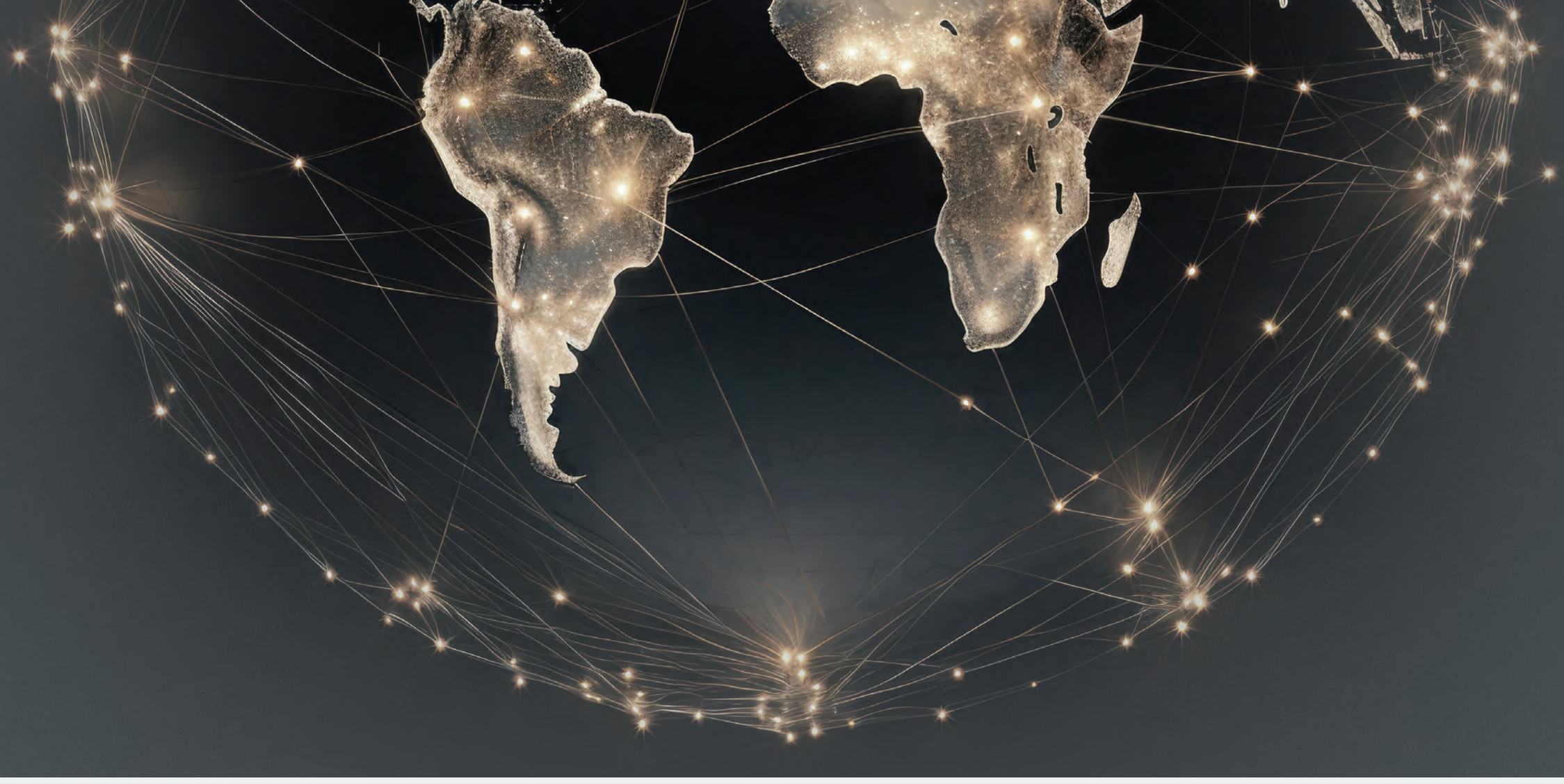
The global geopolitical landscape is undergoing structural realignment, driven by a steady shift to a multipolar structure through the rise of regional powers such as China and India, a recalibrated strategic position by the United States, and a growing fragmentation across traditional alliances. For the UAE, a nation defined by strategic and unique neutral positioning, these shifts present both challenges and potential opportunities. The UAE is an active player in the geopolitical scene and can further strengthen its positioning as a global partner through a suite of bilateral and multilateral engagements.

The UAE has established a uniquely neutral geopolitical model, one that enables diversified independent partnerships and impactful influence. Our strategic engagements span across the world from the United States, France, Türkiye, and all the way to key Asian markets, and are supported by our role as a convening hub for dialogue and defence diplomacy through platforms like IDEX, NAVDEX, and UMEX. This model has enabled the UAE to maintain deep cooperation with major global powers while safeguarding sovereign decision-making and preserving strategic autonomy.

As geopolitical competition and complexity expand, the UAE's ability to align its defence industry with its geopolitical neutrality will become a foundation of its long-term national resilience. Today's power dynamics are not shaped solely by military capability itself, but by the ability to develop, produce, and export the defence technologies that underpin sovereignty and alliances. In this environment, national defence industries are becoming as crucial to foreign policy as embassies and summits.

These changes are influencing the conceptualisation of national security and, by extension, the structure and support of defence industries. As competition among major powers intensifies and regional tensions rise, the strategic imperative for countries to build resilient, sovereign defence capabilities is growing. For the UAE, this translates into a defence industry that must be outward-looking, diplomatically agile, and technically competitive, while still capable of supporting allies and safeguarding national interests.





Driven by both geopolitical tensions and realignments, many countries are considering carefully their approach to industrial self reliance. Defence exporters face growing uncertainty around market access, while import dependent nations are reassessing long-term procurement strategies. In response, there is a visible pivot toward localising production, securing critical inputs, and diversifying supply relationships, shifts that directly impact investment flows, partnership structures, and risk assessments across defence.

In parallel, defence diplomacy is becoming more targeted. Rather than relying solely on broad multilateral forums, many nations (including the UAE) are forming focused bilateral or trilateral arrangements to co-develop platforms, share technology, and synchronise defence procurement. These emerging formats reflect a move toward greater agility in responding to shared threats and interests and place pressure on defence industries to align with evolving partnership models and interoperability standards.

As geopolitical dynamics continue to evolve, the ability of the defence industry to remain flexible, competitive, and aligned with national priorities will be a defining factor in shaping the UAE's strategic influence, industrial resilience, and global positioning. In this context, our defence industrial policy is more than economic, as it is a vector of national positioning, a tool of calibrated sovereignty, and a means of building resilience amid increasingly complex global alignments.

TREND 4:

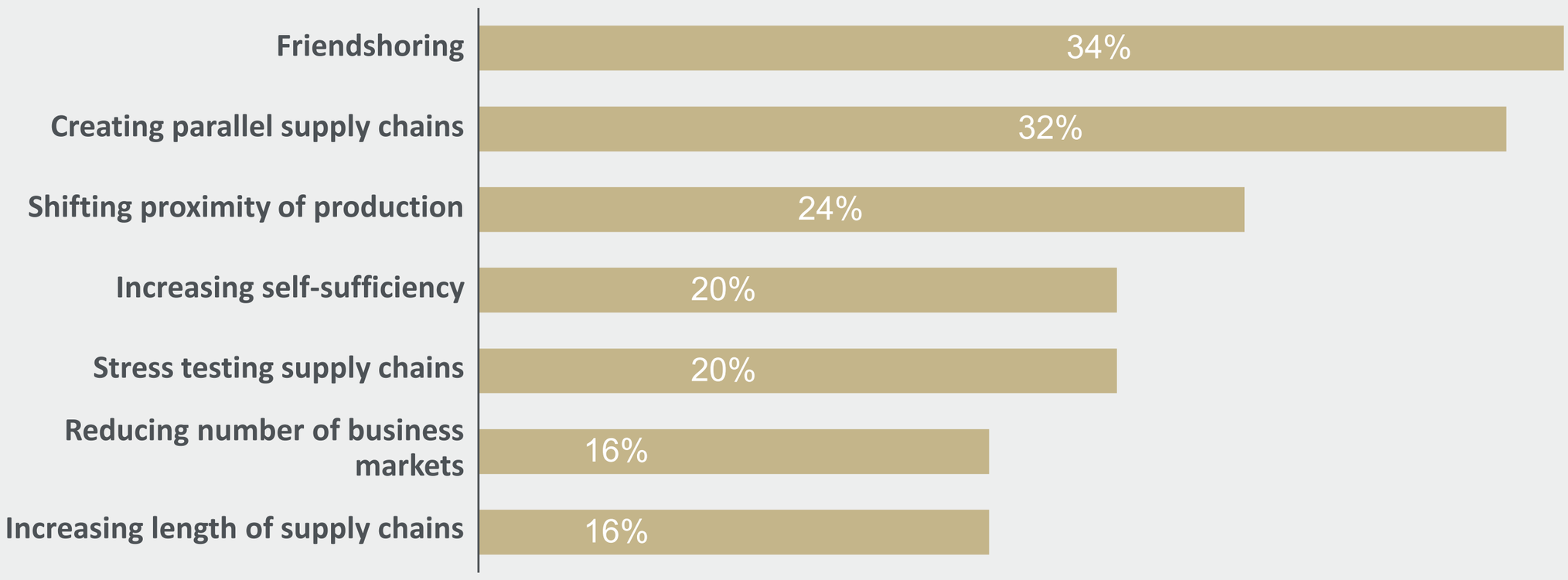
SUPPLY CHAIN

Global trade disruptions over the past decade have exposed significant vulnerabilities in defence supply chains, revealing the extent to which even advanced military programmes rely on multi-tiered global networks. As platforms grow more sophisticated, integrating cutting-edge electronics, sensors, and materials sourced from specialised suppliers, so, too, has the web of dependencies that underpin them.

Figure: 4

Geopolitical events are having a significant influence on supply chains...

Impact of geopolitical events on trade and supply-chain strategies (Percentage of respondents)



Countries now are increasingly focused on making their supply chains more robust and reducing single-region dependency

Many of these defence technology systems rely on precision-engineered sub-components that are not only sourced internationally but often concentrated in single regions, creating potential failure points related to geopolitical tensions, sanctions, export controls, and regulatory shifts. For the UAE, regulatory frameworks such as the Missile Technology Control Regime (MTCR) and International Traffic in Arms Regulations (ITAR) continue to pose significant constraints to the import, integration, and localisation of advanced defence technologies. Though these regimes are essential to international non-proliferation, they often restrict access to strategic systems such as Unmanned Aerial Vehicles (UAV), precision-guided munitions, and secure communications infrastructure.

Despite the UAE's longstanding partnerships with key Western nations, such limitations have underscored the need to navigate such export restrictions with independent architectures, co-development models with IP parity, and the diversification of sourcing toward more agile supply chains. This is shaping our procurement cycles, R&D priorities, design strategies, and platform architecture to be more resilient.

Indeed, modern defence supply chains are no longer just logistical frameworks but rather dynamic, high-risk ecosystems defined by complexity, specialisation, and time sensitivity. With thousands of components moving through fragmented supplier networks, alongside growing reliance on third-party logistics providers, control and visibility are becoming increasingly difficult to maintain.

In parallel, the pressure is mounting to deliver systems faster, at lower cost, and with greater transparency. The expectation of high service levels, moreover, is coupled with tightening regulations on carbon emissions, ethical sourcing, and export compliance, making the operating environment even more demanding. Efforts to build buffer inventories for resilience face the obsolescence-related risk that a component stockpiled today may not meet the requirements of a platform upgrade tomorrow in fast-evolving technology sectors.

Meanwhile, governments and defence firms globally are scaling production capacity, creating more secure industrial zones, and investing in domestic manufacturing for mission-critical capabilities. Defence entities are also promoting supplier diversification and “friendshoring” strategies, with parallel efforts including digitalising supply chain oversight through AI-driven analytics, simulation tools, and end-to-end traceability platforms that enable early detection of risk and more agile decision-making.

Accordingly, the UAE is accelerating efforts to de-risk its defence supply chains by investing in dual-use technologies, expanding sovereign design and manufacturing capabilities, and forming alternative industrial partnerships, particularly in Asia, Latin America, and neutral European markets. These moves are not merely tactical but represent a strategic response to ensure uninterrupted development, operational readiness, and long-term autonomy.

This marks the beginning of a new era in defence supply chain strategy, where resilience is not simply a risk management exercise, but a pillar of strategic readiness and industrial competitiveness. Countries are moving to embed supply chain resilience into defence procurement frameworks, weighing long-term reliability and sovereign control alongside traditional factors like price and performance. Public-private collaboration is also intensifying, with governments supporting co-investment in local suppliers, national stockpiles, and secure industrial clusters. In the UAE, the role of Tawazun Council is instrumental in driving this change as we accelerate the move from a reactive tactical procurement approach to a more proactive strategic acquisition approach; while ensuring adequate supply chain risk assessment and management, based on analytics, foresight, and scenario planning.

As supply chain dynamics continue to evolve, the defence industry’s ability to manage complexity, diversify risk, and localise production will be central to sustaining national capability and advantage.

TREND 5:

WAR FOR TALENT

Amid accelerating global change, talent has emerged as a key determinant of how countries will shape the future of their defence industries. The next decade will see workforce strategy take on greater importance, as nations compete not only for market share or technological superiority but for the skilled individuals who can drive innovation, implement advanced systems, and maintain operational readiness. The rise of automation and AI, moreover, is redefining the division of labor across industries, creating new requirements for technical skillsets and fundamentally altering the role of human capital.

According to World Economic Forum estimates, automation will shift 15% of global labor output in the next five years, with up to 82% of tasks expected to be fully automated and only 18% augmented by human input. This transformation will affect sectors unevenly, but defence-adjacent fields such as advanced manufacturing, cybersecurity, and government services are expected to retain a higher degree of human-machine teaming, where complex systems still require human oversight, ethical judgment, and adaptive problem-solving.

Figure: 5
Expected change in proportion of human-performed tasks to automation, 2025-2030

Expected shift in human output from 2025 to 2030 will change by 15%, attributing to 82% in fully automated tasks

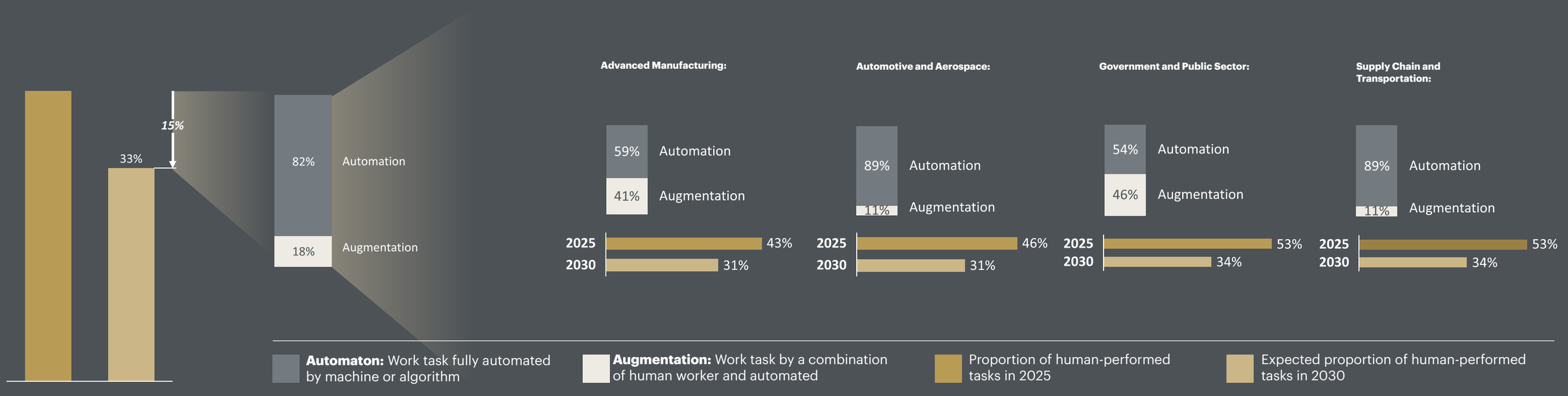


Figure: 6
Shift in the change of human share of work task delivery varies by industry, 2025-2030

At the heart of this transformation lies a growing need for advanced technological skillsets. The global shortage of STEM graduates, particularly in AI and robotics, is fast becoming a major constraint on industrial growth and innovation. Defence industries must compete directly with commercial tech sectors for the same limited pool of talent, often without the flexibility or speed to match the latter's hiring models or compensation structures. The rise of dual-use technologies and complex systems integration, moreover, require engineers, data scientists, software developers, and systems architects capable of operating across multiple domains.

Figure: 7

Digital transformation & emerging advanced technologies is in high demand for stem graduates

DIGITAL TRANSFORMATION

Top 3 technology trends in digital transformation:

- **Advanced Technologies**
- **Robotics & Automation**
- **Energy Generation**

ADVANCED TECHNOLOGIES IN DEFENCE

Industry 4.0 and technological advancement in defence material is necessitating specialized and sophisticated skillset

Figure: 8

Demand for AI, cybersecurity, and advanced manufacturing skills is outpacing supply

Demand for AI, cybersecurity, and advanced manufacturing skills is outpacing supply

Of firms struggle to find talent

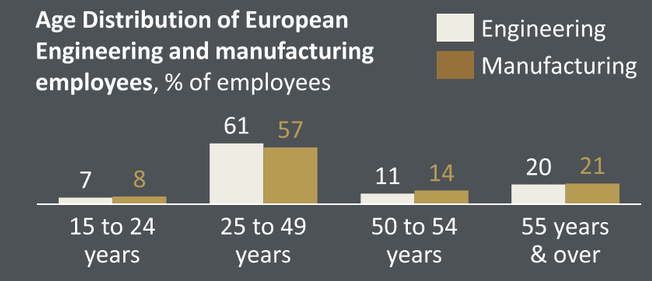
Lack basic digital skills

Figure: 9

Aging workforce is creating a gap in experience and expertise

AGING WORKFORCE IS CREATING A GAP IN EXPERIENCE AND EXPERTISE

Age Distribution of European Engineering and manufacturing employees, % of employees



GLOBAL COMPETITION FOR STEM FROM ROLES IN CIVILIAN SECTOR

- **Higher compensation and faster career growth**
- **Global mobility with minimal restrictions**
- **More innovative & agile**

As defence technologies become more software-defined and intelligence-driven, the gap between technological potential and workforce capability will likely widen. Closing this gap requires not only strategic investments in STEM education and defence-oriented technical training, but also new models of workforce development that embrace cross-sector collaboration, international partnerships, and agile career pathways. This shift requires seeing workforce readiness as a strategic enabler of national resilience, defence innovation, and industrial competitiveness, rather than a traditional support function.

Yet while advanced technologies are quickly reshaping workforce requirements, it remains critical not to overlook the enduring importance of traditional defence industry skillsets. Core disciplines such as mechanical engineering, materials science, systems integration, manufacturing operations, and quality assurance continue to underpin defence production and sustainment. These capabilities are especially vital in platform assembly, ordnance development, and testing and evaluation, where physical reliability, precision tolerances, and adherence to military standards remain non-negotiable.

Consequently, as automation expands and the defence sector evolves, the challenge is not to replace these foundational skills, but to integrate and enable them more effectively with digital tools and next generation technologies. A future-ready defence workforce must therefore be both technologically literate and grounded in the practical realities of defence engineering, manufacturing, and sustainment.

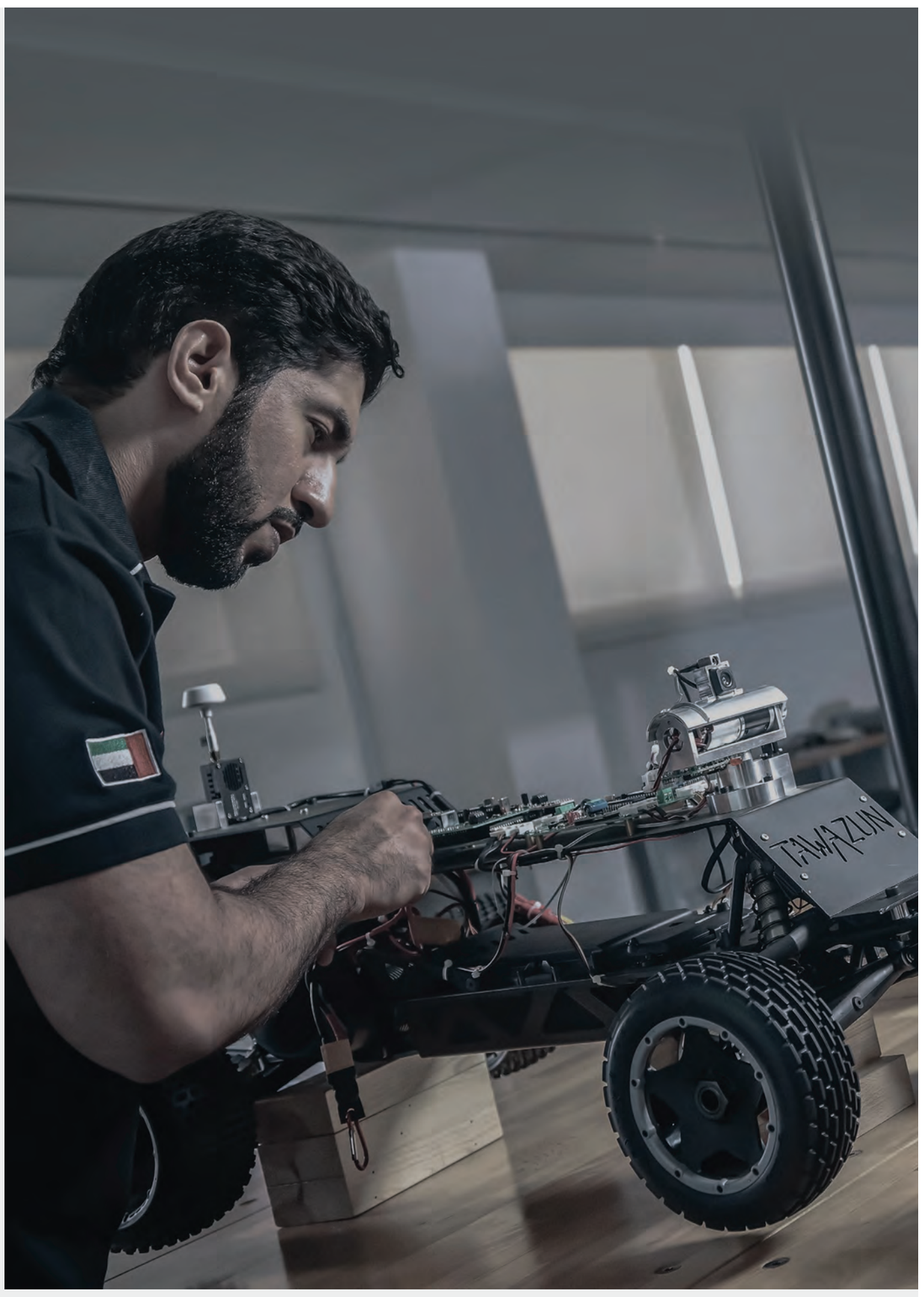
03

Our Journey So Far

4.1 Competitive Business Environment
4.2 Strategic Partnerships
4.3 Workforce for the Future
4.4 World-class Infrastructure
4.5 Sustainable funding

OUR JOURNEY SO FAR

As a nation, we have made significant progress over the last three decades; we have strengthened our position as a global hub for trade and commerce, whilst strategically enhancing and evolving key industries to propel economic development and to bolster the resilience of our nation. Our momentum in driving the defence transformation programme has played a pivotal role in both strengthening our military capability and generating positive externalities that acted as force multipliers for other industries and broader economic growth. Our balanced approach in engaging global partners, and our geopolitical neutrality, positions the UAE as a model for sustainable, innovation-led national development.



We have come a long way since our first endeavors to develop a defence industry in the 1990s through the creation of Abu Dhabi Ship Building (ADSB) and the formation of UAE Offsets Group (now Tawazun Council). In 2015, Calidus was established to develop advanced defence products and capabilities in the UAE and in 2019, we launched EDGE, a conglomerate with 35+ subsidiaries with a bold vision to drive the development of sovereign capabilities for global export. Today, the UAE is ranked among the top 40 global defence exporters[1], a clear demonstration of how far we have advanced in a short time.

Together, Calidus and EDGE have spearheaded a new era of localisation in the UAE's defence sector. Their efforts have had far reaching positive implications for economic diversification, job creation, innovation, and technological advancements across defence and other related industries; transforming us from a modest baseline of domestic capability to a more self-reliant, technologically advanced defence industrial base. This transition from import-dependence to a growing export footprint embodies the vision of building a sovereign, competitive, and future-focused defence ecosystem.

As we look back to the past to seek inspiration for the future, we see five critical measures that have contributed most to our rapid and accelerated development, and underpinned the success story of our defence industry:

- **Competitive Business Environment**
- **Strategic partnerships**
- **Workforce for the future**
- **World-class infrastructure**
- **Sustainable funding**

Together, these factors have acted as a force-multiplier and served as the foundation for a thriving, future-ready sector, as reflected in our upward trajectory in international rankings. On the IMD Global Competitiveness Index, we climbed from 12th in 2022 to 7th in 2024[2], demonstrating strong progress in institutional capability, economic performance, and business efficiency. Meanwhile, our consistent performance in the Global Innovation Index, where we ranked in the top 35 globally since 2020[3], highlights the steady advancement of our national innovation ecosystem.

These achievements provide a springboard for realising our ambitions of innovation, leadership and national resilience, and provide indicators that underscore the effectiveness of our strategic approach and support our ambition to become a global leader in more industries.

By looking at each of these measures individually, we see clear evidence of the elements that enabled our success to date, and why we are fully equipped to steer future innovation and thinking for the global defence industry.

1.COMPETITIVE BUSINESS ENVIRONMENT

As a nation, we are well positioned to continue to strengthen and promote ease of doing business in defence via a combination of regulatory reforms, strategic investments, and international partnerships. We have made significant progress establishing institutions and frameworks that balance national security imperatives with industrial growth objectives, and creating conditions that encourage innovation, facilitate FDIs, and support export compliance.

Key regulatory bodies such as Tawazun Council and the Executive Office for Control and Non-Proliferation have been established to effectively orchestrate licensing, approvals, and security protocols, while concurrently reducing bureaucracy and obstacles that constrain local manufacturers and international partners. An example is the implementation of clearer guidelines for export controls, dual-use technologies, and end-user certification.

Our push to implement increased transparency and simplicity of process has helped our companies align with international standards, thereby facilitating the nation's competitiveness in highly regulated global markets where trust, neutrality and confidence are paramount. This regulatory strength will be a pillar of our ability to position the UAE as a trusted partner in the global defence innovation ecosystem.

2. STRATEGIC PARTNERSHIPS

Our streamlined regulatory environment has acted as one of the key catalysts to form critical long-standing strategic partnerships with foreign defence contractors, thereby significantly mitigating the high risk of global isolation. These partnerships have been essential in fostering and fast-tracking technological advancement, accessing global best practices, localising industrial and human capabilities, and closing critical capability gaps, thus strengthening the UAE defence industry's global competitiveness.

The partnership between EDGE's Learning and Innovation Factory (LIF) and Turkey's MEXT is one of the many examples demonstrating the spirit of collaboration in accelerating technological advancement, joint research initiatives, knowledge exchange, and development of innovative solutions that address both current and future defence-related challenges. Similarly, Khalifa University and Lockheed Martin have partnered to advance UAE-driven technology development through creation of the Center for Innovation and Security Solutions (CISS), a pioneering hub of research, training, and technological leadership, supporting the UAE's strategic goals in defence, aerospace, and security.

AGREEMENTS OBJECTIVES

Khalifa university and Lockheed Martin

LOCKHEED MARTIN

جامعة خليفة
Khalifa University

EDGE and Adani Defence and Aerospace

EDGE

adani

FOCUS AREAS OF DEVELOPMENT

- MACHINE INTELLIGENCE
- AUTONOMY
- MICRO ELECTRONICS
- PLATFORMS AND SYSTEMS
- STRUCTURAL AND THERMAL MATERIALS
- AIR VEHICLE RESEARCH
- MISSILES AND WEAPONS
- ELECTRONIC WARFARE AND CYBER TECHNOLOGIES

3. WORKFORCE FOR THE FUTURE

As we see globally and in the UAE, advanced technologies (AI, autonomous systems, cyber defence, and quantum technologies) are quickly reshaping the future of the workforce, and this is coupled with an ever- increasing push to build the workforce from within, especially in defence and security.

To proactively enable this transformation, we are aligning our academic programmes with the emerging needs of the defence sector. Khalifa University, Mohamed bin Zayed University of Artificial Intelligence (MBZUAI), UAE University (UAEU), Abu Dhabi Polytechnic, and Rabdan Academy offer education programmes across many future-critical fields, including aerospace, materials engineering, and cyber resilience. These strategic efforts are laying the foundation to build the talent pool for tomorrow, a workforce capable of defining and mastering cutting-edge defence technology.

Meanwhile, our industry partners are supporting us in this vision by providing hands-on practical training opportunities. EDGE's Learning and Innovation Factory (LIF), is a prime illustration in developing skills in high-priority areas of AI, cybersecurity, autonomous systems, and systems integration. With education and training working in a virtuous cycle, we are confident of developing the right workforce for the future.

4. WORLD-CLASS INFRASTRUCTURE

Building fit-for-purpose modern infrastructure is becoming one of the most critical challenges facing the global defence industry today, and it is no different here in the UAE. Defence manufacturing and development are typically more complex and sensitive than most commercial equivalents, thereby demanding appropriate physical and cyber security to maintain a competitive edge. Specialised facilities and equipment for testing, evaluation, and integration are becoming key to satisfy the unique operational, regulatory, and security requirements of defence.

To navigate the complexities of these unique requirements, nations globally are building industrial clusters. This is facilitating closer collaboration between Original Equipment Manufacturer (OEMs), R&D centers, government entities, and the end-users. They support faster innovation cycles and more effective system integration, both of which are necessary to support national competitiveness in a highly regulated global export market.

Built on the same fundamentals, the UAE has already started to develop its own defence industrial clusters in Abu Dhabi, Al Ain and Al Dhafra. Tawazun Industrial Park (TIP) is a flagship industrial part providing a nucleus for defence, aerospace, and high-tech manufacturing. TIP offers research, development, and production under one roof to defence and dual-use industries, including advanced manufacturing capabilities, access to secure facilities, streamlined regulatory processes, bespoke infrastructure, shared services, and proximity to government stakeholders and end users.

The hub's ability to foster cross-border collaboration, facilitate technology transfer, and enhance supply chain localisation has attracted several "landed companies" already benefiting from its integrated ecosystem. TIP's centralised model promotes operational efficiency and supports end-to-end value chain development. It also plays a pivotal role in broader economic diversification efforts by generating skilled employment and encouraging local production, leading to cascaded positive externalities on adjacent sectors.

TIP Overview

4 KM2
Land area surrounding a dedicated intl. landing strip

41 current Tenants	**2,500** Current Residents	**7,511** Employees	**22.61** KM2 Total Land Area

COMPANIES INVOLVED

L3HARRIS · LAHAB DEFENCE SYSTEMS · CARACAL · AL TARIQ · EPI · MILANION TECHNOLOGIES · RESOURCE INDUSTRIES · Together ahead. RUAG · Raytheon · EMIRATES TRAINING TECHNOLOGY · ROCKFORD XELLERIX · ARCA GROUP · SAAB TECHNOLOGIES · TII Technology Innovation Institute · EOS · IGG INTERNATIONAL GOLDEN GROUP

COMPANIES INVOLVED

- Small Arms
- Ammunition
- Pyrotechnics
- Electronics
- Radar Systems
- Land Systems
- Space
- Aviation
- Oil & Gas
- Precision Manufacturing

5. SUSTAINABLE FUNDING

As we have witnessed throughout history, timely and sustained access to capital is one of the fundamental enablers for any industry, especially for defence which is CAPEX-intensive. Yet defence manufacturers typically face greater financing hurdles than commercial counterparts due to long development cycles, strict export controls, and end-user and political sensitivity. Higher regulatory scrutiny adds further complexity, frequently inhibiting financial investment from the usual sources.

Bridging this gap, Tawazun Council is playing a key facilitative role in not only enabling diverse funding products and channels, but connecting the applicant to the appropriate financing institution, and will continue to act as a force multiplier in unlocking funding for the defence sector in UAE.

This is coupled with dedicated financial institutions such as the Strategic Development Fund (SDF) and Emirates Development Bank (EDB) offering specialised financial solutions for defence and ancillary industries such as autonomous systems, aerospace, advance mobility, robotics, etc.

With these key enablers now forming a solid foundation for defence industrial reform, it is time to mark the new phase in our journey, one defined by large but realistic ambitions to build national champions, accelerate innovation and R&D, and build a globally competitive defence industrial sector.

Each milestone brings us closer to our goal of ensuring long-term security and economic prosperity and serving our ambition to lead boldly in the industries of tomorrow.

05
Our Way Forward

OUR WAY FORWARD

Building upon the foundations meticulously laid over the past three decades, the **UAE Defence Industry Strategic Foresight document** charts a decisive course for the future, establishing the strategic steppingstone toward the comprehensive **National Defence Industrial Strategy (NDIS)**. It defines how we will shape the next chapter of our industrial evolution, grounded in our unique national strengths and propelled by a clear, enduring ambition to lead on the regional and global stage.

This ambition is inspired by the enduring vision of His Highness Sheikh Mohamed bin Zayed Al Nahyan, President of the United Arab Emirates, who stated:

“Human beings are the foundation and the center of any genuine endeavor to achieve progress, and innovation is the path to finding effective solutions to critical challenges”

Guided by this philosophy, our approach moves beyond conventional planning; it reflects an unwavering commitment to **actively building the future,** powered by a culture of innovation, strategic foresight, and the empowerment of our people. In doing so, we are not only preparing for the challenges ahead, we are shaping the opportunities that will define the next era of national and industrial resilience.

This National Defence Industry Strategic Foresight document is anchored in **six foundational principles** that serve as strategic compasses, ensuring that our journey remains aligned with the UAE’s broader aspirations for sovereignty, sustainability, and global competitiveness. These principles establish the framework through which we will translate ambition into action:

1. Whole-of-Ecosystem Approach

Integrating government, industry, academia, and investment to drive sovereign capability development.

2. Industry 4.0 and Dual-Use Innovation

Embedding advanced technologies and fostering dual-use applications to accelerate resilience and economic diversification.

3. Emerging Technologies

Leading the development and responsible deployment of frontier technologies, from AI and quantum to autonomous systems and advanced materials.

4. Resilient Supply Chains

Building sovereign, diversified, and digitally empowered supply networks to secure strategic autonomy.

5. Local Talent

Empowering Emirati talents and cultivating a new generation of innovators and leaders to shape the nation’s industrial future.

6. Sustainability

Embedding environmental stewardship and circularity at the core of defence industrial development to ensure long-term resilience and global leadership.

Together, these principles form the foundation of our way forward, ensuring that the UAE does not merely participate in the future but defines it, setting new benchmarks for innovation, resilience, and sustainable leadership in the defence sector.

1. WHOLE-OF-ECOSYSTEM APPROACH

The UAE has long embraced a whole-of- ecosystem approach as the foundation of its national development model. This approach is not theoretical: it is the lived experience through which the UAE has successfully built world-leading sectors in aviation, energy, logistics, infrastructure, and is now extending it decisively to defence and security. By mobilising government, industry, regulators, academia, and investment arms in a tightly coordinated effort, the UAE has consistently delivered outcomes at global standards, setting a model for sovereign capability development.

In aviation, the UAE has firmly established itself as a global leader. Airlines such as Emirates and Etihad Airways are consistently ranked among the world's top carriers[4], collectively operating a fleet exceeding 500 aircraft and serving over 400 destinations across six continents. This leadership is supported by a world-class airport network, with Dubai International Airport ranked as the second busiest globally by passenger traffic, and Zayed International Airport and Al Maktoum International Airport emerging as major international hubs. Collectively, UAE airports now have the capacity to handle more than 220 million passengers annually. This transformation was not achieved in isolation but was the product of sustained collaboration across regulatory agencies, operators, investors, educational and research institutions, and private sector innovators.

Similarly, in logistics and maritime trade, the UAE has emerged as the region's foremost transshipment and trade hub. Jebel Ali Port, consistently ranked among the world's ten busiest ports[5], is part of a broader, integrated port network that includes Zayed Port, Khalifa Port, and Fujairah Port, forming one of the world's most sophisticated port clusters. Together, these ports handle over 25 million TEUs annually and manage cargo volumes exceeding 100 million metric tons per year. The scale and connectivity of the UAE's maritime infrastructure reflect a modelof coordinated action among government regulators, port authorities, customs agencies, logistics providers, and global investors.

The development of Etihad Rail provides another compelling demonstration of the Whole-of-Ecosystem Approach in practice. As the UAE's first national freight and passenger railway network, Etihad Rail strategically links industrial zones, ports, and population centers across the Emirates. It is the result of seamless coordination between federal authorities, private investors, engineering firms, and international technology partners. Beyond enhancing domestic mobility, Etihad Rail amplifies the UAE's role as a logistics and trade multiplier across the broader Gulf region. Like the defence sector, railways are capital-intensive, highly regulated, and dependent on long-term national planning, and the UAE's success with Etihad Rail reinforces its ability to deliver complex, cross-sectoral projects to global standards while nurturing local capabilities.

In energy, the UAE has demonstrated world-leading leadership in building an ecosystem that spans traditional hydrocarbons, peaceful nuclear energy, and renewable resources. As a responsible energy producer, the UAE has deployed strategic initiatives such as ADNOC's expansion in sustainable hydrocarbon production and the commissioning of the Barakah Nuclear Energy Plant, the first of its kind in the Arab world. Moreover, the UAE has emerged as a pioneer in renewables through landmark projects like Masdar City and the Mohammed bin Rashid Al Maktoum Solar Park. Through this diversified and integrated ecosystem, the UAE is advancing its national energy strategy toward a balanced, secure, and sustainable future. Moving forward, the energy sector is set to lead the next phase of the energy transition, with the UAE committed to becoming a global hub for clean hydrogen, carbon capture technologies, and net-zero industrial ecosystems by 2050.

Today, this same integrated ecosystem model is being applied decisively to the defence and security sector. Just as aviation, logistics, and energy flourished through unified national efforts, the defence industry is being shaped by the convergence of government agencies such as the Ministry of Defence and Tawazun Council, industrial champions like EDGE, leading academic and research institutions, and national funding bodies. Together, they form a cohesive defence ecosystem focused on regulation, capability development, talent preparation, and innovation acceleration.

As we look toward 2030 and beyond, the UAE is not only building a sovereign defence industry, it is defining a model that is globally competitive, strategically resilient, technologically advanced, and distinctly Emirati. By embedding emerging technologies such as AI, autonomous systems, advanced materials, and green energy solutions across this ecosystem, the UAE is positioning itself to lead in next-generation defence capabilities. This foresight-driven approach ensures that the UAE will not merely participate in the future global defence economy, but it will shape it.

2. INDUSTRY 4.0 AND DUAL-USE INNOVATION

In the UAE, **Industry 4.0 is not an aspiration, it is a reality we are shaping daily**. AI, data-driven automation, and digital manufacturing are not future concepts here; they are foundational to how critical sectors operate today. Now, we are extending this momentum to the defence sector, positioning the UAE as a global pioneer at the convergence of defence manufacturing and advanced technology.

Our approach is inherently **dual-use by design.** Every investment in industrial innovation is calibrated to serve both defence and civilian applications, accelerating commercialisation, strengthening national resilience, and maximising economic value from every technological breakthrough. This model reinforces the UAE's strategic autonomy while expanding our influence in the global high-tech economy.

The fundamentals of our defence industrial strategy are rooted in **Industry 4.0 principles:** achieving the optimal balance between productivity, cost-efficiency, and uncompromising global quality standards. This is not a future goal, it is underway today. Entities such as **EDGE** are already integrating autonomous systems, additive manufacturing, and advanced robotics into their production lines. **MGX**, our national AI industrial champion, is advancing secure, sovereign AI systems, while **AI71**, launched by **G42** in partnership with the Abu Dhabi government, is pushing the frontiers of foundational AI models that underpin national security and resilience.

The UAE is not merely an adopter of these technologies, **we are shaping their future.** Through coordinated national programmes, we are embedding advanced technologies such as **AI, quantum computing, autonomous systems, digital twins, edge computing,** and **resilient cybersecurity architectures**

into defence and dual-use applications. From secure, resilient battlefield networks to predictive maintenance ecosystems and swarm-enabled autonomous platforms, technological ambition is being converted into operational advantage.

A landmark initiative exemplifying this commitment is the **Stargate UAE** project. Announced in May 2025, Stargate UAE is a strategic partnership between the UAE and leading global technology firms, including OpenAI, Oracle, Nvidia, Cisco, and SoftBank. The project entails the construction of a 1-gigawatt AI data center in Abu Dhabi, with an initial 200 megawatts expected to be operational by 2026.

This facility will be one of the largest AI data centers globally, providing the computational backbone necessary for advanced AI applications across various sectors, including defence, healthcare, energy, and transportation. The Stargate UAE initiative not only enhances the UAE's AI capabilities but also solidifies its position as a global hub for AI innovation and infrastructure.

We recognise that **dual-use innovation** is a strategic force multiplier for agile, innovation-driven nations. By fostering cross- sector applications spanning space systems, mobility solutions, AI, and next-generation materials, the UAE creates efficiencies, accelerates commercialisation cycles, and broadens its industrial base. This approach minimises duplication, leverages private sector dynamism, and enables scalable capabilities across military and civilian domains.

Our academic and commercial R&D ecosystem provides critical enablers. Institutions such as **Khalifa University** and the **Advanced Technology Research Council (ATRC)** are fostering cross-linkages between civilian and military innovation. Initiatives like

the Technology Innovation Institute (TII) and ASPIRE under ATRC are leading research in robotics, quantum sciences, and advanced materials with direct defence relevance, while MBZUAI is producing AI talent capable of operating at the nexus of national security and industrial innovation. **This dual-use ethos ensures that every dirham invested in innovation delivers compounded national returns,** reinforcing sovereign defence capabilities while enhancing the UAE's competitive edge in the global innovation economy.

The UAE's **national R&D ecosystem** is being recalibrated to support this transformation. **The Emirates Research and Development Council (ERDC)** serves as the strategic anchor, aligning research investments, regulatory frameworks, and innovation programmes with national priorities, including defence and dual-use technologies. As we accelerate the integration of AI, autonomous systems, advanced manufacturing, and space technologies into the defence sector, the ERDC plays a pivotal role in connecting government, academia, and industry into a single, unified innovation pipeline, ensuring that every breakthrough strengthens both national resilience and global competitiveness.

Looking ahead, the UAE will reinforce these efforts by **establishing regulatory sandboxes, fast-tracking digital infrastructure, and embedding secure-by-design standards across all defence and dual-use technologies.** Through these initiatives, the UAE will not only enhance the trust of the global defence economy in its systems and capabilities — **we will set new standards in how future defence ecosystems are built: with speed, precision, resilience, and unwavering strategic vision.**

3. EMERGING TECHNOLOGIES

Technology today is not merely shaping the future of warfare, it is redefining the future of nations. In the evolving strategic landscape, AI, robotics, autonomous systems, quantum computing, and advanced manufacturing have moved beyond research laboratories to become essential enablers of battlefield advantage and industrial competitiveness. The UAE recognises that leadership in emerging technologies is no longer optional; it is a sovereign imperative. Our ambition is not simply to adapt to this transformation but to lead it, positioning the UAE as a global catalyst for innovation, where technological capability fuels both national resilience and economic strength.

The UAE's leadership in this domain is the result of decades of deliberate investment and strategic foresight.

Ranked first in the region and seventh globally in the 2024 Government AI Readiness Index by Oxford Insights[6], the UAE's achievements reflect a deep-rooted national commitment to building a future-ready innovation ecosystem. Initiatives such as the National AI Strategy 2031 and the establishment of the Mohamed bin Zayed University of Artificial Intelligence (the world's first graduate-level AI university) demonstrate the UAE's intent to not only advance research and governance but also translate these efforts into tangible real-world applications. Today, these investments are delivering cutting-edge defence capabilities, ranging from AI-enabled threat detection and autonomous UAV navigation to predictive maintenance systems and intelligent manufacturing platforms, championed by entities such as EDGE and strengthened by an agile academic and research ecosystem.

The launch of the Stargate initiative in 2025 with OpenAI, Oracle, Nvidia, and Cisco to establish a 1-gigawatt AI-dedicated data center in Abu Dhabi, will not only help the UAE further reinforce its technological autonomy but also position itself as a central node in the future global AI economy.

Complementing this momentum is a deliberate national effort to foster a dynamic innovation ecosystem. Institutions such as Khalifa University, MBZUAI, and the Advanced Technology Research Council are leading research across robotics, quantum sciences, advanced materials, and secure autonomous systems, ensuring that breakthroughs are rapidly translated into operational defence and dual-use applications. Simultaneously, the UAE is cultivating a robust pipeline of SMEs and start-ups focused on frontier technologies, supported through access to regulatory sandboxes, prototyping environments, and structured co-development programmes. This approach ensures that innovation is nurtured domestically, scaled efficiently, and aligned with national security priorities.

At the core of the UAE's strategy is a commitment to value-driven innovation. Our vision extends beyond technological advancement; it is anchored in becoming a global reference point for responsible and ethical development. Security, governance, and trust are embedded at every layer, ensuring that emerging capabilities not only deliver strategic advantage but also uphold the highest standards of integrity and reflect the values that define us as a nation. Through this comprehensive and integrated approach, the UAE is not merely participating in the future, it is institutionalising innovation as a sovereign capability and shaping the frontier of global technological progress with precision, responsibility, and enduring vision.

4. RESILIENT SUPPLY CHAINS

Resilient supply chains form a cornerstone of the United Arab Emirates' vision for a sovereign, competitive, and future-ready defence industry. Positioned at the crossroads of global trade, the UAE has long leveraged its geographical advantage to become a premier logistics hub; yet, this strategic position also exposes the nation to the vulnerabilities of global supply chain disruptions. Recent crises, from the COVID-19 pandemic to shifting geopolitical dynamics, have underscored the urgency of embedding resilience into every layer of our industrial value chain. In defence, where operational readiness and strategic autonomy are paramount, resilience is not a preference, but a necessity.

The UAE's approach is deliberate and comprehensive, drawing lessons from its proven successes in energy and food security, where it has consistently ranked among the world's most prepared nations[7]. The same rigor and foresight are now being applied to defence supply chains, ensuring that they are not only robust but also agile and strategically diversified. We are localising production where strategic advantage can be gained, particularly in critical subsystems and high- value components. At the same time, we are expanding and diversifying our supplier base through targeted trade agreements, technology partnerships, and dual-use innovation platforms, thereby broadening access while mitigating risk.

Our strategy integrates the full spectrum of industrial activity, from research and development to design, sourcing, manufacturing, Maintenance, Repair, and Overhaul (MRO), and sustainment. Through programmes such as the National In-Country Value (ICV) initiative and an expanding network of specialised free ones, we are nurturing a new generation of domestic suppliers, fostering industrial depth, and driving technology transfer. Investments in secure-by- design architectures, AI-enabled supply chain analytics, and digitally integrated logistics ecosystems further reinforce this resilience, ensuring that our supply chains are not only efficient but intelligent and predictive.

The UAE's ascent into the top 50 of the 2023 FM Global Resilience Index[8] provides a solid foundation upon which to build, but our ambitions extend further. We aim to create a defence supply chain ecosystem that is sovereign, diversified, digitally empowered, and globally competitive. This means cultivating self-reliance without isolation, ensuring operational continuity under all circumstances, and enhancing our capacity to withstand and lead through future shocks. Through these integrated efforts, the UAE is not merely safeguarding its defence industrial base, it is setting a new benchmark for supply chain resilience in an era of strategic uncertainty.

5. LOCAL TALENT

Talent is among the UAEs' most valuable national assets and the backbone of its industrial development journey. Recognising that sustainable competitiveness begins with human capital, the UAE has adopted a deliberate two-pronged strategy: developing and empowering local talent while attracting and retaining world-class global expertise. This integrated approach ensures the creation of an industry-ready, future-proof workforce capable of driving the nation's most ambitious defence and industrial aspirations.

This vision is deeply rooted in the national philosophy articulated by His Highness Sheikh Mohammed bin Rashid Al Maktoum, who stated:

“The UAE's journey has been built from the beginnings on creative thinking and innovative minds.
A key component of our future readiness is our ability to attract the best talents. The UAE was and will continue to be a haven for creative human thought and brilliant minds, who will always be part of our preparation for the future.”

Today, the UAE ranks 17th globally in the 2024 IMD World Talent Ranking[9], a testament to the nation's enduring commitment to talent development, international competitiveness, and investment in education and skills. More notably, in the Readiness sub-index, the UAE has risen from seventh place in 2022 to second globally in 2024[10], a reflection of its focused efforts to nurture a competitive, knowledge-driven economy that outpaces regional peers and matches global leaders.

This commitment is being translated into concrete action within the defence ecosystem. Initiatives such as the EDGE Learning and Innovation Factory, the Khalifa University–Lockheed Martin Center for Innovation and Security Solutions, and specialised graduate programmes at Rabdan Academy are building sovereign expertise in critical fields such as AI, autonomous systems, cyber defence, and advanced manufacturing. These programmes ensure that Emirati talent is not only prepared to meet current defence challenges but is also positioned to anticipate and lead future technological transformations.

Looking ahead, the UAE will continue to evolve its education and training systems in alignment with emerging defence and industrial needs. Scholarship opportunities in defence-critical disciplines will be expanded, strategic partnerships between academia and industry will be deepened, and structured career pipelines will be developed to ensure seamless transitions from university classrooms to advanced industrial workplaces. In parallel, fast-track visa and residency programmes will continue to attract global experts, accelerating knowledge transfer and fostering an environment of innovation and excellence.

Through these efforts, the UAE is not merely building a workforce; it is cultivating a generation of leaders and innovators who will define the nation's sovereign industrial future. This enduring investment in talent is what will ensure that the UAE remains at the forefront of global competitiveness, resilience, and technological leadership for decades to come.

6. SUSTAINABILITY

Sustainability lies at the heart of the UAE's national identity and industrial ambition. As a nation recognised globally for its leadership in both traditional energy markets and the energy transition, the UAE is uniquely positioned to redefine what sustainable industrial development can achieve. Our commitment to sustainability is not a matter of compliance, it is a matter of leadership, legacy, and long-term national resilience. We aim to set a new global standard, demonstrating that advanced industries can thrive without compromising environmental integrity or future generations' rights.

In the defence sector, this ethos is deeply embedded in how we build, not just in what we build. From the outset, the UAE has aligned its defence industrial development with broader national sustainability initiatives, including the UAE Net Zero 2050 strategy and the UAE Green Agenda. These frameworks compel us to think beyond immediate capability acquisition and toward the creation of an industrial ecosystem that is circular, resource-efficient, and future-focused. Our strategic vision extends to designing systems and facilities that embody sustainability principles across the entire value chain, from research and development to production, sustainment, and end-of-life disposal.

Our leadership was on display during COP28, hosted by the UAE, where industrial decarbonisation, energy efficiency, and sustainable innovation were placed firmly at the center of the global climate agenda. The priorities championed at COP28 now serve as a guiding framework for the defence industry, where we are actively pursuing low-emission manufacturing practices, circular logistics models, and eco-conscious system designs. This is not merely an adaptation; it is a strategic commitment to ensuring that sustainability becomes a core pillar of national security and industrial competitiveness.

The UAE's track record in adjacent sectors affirms the viability of this model. In 2023, Masdar was recognised as one of the fastest- growing renewable energy companies globally, and the UAE achieved first place regionally in the Yale Environmental Performance Index[11]. These milestones reflect not isolated achievements but a national model of integrating sustainable practices at scale across sectors, from energy to aviation, logistics to infrastructure, and now, resolutely, into defence.

Within the defence sector, sustainability translates into modular system design to extend lifecycles, promoting repairability and reuse, reducing the carbon footprint of manufacturing and supply chains, and embedding green energy into operations. We are advancing initiatives for low-impact testing, simulation, and MRO activities, while supporting the transition to decarbonised materials and sustainable sourcing practices. Entities such as EDGE and Tawazun Council are leading efforts to drive sustainable procurement standards and low-emission system designs in collaboration with OEMs and suppliers, ensuring that sustainability is woven into the fabric of our industrial partnerships.

Our vision extends beyond national implementation; we aspire for the UAE to play a convening role in shaping the global dialogue on sustainable defence. We seek to lead international efforts in aligning defence industries with net-zero commitments and embedding circularity at scale across the defence sector. This commitment is not only about environmental stewardship, it is about ensuring the legitimacy, trust, and long-term viability of our industrial base. Sustainability strengthens the moral foundation of our industrial strategy and enhances the UAE's position as a responsible leader on the global stage.

To deliver effectively on these foundational principles, five key national priorities have been identified to guide the development of the National Defence Industrial Strategy. These priorities will ensure a uniform direction for the defence ecosystem, aligning medium-term objectives with long-term aspirations, and orchestrating collective efforts to move forward together. Through this unified approach, the UAE will not merely sustain its momentum, it will set new global benchmarks by defining the next era of sovereign defence industry leadership, resilience, and transformative innovation.

06 Our National Defence Industries Priorities

1 Advance sovereign defence capabilities across priority platforms and systems

2 Position the UAE as a global hub for the defence industry

3 Accelerate innovation, R&D, and adoption of advanced technologies

4 Attract foreign direct investment across the entire value chain with focus on advanced technologies

5 Drive the growth of SMEs and support creation of more national champions

PRIORITY 1 :

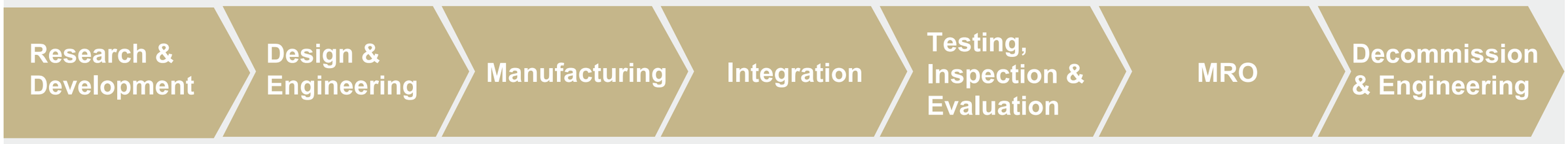
ADVANCE SOVEREIGN DEFENCE CAPABILITIES ACROSS PRIORITY PLATFORMS AND SYSTEMS

We aim to chart our own domestic defence infrastructure, procure advanced technologies, and deploy military assets independently and in alignment with our national defence interests. As a rapidly modernising nation with aspirations of building a sovereign defence ecosystem, we place a strong emphasis on developing local defence capabilities, enhancing self-reliance, and growing our industrial base. Our unwavering commitment to peaceful development and national defence is a fundamental philosophy of our growing defence capabilities. It is intended to protect our sovereignty and contribute to regional stability, not to pursue expansion or conflict, thereby reinforcing our image as a responsible and principled actor in the global defence landscape.

We aim to build advance sovereignty defence capabilities for 200+ systems across our 8 warfighting and capability domains. These strategic plays will be defined by mapping our national aspirations for each system against our current and already planned capabilities, but with the systematic lens of achieving overall sovereignty, not as a one-size-fits-all solution but one that is carefully applied across the value chain for each of these systems.

We will establish the appropriate IP ownership and control for select strategic systems by developing/co-developing technologies and ensuring national control over intellectual property. The focus on R&D shall include promoting national defence-specific early-funding channels, developing the local talent for the defence R&D centers, encouraging public-private collaborations within an agile innovation ecosystem, and building scalable prototyping infrastructure to accelerate the transition from concept to production.

Defence Material Value Chain



We aspire to enhance domestic manufacturing capabilities by localising production facilities for key components and final assembly. In addition, we are promoting upstream sectors to secure a sustainable sourcing strategy, setting up national standards and certification bodies that can certify defence-grade components independently, and accelerating technology transfers and offset agreements, i.e., by leveraging foreign partnerships with strong knowledge transfer and localisation clauses.

Our vision is to expand our footprint significantly by promoting additional national integration facilities capable of integrating complex systems under secure conditions, additional independent world-class testing infrastructure including test ranges and laboratories, and developing simulation and digital twin capabilities, i.e., developing domestic expertise in advanced modelling and simulation for system validation and training.

We strive to continue building sovereign MRO facilities to significantly reduce downtime and dependency, develop domestic suppliers for strategic spare parts and consumables, and introduce best-in-class training and certification programmes to generate a pipeline of nationally certified technicians and engineers to sustain and grow our MRO ambitions.

We understand the full scale of opportunities and want to be at the forefront of change by implementing national protocols for safe and environmentally friendly disposal of military systems, building sovereign capabilities for data destruction, cryptographic erasure, and system neutralisation, and establishing recycling and reuse programmes for material recovery and repurposing of components.

As we analyse system by system and domain by domain, we strive to holistically define the future plays for us as a nation. The ability to clearly identify and invest in high-priority platforms and systems will define the next chapter of our leadership in the defence industrial arena over the next decade.

This approach is not about limiting ambition, it is about sequencing it, ensuring that investments are channeled where they will have the greatest sovereign, strategic, and economic impact.

As we move towards developing the strategy which will guide us to select our areas of development, we focus first on platforms and systems that are both strategically critical and industrially viable, second on strategically vital areas where capability gaps remain and must be assessed for development or access, and third on leveraging existing industrial strengths that, while lower in strategic impact, can support adjacent high-priority systems or contribute to export growth. This approach reflects the understanding that sovereign capability is not a fixed end state, but a dynamic process of scaling ambition in line with evolving threat environments and technology frontiers.

PRIORITY 2 :

POSITION THE UAE AS A GLOBAL HUB FOR THE DEFENCE INDUSTRY

We are uniquely positioned to become the Middle East and North Africa’s pre-eminent hub for defence innovation and manufacturing. Our balanced geopolitical stance, together with our world-class infrastructure, and favourable investment conditions are conducive to lead the region’s defence transformation. The UAE’s demonstrable capacity to scale industrial capability quickly reinforces the foundational assets needed. We will translate those advantages into a long-term position of strategic advantage, anchored firmly in sovereign industrial capability, yet by strengthening regional and global partnerships.

Becoming a regional hub requires more than the physical cluster, it demands the development of an integrated ecosystem that supports innovation, production, export, and sustainment. We have already proven our ability to scale new industries rapidly, from aviation to space and advanced manufacturing, and we are poised to replicate this success in defence. Our advanced logistics and free zone networks further reinforce our strength, making the UAE a natural transshipment and export hub for the region’s defence trade.

We have also made deliberate and strategic investments in developing state-of-the-art defence industrial zones that are positioned to anchor long-term industrial growth. Zones such as Tawazun Industrial Park (TIP) in Abu Dhabi, the emerging clusters in Al Ain for aerospace and advanced technologies, and the facilities in Al Dhafra focused on heavy manufacturing and logistics provide a comprehensive environment for design, testing, and production. By clustering capabilities in these specialised zones, we create industrial synergies that enhance productivity, local content development, and global competitiveness.

We plan to establish many more such specialised economic zones with state of the art infrastructure, fast-track licensing, security cleared workforce pipelines, and co-located support services to provide an integrated full stack defence ecosystem. This will act as a core driver of defence industrialisation and international investor attraction.

This entire ecosystem is envisioned to not just support national ambitions, but to actively attract international defence and dual-use technology firms seeking a future-focused regional base. Our commitment to building a high-trust, innovation-friendly environment is not only driving the emergence of national champions but also positioning the UAE as a gateway for next-generation defence industrial collaboration.

These aspirations are and will be underpinned by robust policies and infrastructure.

Our balanced foreign policy, maintaining strategic engagement with both Eastern and Western partners, is a potent and unique strategic enabler. This posture, in which we seek to bring stability rather than conflict, strengthens the UAE's role as a neutral global hub, capable of bridging diverse defence ecosystems and securing diversified partnerships and technology flows.

We will leverage defence agreements and security partnerships to create co-production and co-development opportunities with regional allies, host multilateral forums like IDEX, develop and promote region-wide defence standards for interoperability, and leverage our ports and airports to position us as a logistics hub for defence equipment and products.

We will ensure accelerated access to dual-use ports, secure airbases with cargo capability, and commensurate digital infrastructure to support defence logistics.

Our push to create a globally competitive product ecosystem will be centered on unlocking diversified offerings focusing on systems with regional relevance, modular and innovative products, and dual-use technologies.

In our pursuit of excellence as a regional hub, we aim to position the UAE as an epicentre of innovation and technological leadership.

This is by channeling our resources in new domains such as cybersecurity and electronic warfare and positioning the UAE as one of the global providers of cyber defence and electronic countermeasure systems.

We aim to be the regional standard for space and C4I integration by leveraging our advanced space programmes and creating regional geospatial intelligence offerings.

By pursuing a complementary and focused approach across platforms in different domains, we will build a robust, end-to-end industrial ecosystem, one that makes the UAE the regional hub of choice. Global players and regional partners will be able to rely on our capabilities for critical stages of capability delivery, without needing to replicate full value chains elsewhere. With this, we aim to further strengthen the UAE's role as a pivotal partner for co-development, customisation, and sustainment across the defence sector.

PRIORITY 3 :

ACCELERATE INNOVATION, R&D, AND ADOPTION OF ADVANCED TECHNOLOGIES

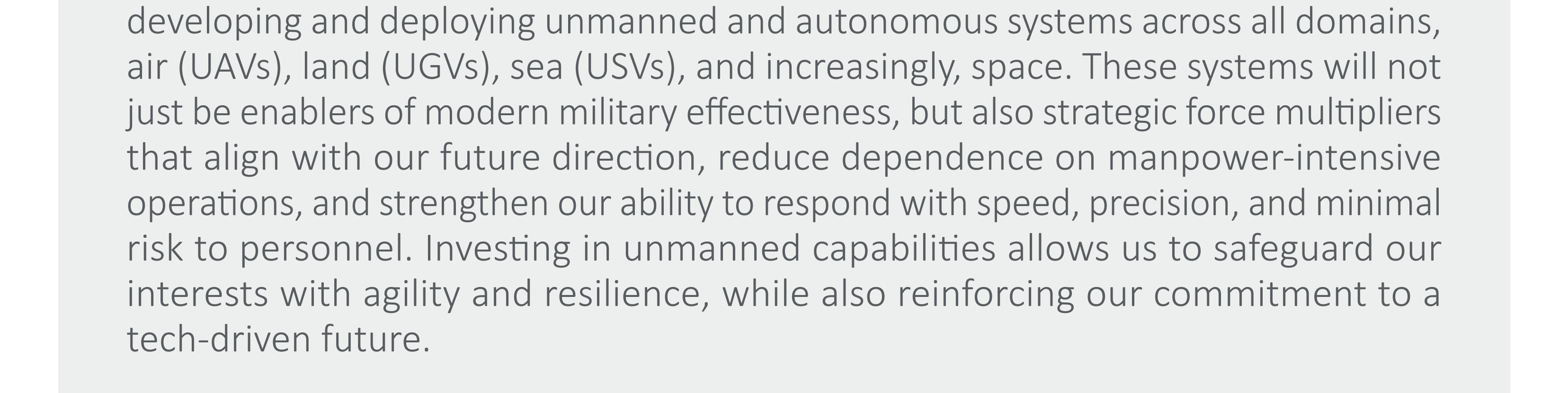
Technological advancement is and will remain a cornerstone of our ambition for the UAE's defence industry. As global defence ecosystems transition to more agile, digital, and autonomous systems, we must not only keep pace, but we must also actively shape the frontier. Innovation and R&D are no longer optional enablers; they are the foundation upon which our future competitiveness, sovereignty, and operational effectiveness will be built.

We have already laid strong foundations across our civil sectors, in AI, robotics, and advanced manufacturing, and we aspire to build on that success and leverage applications and use-cases to defence. Accelerating the development and integration of these advanced technologies into our defence industrial base will enhance our system capabilities, reduce development timelines, and unlock entirely new mission sets. These technologies will drive efficiencies across the value chain, from intelligent design and simulation to autonomous production and predictive maintenance, further strengthening our strategic advantage.

Regionally, we are in a rapidly modernising region. Competitors and partners alike are investing heavily in AI, unmanned systems, electronic warfare, and cyber capabilities.

In this environment, first-mover advantage is critical: those who build innovative ecosystems early will dominate regional defence markets, attract international partners, and secure export opportunities.

The UAE recognises the critical importance of future-ready capabilities, such as developing and deploying unmanned and autonomous systems across all domains, air (UAVs), land (UGVs), sea (USVs), and increasingly, space. These systems will not just be enablers of modern military effectiveness, but also strategic force multipliers that align with our future direction, reduce dependence on manpower-intensive operations, and strengthen our ability to respond with speed, precision, and minimal risk to personnel. Investing in unmanned capabilities allows us to safeguard our interests with agility and resilience, while also reinforcing our commitment to a tech-driven future.



We view unmanned and autonomous systems as national priorities that directly enhance both our strategic sovereignty and our industrial base. Unmanned Aerial Vehicles (UAVs) are already transforming ISR (Intelligence, Surveillance, and Reconnaissance), border security, and tactical operations, and expanding into VTOL (vertical take-off and landing) platforms and AI-enabled swarm drones. On land, Unmanned Ground Vehicles (UGVs) are being developed for logistics support, route clearance, and combat support roles, particularly valuable in minimising risk to personnel in urban or hazardous environments. At sea, Unmanned Surface Vessels (USVs) are offering new dimensions in maritime surveillance and port security which are critical to our geostrategic maritime position.

To accelerate build-up of local capability in research, design, and development of these critical technologies, we aim to foster a national innovation ecosystem purpose-built for unmanned systems. This includes advanced R&D and prototyping facilities for UAVs and USVs, desert and maritime test ranges, and secure AI development environments tailored for autonomy. By treating unmanned systems not just as tactical tools but as a sovereign technology pillar, we aim to elevate the UAE's position as a regional leader in autonomous defence capabilities, and as a leader of next-generation solutions.

Economically, our strong fiscal position, mature investment vehicles, and proven experience in building high-tech industrial sectors (such as aerospace, space, and energy) give us a critical head start in our journey. Our aim is not simply to provide easy access to funding of R&D, it is also to reduce bureaucracy for start-ups and make the UAE not just an attractive place to invest, but a simple one. We are committed to creating a safe and fulfilling environment for innovative start-ups to thrive. Our goal is to facilitate every aspect of the journey, enabling innovators to bring strategic products to the global market, often at scale and at pace. By linking defence innovation to our broader national economic diversification efforts under "Operation 300bn" and the National Innovation Strategy, we look to unlock powerful synergies between civilian and military technological advancement.

Our size also presents an advantage in agility. With streamlined decision-making, close public-private collaboration, and a national culture of rapid execution, we can create innovation ecosystems faster and more efficiently than many larger markets.

We will prioritise depth over breadth, focusing our resources on key areas where technological leadership is strategically vital. Overall, we are deeply committed to foster an environment of innovation and R&D and be recognised as a flag-bearer in defining the future of the defence industry globally.

PRIORITY 4 :

ATTRACT FOREIGN DIRECT INVESTMENT ACROSS THE ENTIRE VALUE CHAIN WITH FOCUS ON ADVANCED TECHNOLOGIES

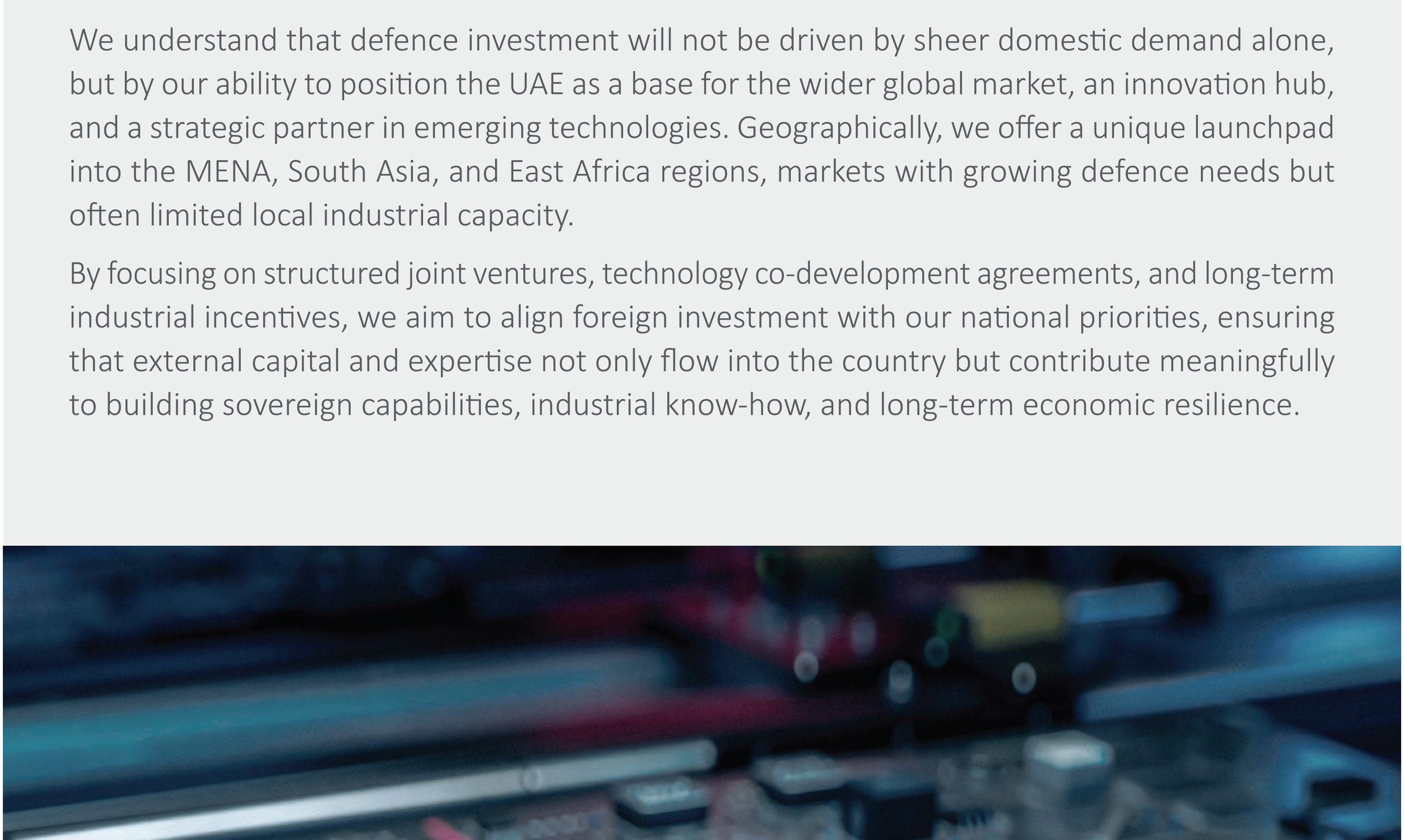
Foreign direct investment (FDI) is a critical catalyst for accelerating the growth, competitiveness, and global integration of our defence industrial base. By attracting targeted FDIs across the entire value chain, from R&D and prototyping to manufacturing, integration, and sustainment, we aim to fast-track our access to cutting-edge technologies, global best practices, and new export markets.

In an increasingly competitive global defence environment, our success will depend not merely on attracting capital, but on drawing the right strategic partners: those who bring deep technological expertise, integration know-how, and a long-term commitment to our national industrial goals. We will strengthen and leverage technology clusters, long leases, tax breaks, etc. to create a conducive investment environment. We are driven to simplify the processes of licensing and provide a ‘one-stop-shop’. Providing easy access to cutting edge laboratories and manufacturing facilities will help attract priority advanced technologies that enable next-generation capabilities, such as AI, robotics, cyber-physical systems, autonomous platforms, and secure communications.

To unlock the full potential of collaborations, we must not only develop tailored incentive programmes within a legally clear framework, but also forge targeted partnerships, and pioneer co-development models that align foreign investor priorities with our national strategic imperatives. Strategic FDI is about how we embed ourselves more deeply into the global defence innovation ecosystem while strengthening our sovereign technological capacity.

We understand that defence investment will not be driven by sheer domestic demand alone, but by our ability to position the UAE as a base for the wider global market, an innovation hub, and a strategic partner in emerging technologies. Geographically, we offer a unique launchpad into the MENA, South Asia, and East Africa regions, markets with growing defence needs but often limited local industrial capacity.

By focusing on structured joint ventures, technology co-development agreements, and long-term industrial incentives, we aim to align foreign investment with our national priorities, ensuring that external capital and expertise not only flow into the country but contribute meaningfully to building sovereign capabilities, industrial know-how, and long-term economic resilience.



PRIORITY 5 :

DRIVE THE GROWTH OF SMES AND SUPPORT THE CREATION OF MORE NATIONAL CHAMPIONS

A resilient and competitive defence industry cannot be built on a handful of large players alone. Small and medium-sized enterprises (SMEs) and scale-up firms are a catalyst for innovation, agility, and supply chain depth. Global experience shows that SMEs are often the most agile drivers of technological breakthroughs, while national champions anchor industrial ecosystems, stimulate supply chain development, and project sovereign capability abroad.

We work towards developing a defence industry ecosystem where SMEs are central to value creation and innovation. These firms will be empowered to co-develop subsystems, contribute to R&D, and integrate into local and global supply chains. Meanwhile, high-performing firms with the potential to become global players will be supported through scale-up finance, export enablement, knowledge transfer, and government-backed procurement pathways, allowing them to mature into national industrial champions.

Countries with large strategic ambitions often recognise early that SME ecosystems cannot be left to evolve organically. Instead, they intervene actively to shape market structures, reduce barriers to entry, and provide targeted support for innovation.

Rather than relying solely on broad-based SME funds, we aim to create sector-specific venture arms, sovereign investment vehicles, and strategic grant programmes tied directly to defence innovation objectives. In parallel, we are progressing on simplifying and standardising regulatory frameworks around IP services (ownership, patent filing, licensing), export controls, and government contracting so that SMEs are not disadvantaged against larger incumbents. The future will see dedicated defence incubator/ accelerator, dual-use innovation hubs, and industrial zones that physically co-locate SMEs, primes, academia, and government and private R&D entities. These ecosystems will be designed to break down silos, foster collaboration, and allow SMEs to rapidly prototype, test, and validate their innovations within defence-relevant environments in the UAE. Increased access to testbeds, simulation environments, and secure facilities will reduce the barriers for SMEs to enter complex sectors like defence electronics, AI, or secure communications. We are also leveraging our offset programmes to redirect defence offset obligations toward partnerships with UAE-based SMEs, not just joint ventures with large industrial entities.

In parallel to our SME development agenda, we will pursue a deliberate strategy to build national champions through a combination of catalytic interventions. We will identify high-performing firms with the potential for global competitiveness and orchestrate the required support to them, providing priority access to dedicated export promotion services and flagship national programmes that serve as accelerators for scale. These firms will be supported to compete at the international stage from an early phase, embedding a culture of global competitiveness and innovation.

Success will be enabled through clear pathways for technology transfer, privileged access to military test ranges, participation in national pilot projects, and long-term government procurement commitments that de-risk private investment in strategically important capabilities. We will use flagship projects and innovation challenges as springboards to help selected firms mature into global players, while ensuring that technology readiness levels are accelerated through structured partnerships and fast-tracked adoption.

Finally, we will

Embed a national culture that celebrates entrepreneurship and innovation in the defence industries as critical pillars of our future economy.

Deepen public-private collaboration, with government acting as a catalyst and enabler.

Lay the foundation for a resilient, world-class defence industrial base that reflects the UAE's national vision, by building a thriving ecosystem that rewards ambition, innovation, and international competitiveness.

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