

ARMY INDUSTRIAL ENGAGEMENT FRAMEWORK

'Advantage through Industry'

AGILE
ADAPTABLE
RESILIENT
INTERNATIONAL
BY DESIGN
AVAILABLE



ARMY
BE THE BEST

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FOREWORD



BY THE SECRETARY OF STATE FOR DEFENCE

The Army has enjoyed a long and deep relationship with its industrial partners. This remains constant, but the Defence environment has not; the threat is evolving constantly and rapid technological advances risk outpacing capability delivery. In response to this challenge, the Army is undertaking an ambitious transformation programme, both in its operating concept and in its approach to how it engages with Industry. The Army and industry have recognised a need to think differently about how their relationship should work in the future. Industry wants clarity from the Army on its future requirements so it can be better served, and the Army wants to gain advantages over its adversaries through the technology, innovation and efficiencies that industry can offer. This is the first time that the Army has articulated what it requires of industry in one document, describing its route to modernisation in the form of design principles and capability objectives. This clarity will encourage innovation and suggest where Industry may want to focus its own research and development. This document aligns itself with key Defence, industrial and prosperity policies, and offers a range of new and strengthened approaches for current and future engagement. I am pleased to endorse the Army's new approach to industry; this framework will benefit industrial partners as they support Defence in the delivery of Army capability for the future.

THE ARMY'S VISION:

The Army's relationship with Industry will be one of close cooperation that fosters an exchange of ideas and innovation. Together, we will deliver capability that is adaptable, agile, resilient and affordable, giving UK Land Forces advantage over its adversaries. In response to the rapidly evolving challenges of the operational environment, there will be a specific focus on agility and adaptability. We recognise that some platforms will continue in-service for extended periods, others will be replaced through modernisation, but both will benefit from the exploitation of new technologies that can drive advantage. Open architectures will allow the repeated integration of systems and sub-systems, and do so rapidly. Our organisation and doctrine will be international by design and our approach will foster human, procedural and technical interoperability. We will harness the best people and the best industry innovations and give them a stable and affordable position from which to deliver capability. This enterprise approach will support UK prosperity ambitions internationally, with innovation and the UK supply chain at its heart.

EXECUTIVE SUMMARY



The world is changing at an increasingly rapid pace; the political, social, economic and technological environments are shifting constantly. Defence, and not least the British Army itself, must find the ends, ways and means to adapt with this change to ensure operational and strategic advantage over our adversaries.

Today's threats are more diverse, more unpredictable and more numerous than at any other time in history. The Army is increasingly called upon to conduct a multitude of tasks at home and around the world, so an inherent adaptability in our structures and capabilities is critical. Affordability will remain a key enabler in shaping our response.

“Capability is the combination of equipment, trained personnel and support that give the armed forces the capacity to achieve the tasks they are given.”¹

These challenges cannot be faced in isolation; the British Army needs to work closely with allies and partners but, most importantly, it must work more closely with Industry. Multiple platforms with increasing longevity, diverse operating environments and relatively low capital costs for some equipment mean a more dynamic market. These considerations present an opportunity for the Army to establish its future capability requirements, and for Industry to include the Army's needs in their research and development programmes. Closer engagement, aligned to the Army's future force planning, will mitigate these challenges. Science and Technology and Innovation will be

1. Defence Acquisition Operating Model 2015

key in driving the Army's development of new approaches to military requirements and help exploit game-changing advances.

The Army is committed to modernising its capabilities and concepts. Industry has a central role to play in this modernisation. Aligned to other Defence initiatives, this engagement framework demonstrates how the Army intends to work with Industry to deliver modernised future Land capabilities. Through a series of engagement activities that seek to exploit innovation set against future force planning considerations, this framework will underpin a collaborative relationship, increase transparency and ultimately support UK prosperity.

Specifically, the framework sets out:

- How the Army's aspiration to create a future force that is international by design and NATO by default, will encourage closer cooperation with international partners, helping to drive interoperability, economies of scale and generate export opportunities. It will also recognise those technologies and skills Defence would wish to assure access.
- Through the primacy of a market driven approach and Technology-led Modernisation, the Army will seek new ways of engaging with Industry, including small and medium-sized enterprises (SMEs) and non-traditional defence suppliers, to develop world-leading products and services. The Army will also seek opportunities for agile acquisition and procurement, pulling concepts rapidly

through to delivery using increased experimentation and promoting coherence across Defence.

- The Army's contribution to UK prosperity will be taken into account throughout the capability development process. Exportability will be considered at the outset such that, in meeting the Army's requirements, opportunities for wider sales are enhanced. Through our acquisition and experimentation, supplier innovation will be promoted; and the local nature of supply chains will be encouraged within acquisition to support regional prosperity.
- As the largest employer within Defence, and as an inherently people-centred organisation, the Army applies a Whole Force Approach to ensure that human capability remains at the heart of our decision-making. The Army will also ensure outputs are delivered efficiently by the right mix of capable and motivated people from the Regular, Reserve, Civil Service, contractors and the wider Defence and security community, both now and in the future.

The time is right for a strategic approach to Land capability through a deliberate engagement framework with Industry that optimises the mutual benefits of working with and supporting a forward-thinking and innovative Army. Together, we must forge and sustain an Army that must be prepared to meet the many new challenges today and in the future.

POLICY CONTENT

THE ARMY INDUSTRIAL ENGAGEMENT FRAMEWORK SEEKS TO REALISE A NUMBER OF POLICY ASPIRATIONS:

Promoting Prosperity. The 2015 Strategic Defence and Security Review codified, for the first time, the requirement to promote prosperity. Failure to do so was considered a national security risk. Prosperity remains at the heart of the Global Britain policy and is a prominent feature of the 2018 Modernising Defence Programme underpinned by the *Dunne Review, 'Growing the Contribution of Defence to UK Prosperity'*. The review focuses on three areas: firstly, what the Ministry of Defence can do to embed prosperity as an explicit objective into its decisions; secondly, to increase agility in acquisition and procurement; and finally, the relationship between the Defence Industry and the rest of the economy. The requirement to promote prosperity is reflected in the Defence Plan and subsequently the Army Command Plan. The Army is committed to building a stronger relationship with Industry to deliver the capabilities required to meet current and future security threats and to play its part in sustaining a diverse and dynamic industrial base in the UK.

The UK's Industrial Strategy. In 2017 the Government published its *Industrial Strategy: Building a Britain fit for the future*. The strategy sets out a long-term plan to boost the productivity and earning power of people throughout the UK and is focused on the five foundations of productivity: ideas, people, infrastructure, business environment and places. The Defence sector has a vital role to play in the UK economy; not only crucial to the nation's



Ajax Assembly facility Merthyr Tydfil

defence, but also as a key part of the UK's industrial infrastructure.

Defence Industrial Policy. The refreshed 2017 Defence industrial policy, *Industry for defence and a prosperous Britain*, recognises the crucial role that British Industry, working alongside the Armed Forces, plays in delivering the UK's national security objectives. The updated policy focuses on considering the wider economic, international and security implications of defence programmes at an earlier stage. It creates the conditions for Industry to be internationally competitive, innovative and secure, as well as continuing to make it easier to do business with Defence, especially for small and medium-sized enterprises and non-traditional defence suppliers. In this context, the Army has a responsibility to ensure it procures the right capability at value for money for the UK taxpayer, while supporting an environment that encourages a thriving and globally competitive UK Defence sector.

Defence Technology Framework.

In Summer 2018 Defence announced the *Defence Technology Framework*, which identifies the key emerging technologies judged to be central to modernising and transforming Defence and directs technology investment, experimentation and innovation. Importantly, the Technology Framework will set a clear demand signal to Industry on Defence technology priorities as part of a broader initiative to make the Defence approach to technology more strategic, agile, experimentation-led and affordable (this approach has been named 'Technology-led Modernisation').

Whole Force by Design. Whole Force by Design recognises the significant value that can be achieved by the effective collaboration of full-time military personnel, Reserves, Civil Servants, contractors and the wider Defence and security community. Whole Force by Design is a deliberate approach that draws on the talent in the Whole Force and will shift the focus from personnel to enterprise management and rapid capability development. This concept requires a cultural change and will strengthen the business and operational potential of Defence.

Advantage Through Innovation. *Advantage through Innovation* is the prospectus describing the Defence Innovation Initiative. The prospectus sets out the Defence core principles of its approach to innovation, including links to other themes such as 'prosperity' and 'international by design'. An enduring focus on innovation activity, prioritised against the threat and wider global challenges, will ensure the Army maintains military advantage into the future. This is critical activity if the Army is to fully contribute to the Defence goal of maintaining strategic and operational advantage.



Warrior CSP Demonstration Vehicle on the tilt table at Hurn, capturing dimensional measurements and functionality at extreme angles.



CHAPTER 1

**UNDERPINNING
LAND CAPABILITY
IS THE
MAINTENANCE
OF A SOVEREIGN
WARFIGHTING
DIVISION.**

STRATEGIC CONTEXT

1. The UK's ability to employ Land forces is fundamental to the delivery of national security. Land power protects our people, projects our global influence and promotes prosperity. Land capability must be resilient, able to operate across wide areas, travel long distances, demonstrate force and national intent and deter our potential adversaries. Importantly, Land capability must deliver against the four core purposes of the Army:



- A combat ready and adaptable Army for operations today is the Army's highest priority, followed by being prepared for what may come tomorrow.
- An Army constantly deployed to reassure our citizens, secure our dependencies, deter aggression and prevent conflict.
- An Army persistently engaged at home and overseas to understand and shape, to deter and protect, and to enhance prosperity.
- An Army that is the nation's safety net, ready to deal with natural disasters and crisis, at home and abroad.

2. Land capability provides a responsive tool of national power, the effect of which can be force-multiplied through coherence with our defence and security allies and partners (such as NATO, ABCANZ and the Joint Expeditionary Force).

3. The Army makes a significant contribution to a wide variety of Defence Tasks, including: counter-insurgency; capacity building; homeland security; deterrence and, most importantly, warfighting.

MODERNISING LAND CAPABILITY

4. Underpinning Land capability is the maintenance of a sovereign warfighting division, which is inherently international by design and ready to work intimately with NATO allies and other international partners. The Division is the critical organising structure that delivers effect, either as a whole or as task-orientated groupings across the spectrum of Land activity within a Joint Force context. Land capability should be considered as a system of systems, designed to generate effect and influence adversaries. Importantly, it is not just platforms and weapons, but also enabling systems such as logistics and communications as well as the critical linkages to other levers of power and influence at governmental level (such as diplomacy, economic security and the rule of law).

5. Capability development in the Army, as a key component of broader force development, must understand and keep pace with the most challenging future threats and technological change. The Army must be adaptable so it can, in concert with key allies, readily prevail over the most likely and most dangerous threats. Today's challenge is to modernise Land

capability to face an evolving, demanding, hybrid peer threat by developing the warfighting division able to operate within a joint or allied operation. Developing the truly cutting-edge technology needed to retain the edge over the threat by traditional methods is increasingly expensive. We therefore aim to optimise industrial, scientific, academic, cross-government support and allied partnerships to find innovative and cost-effective ways to maintain our Operational Advantage.

OPERATIONAL ADVANTAGE AND FREEDOM OF ACTION

Operational Advantage: The ability to find and maintain an edge over potential adversaries, both to increase the chance of success in hostile situations and to increase the protection of the UK assets involved, especially our people.

Freedom of Action: The ability to determine our internal and external affairs and act in the country's interests free from intervention by other states or entities, in accordance with our legal obligations.

6. Operational Advantage over our adversaries is a multi-faceted endeavour; it will be achieved through thinking differently, acting preemptively, using technology and capability unavailable to our adversaries and acting in a way not easily anticipated. Operational Advantage will rely on innovation from all UK Defence stakeholders. Achievement and maintenance of Operational Advantage will also enable the Army to achieve Freedom of Action.

7. Freedom of Action to meet evolving threats require timely access to the

necessary scientific and engineering skills and knowledge found from expertise across UK Government, Industry and academia. To mitigate these threats, Industry is invited to work with the Army's capability development sponsors and delivery organisations to preserve our technologies, capabilities and expertise that enable Operational Advantage and Freedom of Action, allowing the UK to operate when and where it chooses. This is a shared responsibility to maintain UK defence and security. Both are pivotal considerations for capability development and are applicable throughout the acquisition cycle and the life of a capability.

SHARED RISKS AND CHALLENGES

8. Challenges for effective management of Land capability include: the complex and diverse nature of Land capabilities; an evolving threat environment leading to the need for constant evolution; the proliferation of low-cost but game-changing technologies driven by the open market; and, paradoxically, the increasing cost of military-specific technologies also required to sustain the edge. This evolving landscape challenges the Army's ability to be consistent and Industry's ability to position its research and development to meet the Army's needs. The situation is further exacerbated by the lack of responsiveness within the current acquisition process to the particular needs of Land capability development, delivery and sustainment. Improved engagement can mitigate these challenges, and compliment Defence's reform of capability acquisition. Aligned with the Defence Technology Framework the Army will ensure a consistent Land narrative to Industry through the capability lifecycle.

MUTUAL BENEFITS OF INDUSTRIAL ENGAGEMENT

9. The major conduit for Defence-Industry relationships is the Defence Suppliers Forum, a body now streamlined to better deliver activity. In April 2019 the Defence Suppliers Forum released their 2025 Defence Industry Vision, which describes how Defence is seeking a more collaborative, but increasingly demanding relationship with Industry. A strong relationship with Industry is critical to the Army's ability to generate innovative and efficient capability, which will realise cost and value benefits to both. The relationship will support the UK's prosperity agenda and wider enterprise. It should maximise the effectiveness and enduring value for money of Land capabilities and help maintain a technological edge over adversaries by identifying new and innovative partners and technology. Improved mutual trust and communication will enhance Industry's understanding of the Army's requirements, such as the generation and operation of Land forces, capability delivery and development. Substantive engagement will promote Industry involvement, increase effectiveness and support reliable income generation for industrial partners and value for money for Defence.

10. Our cooperation with Industry will be critical in meeting this challenge; the Army will not succeed in modernising at pace without a strong partnership with Industry to help deliver and sustain a supply chain integral from the outset and dynamic enough to address and overcome emerging challenges. This requires an enduring approach underpinned by genuine mutual trust and understanding.

11. The Army will seek to enhance its relationship with Industry, with stronger more active and informed engagements and dialogue with its [current and potential future] suppliers to facilitate better understanding of the strategic planning needed to develop and sustain both Army capability and the supply chain. Both the Army and Industry must articulate their shared aims, which include: working collaboratively in driving transformation, improving performance, reducing cost through life, exploiting technology, and introducing new ways of working and agile solutions, whilst identifying risks and opportunities. Such relationships, carefully focused around priority capabilities and with key partners, and through the wider collective industrial base, will entirely complement contractual arrangements and future competitive approaches.





CHAPTER 2

**TOGETHER, WE CAN DRIVE
CAPABILITY DEVELOPMENT
AND TECHNOLOGY
EXPLOITATION TO
ACHIEVE ADVANTAGE AND
SUPPORT PROSPERITY**

VALUE OF LAND CAPABILITY TO UK PROSPERITY

1. As an integral part of Defence, and as one of the UK's largest employers and consumers, the Army is in a unique position; offering considerable value to the UK through its global network. This network can:

- Exploit the Army's world-class reputation for excellence to influence the conceptual thinking and capability planning in potential markets and partner nations.
- Provide the opportunity for the Army to operate in conjunction with the Department for International Trade and its Defence Security Organisation, Industry and other partners, to gather information for the UK Defence Solutions Centre (<https://www.ukdsc.org/>). This initiative will generate market intelligence that identifies and quantifies opportunities in the near, medium and long-term.
- In line with the wider Defence intent for Technology-led Modernisation, act as a focus for experimentation, modernisation and investment in the personal development of its people.

2. Utilising its resources and subject matter experts, the Army will:

- Provide briefings, training and advice to Industry, senior officers, Defence Attachés, overseas Liaison Officers, regionally-aligned brigades and other global touch points on the ways and means the Army can support UK prosperity. It will support

prosperity narratives and opportunities in appropriate countries or regions.

- Embed Industry/Department of Trade representatives within high-level international engagement visits, and smaller scale engagements on training exercises and partnering deployments. This will allow Industry the opportunity to influence acquisition and procurement decision makers within potential markets and partner nations.
- Provide Army deployments with wider support to demonstrate capability and its benefits to potential customers, giving it the 'used on operations by the British Army' endorsement to boost export potential. This approach could include bespoke liaison, demonstration, capability development and capability management visits to potential export countries.
- Offer places on relevant British Army courses to current and future decision makers to promote our global influence.
- Invite key decision-makers to UK events, conferences and exercises.
- Establish training facilities and camps for overseas partners.
- Where appropriate, embed Army experts within Industry as 'Professional Placements' to assist with the development of best practice, export campaigns, doctrine development, re-organisation of partner Armies and subsequent capability delivery.

AN EXAMPLE:

The Army and MBDA are working together to ensure military acquisition delivers UK prosperity.

Defence and MBDA signed a Portfolio Management Agreement in 2010, under which MBDA is the Ministry of Defence's sole supplier for a significant proportion of its complex weapons acquisition. This approach delivers the military capability that matches the evolving requirements of the UK's Armed Forces and underpins the defence requirements for Operational Advantage and Freedom of Action. A 10-year net savings target has been set from the complex weapons pipeline (compared with estimated ad hoc procurement costs in a non-portfolio approach) of £1.2 billion. The agreement has been structured to contribute to the UK's prosperity by:

- Extending the partnership between government and MBDA to cover defence exports, reinforcing the UK's international strategic defence and industrial relationships. It has been assessed that this has delivered £600 million of gross export benefits since 2010, with future exports look even more promising in view of the strength of the future portfolio of weapons being

developed. For the Army in particular, the Land Ceptor air defence capability has the potential to be adopted by key allies around the world, bringing further financial benefits to the UK.

- Sustaining broader industrial capability, which MBDA estimates as more than 3,500 skilled employees, a UK supply chain spanning 1,000 companies including 700 SMEs, and a jointly-funded international technology and innovation programme.
- Giving MBDA the long-term confidence to invest £50m in a new factory in north-west England and in a nationally-recognised early career programme for over 200 apprentices and graduates.
- The Portfolio Management Agreement is structured to include a Joint Export Management Board, and a higher Export Steering Board co-chaired by the Ministry of Defence and MBDA, coordinating and prioritising Ministerial and military support to the key complex weapon export campaigns.



A GLOBAL NETWORK

3. The Army's global defence engagement footprint exploits a unique international Liaison Officer and Exchange Officer network around the globe which, when coupled with training in regions of core Defence interest (Europe, the Middle East and Africa), helps to identify both threats and opportunities in areas of critical importance to the UK. In 2017 the Army deployed 51,726 people on operations, training or defence engagement to 55 countries. Additionally, the UK conducts Army-to-Army talks with 23 countries on an annual basis, which are closely coordinated with a comprehensive senior officer and staff level international engagement programme. These talks provide the backbone to the Interoperability and Security Cooperation programmes with our key allies and partners. This global Army footprint delivers:

- Access to developing and emerging markets which would otherwise not easily be available to UK Industry.
- The basis to develop a detailed understanding of the Defence and wider commercial opportunities across a significant range of countries.
- Development of enduring relationships, which open doors for Industry to provide critical opportunities to break into new markets.
- Support and reinforcement to credible international security, which in turn boosts economic progress and provides the basis for global trade.
- Demonstration of cutting edge British technology, capability and services

through operations, training and defence engagement activity.

REFERENCE

4. Recognition of the British Army's reference status reflects on the equipment, training systems and support services it uses. Holding reference status can be leveraged to assist Industry in promoting their goods and services with those nations who seek to be interoperable with UK forces (particularly within NATO countries and other partners). Unique brands, such as the Royal Military Academy Sandhurst, can be leveraged for training the young officers of our strategic partners. Attendance on UK courses builds long-term personal relationships and a global alumni network that promotes UK brands and provides access points for Industry entering new and emerging markets.

RESEARCH AND EXPERIMENTATION

5. In partnership with the Defence Science and Technology Laboratory (Dstl), the Army generates evidence through experimentation to inform decision-making and ensure the Army maintains advantage. The Army Warfighting Experiment series is a pan-capability activity involving all aspects of Army capability. This event aims to improve and encourage engagement with Industry, academia and other government departments. For example, 2018's warfighting experiment, called Exercise Autonomous Warrior (Land), was a £15m collaboration with Industry to test robotic and autonomous systems. The on-going exploitation of the exercise will signpost future capability requirements and demonstrate how robotics and autonomous systems can increase capability while reducing both cost and risk,



as well as securing Operational Advantage. By working more closely as a team, Industry, academia and the Ministry of Defence co-operated to achieve a common goal - to work faster and become more innovative. To break the barriers between suppliers and users, this research and development work can be shared through the Force Development Nexus, a community of interest connecting Industry, allies, academia and military planners.

SKILLS INVESTMENT

6. A decisive and unique value comes from the Army's investment in the development of its people, which links to the Government's broader vision for a Shared Society. The Army recruits a large percentage of soldiers with a below average academic record (for example, 65% enter without a GCSE A-C in English and Maths). From this foundation, the Army's commitment to life-long learning ensures the

very same people leave the Army with far greater skills, and by association, contribute to social mobility within the UK. Policies such as offering Army recruits an appropriate Intermediate/Advanced Apprenticeship mean that the 7,000 service personnel who enter the private sector annually are better trained and motivated than when they entered the Army. These superior skills, experience and leadership mean the veteran workforce provides a multiplier effect: veterans provide enhanced productivity within the national economy, they are less of a training burden for employers, and provide cost avoidance benefits for the Department for Education (because the fiscal responsibility for up-skilling recruits lies with the Ministry of Defence). Those leaving the Army are more likely to be employed than the rest of the population and 23% of those leaving are employed in skilled trade occupations (compared to 11% of the UK population).



Ajax Assembly Line in Merthyr Tydfil (Apollo variant in the foreground)

CHAPTER 3

**ADOPTING
STRUCTURES AND
CAPABILITIES
SUITED TO
CHANGING, COMPLEX
ENVIRONMENTS
WILL BE
FUNDAMENTAL TO
FUTURE CAPABILITY
DEVELOPMENT**

WHAT THE ARMY REQUIRES OF INDUSTRY

1. The UK defence industrial base has been, and continues to be, an essential component of Land capability acquisition. Industry plays a key role at each phase of the acquisition cycle from concept, assessment, delivery, manufacture and integration into service through to disposal. Requirement setting has traditionally been based on a predictive approach, with Defence seeking to forecast a threat and then identify specific capabilities to over-match it. Industry was then set the challenge of designing equipment to meet the Army's specifications. Despite considerable effort in predicting requirements, the Army has found itself fielding capabilities in a different context to that anticipated, and subsequently having to adapt to these new circumstances. This has consumed considerable unplanned resource and seen short-term shifting of priorities and financial re-profiling.

2. Our Defence industry partners have responded magnificently to this challenge, however, the inherent lack of stability has proven costly to the Ministry of Defence and created uncertainty in Industry. It could also be argued that Defence's predictive approach has also led to a narrowing of the industrial base as Industry has focused on equipment most likely to compete successfully. Threats and operational environments will continuously evolve, so the Army must adopt an approach to force design and capability provision that embraces this reality. Adopting structures and capabilities suited to changing, complex environments, rather than seeking to control them, will be fundamental to future capability development. With such uncertainty, Industry will play a key role in understanding the breadth of emerging technology and how it will impact upon the Army's concepts.

Such a pivotal role will be fundamental in forging a strong relationship.

3. This relationship must be reciprocal, therefore the Army must provide, with as much certainty as possible, the areas it intends to focus its capability development effort on. Articulating this intent can be described through: Force Design Principles, Advantages Sought and Capability Objectives.

FORCE DESIGN PRINCIPLES

4. The pre-eminent quality of the Army in the future will be the ability to **adapt**, combined with the **agility** to do so with relative ease. The UK will maintain an active approach to deterrence, being prepared to undertake a full range of combat operations independently or alongside the US, NATO or other European formations. We must be able to project power and influence globally; ensuring our systems and sub-systems are interoperable within UK Defence and also amongst our principle **international** partners. Defence and Army **resilience** under constant and evolving challenge from our adversaries will be an enduring cornerstone of our ability to fight. Resilience extends across the UK homeland to ensure the ability of civil society to function and the Defence industrial base to sustain military output. In all of this, **affordability** will also be key, coupled with fiscal discipline to provide the stable financial position and certainty Industry seeks.

Design Principles:

- **Agile**
- **Adaptable**
- **Resilient**
- **International By Design**
- **Affordable**

ADVANTAGES SOUGHT

5. Reductions in UK Defence mass over the last seven decades require us to think differently about how we influence and deliver military tasks. While the deterrent effect and coercive use of force borne of physical mass endures, we must embrace new technologies and advances in human-machine teaming to deliver tasks with fewer people and platforms. This requires the Army to rigorously and constantly assess capabilities against the evolving threat. We must also assess and understand our own vulnerabilities. Capabilities must have sufficient redundancy to absorb attrition, through the generation of mass and also through increased reliability and sustainability. Both the UK-based and deployed force must be resilient against an array of physical and virtual threats. Our organisation, systems and structures must be difficult to target, difficult to damage, and able to recover quickly from disruption. This resilience against external factors must also be matched by our ability to respond to internal stimuli such as technological advances, and research and experimentation outcomes, where we must seek opportunities for advantage. This combined approach between the Army, Industry and our international partners will give us the advantage we need over our adversaries.

Advantages Sought:

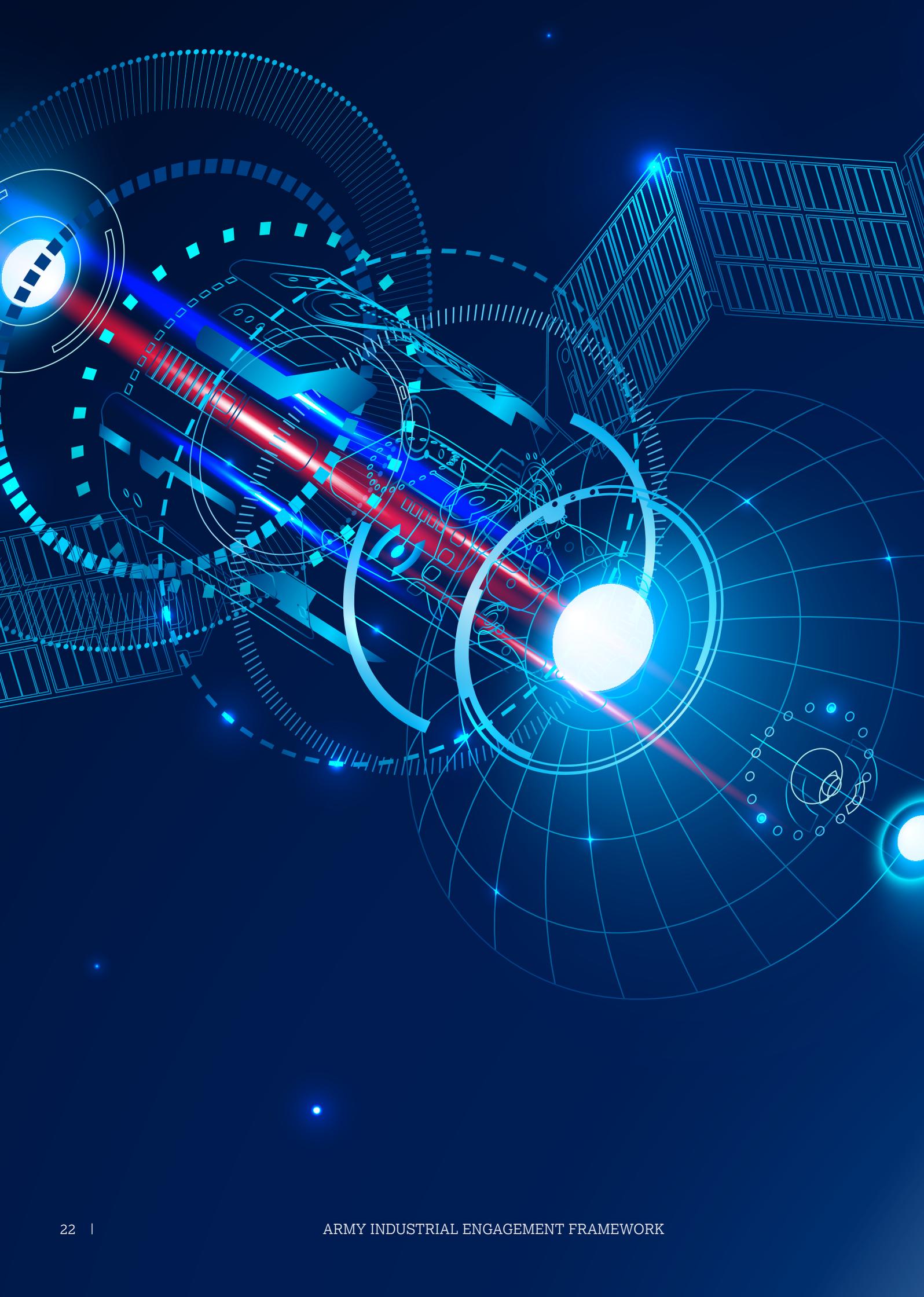
- **Capable/Adaptable People**
- **Increased Tempo**
- **Resilience**
- **Improved Survivability**
- **Improved Redundancy**
- **Increased Speed Of Projection**
- **Improved Influence**
- **Enhanced Operational And Strategic Mobility**
- **Reduced Logistic Need**
- **Increased Operational Security**
- **Increased Capability In Electronic Attack**
- **Greater Soldier Lethality**
- **Deliver Mass Effect**
- **Improved Electronic Defence**
- **Improved Situational Awareness**
- **Improved Platform Reliability**
- **Free Manpower From Support Roles**
- **Enhanced Ability To Upgrade The Force Rapidly With Technology**

CAPABILITY OBJECTIVES

6. To gain the advantages described above, there are a number of higher-level requirements or ‘capability objectives’ the Army has developed. These objectives are intended to provide focus for our capability development. Equally, they are broad enough to avoid stifling innovation or fresh ideas as to how Defence tackles the challenges we face. These objectives will direct our Science and Technology and experimentation effort and shape decisions in the short, medium and long-term. It is intended that Industry will use these capability objectives to shape some of their own research and development activity.

Capability Objectives:

- **Improve soldier effectiveness (lethality, situational awareness and survivability)**
- **Reduced physical burden on the soldier**
- **Reduced cognitive burden on the soldier**
- **Reduce the time needed to understand, decide and act (to increase tempo)**
- **Augment soldiers to increase mass and resilience**
- **Exploit Robotics and Autonomous Systems (RAS)**
- **Increase capability to counter unmanned systems**
- **Improve capabilities to degrade enemy will, cohesion and cognition**
- **Pass information in a contested Electro Magnetic Spectrum (EMS)**
- **Reduce strategic projection time and cost**
- **Improved training capabilities to allow more training in more realistic settings that replicate the human, physical and information ‘terrains’**
- **Intuitive and simple equipment to reduce the training burden, reduce skill fade, and minimise the requirement for specialist maintainers**
- **Greater standardisation (commonality) of components, spares and commodities to reduce logistic need**
- **Greater technological standardisation and interoperability with US and NATO allies**
- **Adopt open architectures (LOSA) to allow the rapid and repeated insertion of new technologies and systems in order to maintain operational edge (against evolving threats and technological advances)**
- **Increased standardisation, modularity and ability to re-purpose and recycle capabilities to meet broader mission profiles**



CURRENT CAPABILITY DEVELOPMENT OPPORTUNITIES

7. The Army recognises the diversity Industry offers in delivering its force development and sustainment to enable capabilities. Current examples of where Industry have offered innovative solutions include:

Munition Acquisition Supply Solutions. Within the munitions environment significant work has been undertaken by Army Headquarters to provide a better understanding of munitions requirements. This work has included differences for training, current operations and contingency, and in terms of munitions type, quantities and readiness timelines. These initiatives have developed, where appropriate, greater interoperability with our Allies. This increased focus on requirement planning has, via a Command Acquisition Support Plan between the Army and Defence Equipment and Support, been developed to enable modernisation and simplification of support arrangements. Changes include optimising: munitions buy plans, order cycle lead times and the resultant stock levels. Further work is also being done between Defence Equipment and Support and Industry to shorten the response time to the munitions requirement, cutting munitions qualification periods and using benchmarking and greater competition as a lever to cut Industry costs. Consequently, as part of the Army Efficiencies initiative, significant savings have already been generated with more expected to follow.

Active Integrated Protection Systems. Effective Active Integrated Protection Systems improve survivability and mission effectiveness. The need to enhance this capability is driven by the threat from the enhanced capabilities of near-peer competitors and non-state actors. Leonardo's 'ICARUS' Technology Demonstrator Programme is developing an open, modular architecture specification for active protection on cross-fleet capability. The programme is responding to analysis identifying that an open, modular system is expected to be substantially cheaper than procuring a closed architecture system. ICARUS is developing an Industry community of interest to support engagement by sub-system manufacturers, with a view to publishing the Modular Integrated Protection System as a NATO Standardisation Agreement.

Collective Training. The Collective Training Transformation Programme will take forward an alliance with the best of Industry to deliver technological innovation, end-to-end support and enabling effects throughout the Collective Training system. Future requirements for training capability are; an objective measurement system linked to readiness and warfare development; blended live, virtual and constructive simulation into a single domain; a system responsive to emerging operating environments and future Army structures; and the ability to harness the most up-to-date ideas, innovation and spiral technological refresh. The Army will develop a collaborative and accountable relationship with Industry, guaranteeing quality of outcomes and efficiencies.

CHAPTER 4



**OUR PLATFORMS
AND SYSTEMS MUST
INTEROPERATE
WITH ALLIES**

INTERNATIONAL BY DESIGN

1. Working with international stakeholders, the Army seeks to deliver a coherent approach to international capability collaboration. This is supporting cross-Defence activity with all strategic partners. The Strategic Approach to Land Commitments project was initiated in 2017 to bring greater coherence to the Army's outward facing international efforts, focused primarily on the shorter-term (funded) activity of the Field Army. The Army supports various Ministry of Defence level engagement forums with our international allies and partners in order to ensure innovative, internationally-aligned capability development into the future.

2. The British Army will most likely operate as part of an international force or coalition, so our platforms and systems must interoperate with our allies on a human, procedural and technical level. We need to develop capabilities, systems and sub-systems that are designed to permit interoperability. This higher-level requirement is particularly important for command and communication systems, but will include digital fires, battlespace management and the movement of data. Interoperability priorities have therefore been developed in alignment with strategic allies to support and inform NATO interoperability:

- Command, Control, Communication, Computers and Intelligence (including Common Operating Picture).
- Digital Fires.
- Intelligence, Surveillance, Target Acquisition and Reconnaissance (Processing, Exploitation and Dissemination).
- Sustainment.

APPROACH TO LONG TERM GLOBAL PARTNERSHIPS

3. The UK has a successful track record of collaborating with international partners to deliver greater capability effect. There are several imminent key decision points regarding possible collaboration with our partners, such as the Next Generation Combat Vehicle (US or France/Germany). Industry has a key stake in these decisions in terms of supply and integration. The Army's approach to developing innovative and sustainable long-term global partnerships will focus on:

- **Threat.** Shared threat assessments and concepts of employment to ensure interoperability on the battlefield.
- **Capability.** Aligning capability user requirements with key strategic partners to underpin interoperability against agreed levels of ambition.
- **Science and Experimentation / Research and Development.** Leverage international research budgets with shared requirements through forums such as technical cooperation and memorandums of understanding.
- **Trials & Experimentation.** Conduct joint trials and experimentation to de-risk new technology. The UK approach to future partnerships will seek to leverage the technological strengths of our partners.
- **Standardisation & Compatibility.** Designing our systems to reinforce the NATO and ABCANZ standardisation agendas and work seamlessly with partners.



- **Economies of Scale.** Increase value for money.
- **Economic Advantage.** Support to the UK prosperity agenda.

4. International collaboration has the potential to present opportunities to bring more work to the UK, contributing to prosperity. Contracts through international organisations offer the potential to develop capability under licence in the UK or to incorporate the development of UK workforce skills.

PRIORITIES FOR CAPABILITY COLLABORATION

5. While it is acknowledged there are many nations with whom the UK aspires to collaborate, the Army places differing emphasis on each partner. Priorities for capability collaboration, which underpin the Army-to-Army interoperability agendas, lie with the United States, France, Germany and Denmark:

- Capability collaboration supports NATO interoperability, reduces capability risk and contributes to the prosperity agenda.
 - With the United States, the collaborative focus is on delivering warfighting at scale.
 - With France, the output is the Combined Joint Expeditionary Force.
 - Collaboration with Germany focuses on key enablers, such as military bridging.
 - The emphasis with Denmark is on collaboration to enable interoperability at battlegroup/brigade level.
6. Collaboration with other partners is developed on a case-by-case basis and is often aligned to niche capabilities offering mutual benefit.

Case Study: BAE Systems/NEXTER Cased Telescopic Ammunition International (CTAI) 50/50 joint venture delivers the 40mm CTA system to the UK and France.

This provides for the UK STRIKE and French SCORPION programmes. Cased Telescopic Ammunition International supplies a medium calibre weapon system that can be fitted to existing fighting vehicles to meet the threats on the modern battlefield (especially complex environments such as urban). The UK and French armies are both customers and supporting partners in this relationship. During the programme lifecycle, both armies will provide a valuable user perspective and specialist support to Industry and Defence Equipment and Support in pursuit of the prosperity agenda.



A Warrior CSP Demonstration Vehicle fires its CT40mm main armament during Unmanned Firing Trials at Bovington.

CHAPTER 5

**MORE AGILE, ADAPTABLE,
DEPLOYABLE
AND PERSISTENTLY
ENGAGED ARMY**



A NEW APPROACH TO CAPABILITY DELIVERY

1. Meeting the capability objectives defined in previous chapters demands a new approach to acquisition, commercial relationships and ways of working across Industry, government and partners. The UK and our Industry partners must seize the initiative and collaboratively deliver change throughout Defence capability.

FORCE DEVELOPMENT

2. Army force development has matured over recent years to be strategy-aligned, threat-informed, resource aware, concepts-driven, evidence-based, NATO by default and international by design. The approach is described in the Land Capability Management Sub-Strategy. This document is available through the Force Development *Nexus*. The Sub-Strategy is aligned to the core strategic modernisation themes for the Army through coherent capability development, enabled by training transformation, interoperability and Science and Technology. The Sub-Strategy provides guidance for the development of Land capability from today's current force, through the near-term horizon of the Army's contribution to Joint Force 2025 and towards the future Conceptual Forces horizon in the 2035-40 timeframe.

3. In adapting the force development approach, Land capability will develop new ways of working that will inform and collaborate with Industry, non-traditional suppliers (including small-to-medium sized enterprises), academia and strategic partners. Together, we will understand and optimise the mutual benefits of leveraging and supporting the Army's reference status.

4. Alongside the traditional force development model of four forces (current, funded, future, and conceptual) there is recognition that force development must be guided by a way of operating that keeps pace with the threat and the rate of technological change. Therefore, the new Future Force Headmark described in the Capability Management Sub-Strategy has been developed as a target for force development and how to drive change so the Army of the future can succeed.

5. Underpinned by the logic of the Future Force Headmark, Land capability stakeholders envisage an evolutionary approach to delivering future capabilities, taking us from the planned Joint Force 2025 through to the more revolutionary Conceptual Force (Land) 2035. This approach will aim to draw forward the necessary technologies as they mature, to ensure formations within the Army are equipped with the most relevant and modern capability available.



Warrior CSP Demonstration Vehicle in the advanced, bespoke trials facility in Bovington.

THE ROUTE TO MODERNISATION

6. The 4th Industrial Revolution is underway. Only an Army that is agile, adaptable and resilient will meet the demands of this fast changing, increasingly competitive world. The Army has defined its Future Force Headmark in the Capability Management Sub-Strategy. Chapter 3 of this framework has provided further detail by articulating design principles, advantages sought and capability objectives. These principles and other themes outlined below, will underpin the approach for Defence, Army and Industry to work collaboratively to deliver modernisation:

- **Transformation Fund.** Defence launched the Transformation Fund in January 2019. This resource pool and streamlined mechanism allows the Army to seize opportunities presented by innovative concepts and technologies and develop them rapidly into useable capabilities. Critically, this approach requires mutual collaboration between the Army and Industry; developing and improving the concept together. New capabilities will be deployed on training and operations where further insights will be fed back into the development cycle. This is an example of prototype warfare in action and will help the Army keep pace with change and maintain the operational advantage we seek over our adversaries.
- **Sound Governance.** Benefits of following Project, Programme and Portfolio Management and Business Management approaches are in improving governance, delivery, and engagement with Industry and the Ministry of Defence delivery agents.
- **Enterprise Approach.** The Army is leading across Defence to adopt an overarching Enterprise Approach. This will involve better requirement setting, balance or flexibility versus pricing certainty and an appropriate contracting model. Collaboration between equipment programmes, the acquisition community and Industry is key.
- **Open Architecture.** Beyond the enterprise approach, the Army's innovative approach to modernisation will continue to press for open architectures (based on Land Open Systems Architectures). This will deliver capability in a more responsive and agile manner, enabling small and medium-size enterprises to introduce their cutting-edge technologies in a way that has previously not been possible. Open architectures will unlock the ability to spirally develop capabilities and incorporate innovative technology from the widest possible sources. Integrating new technologies such as novel weapons, automation, artificial intelligence and remote autonomous systems will be key to maintaining advantage. The opportunities for small and medium enterprises to significantly contribute to this evolution is made possible by adopting open architectures agnostic of platform or system.
- **Agile Approach.** The Army has examined the implications of fully embracing the Agile Acquisition process. 'Agile' means different things to different people and cuts across many themes, but requires both business and cultural change to be effective. Progressively deeper adaptation of an agile approach offers greater benefit, but requires changes to the operating

model and potentially more risk appetite, increased delegation and resource effort to exploit opportunities, respond to threats and future proof delivery. Key to enabling Agile is closer ‘Customer-Supplier’ engagement, shorter decision loops and incremental drops of “minimum viable product/service”. This means improving delivery enablers in governance, funding and contracting routes.

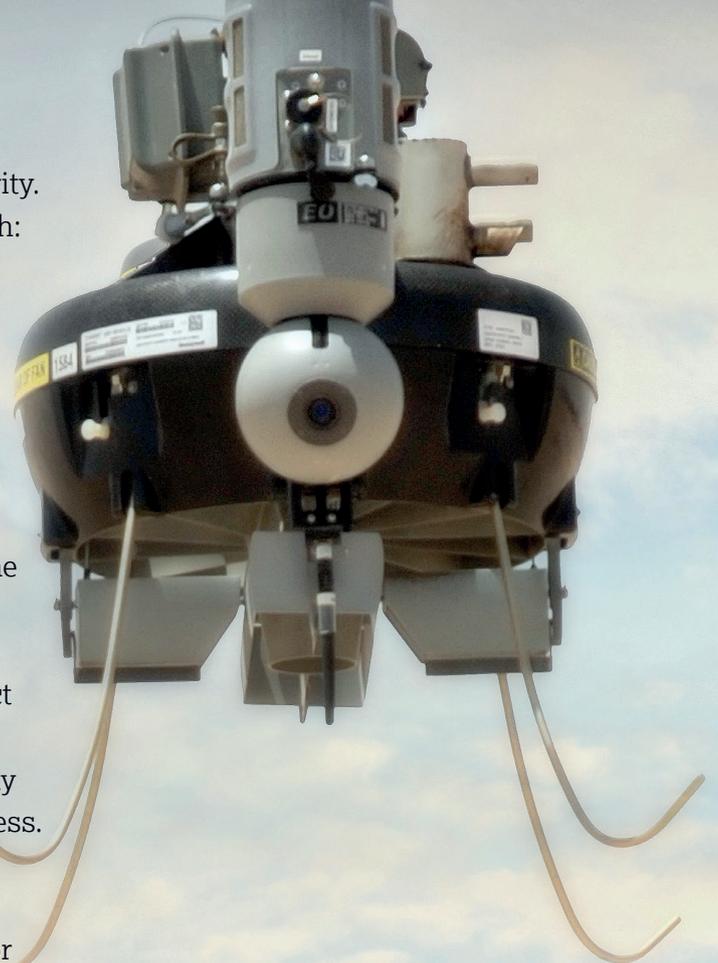
- **Exploit Science and Technology.** In line with the priorities in the Defence Technology Framework, and aligned with the tenets of Technology-led Modernisation, the Army will exploit current and future Science and Technology, aligned with the key capability themes of the Army’s future way of operating, to achieve the Future Force Headmark.
- **Early Engagement with Industry.** Stakeholders should use the Force Development Nexus, a forum to link communities of interest from industry, academia, allies and partners with Army Headquarters force development staff and senior leadership. The Nexus enables the sharing of ideas, articles and other media across the community. The Nexus draws from the Army’s ‘Agile Warrior’ programme; the intellectual examination of current and emerging threats and opportunities for land capability within a joint, inter-agency, intra-governmental and multinational context. Agile Warrior generates evidence-based analysis to inform the continual transformation of land component capability and force structures across all lines of development.
- **Value and Exploit Innovation.** Innovation will be central to the Army’s response to the changing environment. The nascent

Army Rapid Innovation and Experimentation Laboratory (ARIEL) is the hub for Army Innovation and will: maintain situational awareness on innovation activity, lead and champion innovation as an activity across the Army, foster a culture of innovation, commission projects that exploit opportunities and solve problems, champion problems and solutions into the Defence and Security Accelerator as ‘Innovation Challenges’ and exploit the Innovation Fund.

- **Modernisation of Support.** Through its Support Sub-Strategy, the Army seeks to provide optimised and agile support to a more adaptable, deployable and persistently engaged Army, whilst reducing logistic need and exploiting a highly productive Whole Force.
- **An Agile Commercial Framework.** It is critical that a clearly understood commercial framework underpins the Army’s industrial engagement. It must be sufficiently robust to protect the interests of both the Army and industry. Equally, its clarity and flexibility will directly correlate with the quality and speed of the benefits of this client-customer relationship.
- **Data.** Data provision from training, capability development, demand drivers and other relevant sources will facilitate far superior contributions from Industry. A commitment to share specific data will be investigated whilst maintaining data protection and security guidelines. This would particularly allow Industry to provide enhanced propositions in response to requirements.
- **Prosperity.** The Army’s new approach to capability delivery will significantly

enhance our contribution to UK prosperity. Four key aspects underpin this approach:

- Consideration of prosperity benefits throughout the capability development process will ensure opportunities are identified early. Early signalling of our focus on prosperity will also incentivise greater Industry consideration in the tendering process.
- Export opportunities, and its impact on the overall affordability of a programme, will be considered early in the capability development process.
- We will work with international partners to realise opportunities for the UK.
- Recognising that small investment in key regions can have a disproportionate impact on the local economy and communities, the relative regional impact will be considered during acquisition and support tendering.



7. Design principles, capability objectives and the Future Force Headmark described in Chapter 3 provide Industry clear direction. They are designed to encourage innovation and avoid being prescriptive or leading to ‘group think’. It is hoped the guidance provided offers sufficient detail to shape Industry research and development activity.

NON-TRADITIONAL, SMALL AND MEDIUM MILITARY SUPPLIERS.

8. Developing the Army’s knowledge and intelligence of current and future supplier markets will be achieved through a renewed focus to developing market capability. We will seek clarity on the ability and motivators within the market, engaging early and describing future opportunities. This will allow suppliers to inform requirements and ease access into procurement opportunities for non-traditional, small and medium-sized enterprises.

LAND CAPABILITY SCIENCE AND TECHNOLOGY PRIORITIES

In collaboration with the Defence Science and Technology Laboratory, the Army has developed a number of Science and Technology priorities:

Open Systems and Agile Procurement.

Enterprise architecture to enable quicker integration of new capabilities, agility in the force, to build interoperability, and to respond quickly to threats.

Decision-Support. To provide advice and analysis (including war-gaming and experimentation) that considers the full span of future Land capabilities to change their balance or identify opportunities for new technologies or ways-of-working.

Advantage over Adversaries. Technologies, applications or techniques that can provide the Army with the ability to overcome adversaries' capabilities. These include:

- **Directed Energy Weapons.** The use of Directed Energy Weapon systems to complement or replace conventional weapons to achieve operational advantage.
- **Enhanced Platform Performance.** By increasing the lethality and survivability of the platform without increasing platform or crew burden. This could be enabled by better armour, active integration protection systems, advanced sensors and command and control systems.
- **Human Performance Enhancement.** Technologies that offer the potential to

augment human, physical and cognitive performance (within UK legal and ethical constraints).

- **Information Advantage.** The future force will be required to be quicker in thought and deed in order to offset enemy mass and unhinge their decision-action cycle. Artificial Intelligence enabled decision-making will allow greater tempo when operating dispersed. Additionally, through investment in digital technologies, a sustainable advantage in a persistent and pervasively contested information domain will be achieved.

Assured Capability. Robust capabilities that assure operations in contested environments such as:

- **Power Generation and Management.** Power generation, power storage and energy harvesting to support advanced sustainability and exploitation of future weapons technologies.
- **Robotics and Autonomous Systems.** Advances in sensors, robotics and computing (artificial intelligence, unmanned systems and machine learning) to provide a wide range of military applications including the ability to take over monotonous tasks, enhance decision-making and support sustainment.
- **Assured Positional Navigation Timing Systems.** Use and exploit robust C4I networks through a seamless single information environment including assured Positional Navigation Timing.

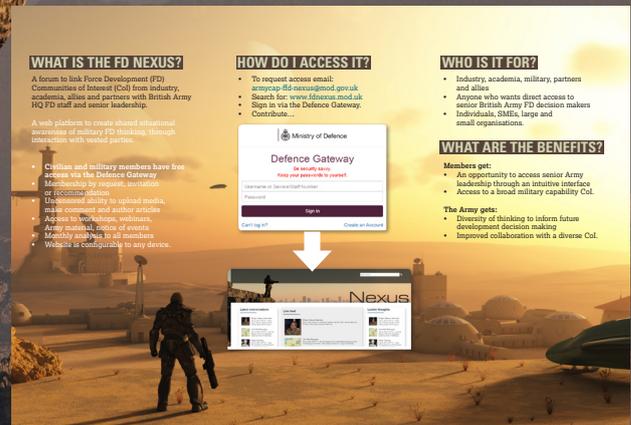
CHAPTER 6

GIVE INDUSTRY
BOTH A GENUINE
VOICE AND
OPPORTUNITIES
FOR FEEDBACK
ON THEIR
CONCEPTS



NEXUS
fdnexus.mod.uk

ARMY
BE THE BEST



WHAT IS THE FD NEXUS?
A forum to link Force Development (FD) Communities of Interest (CoI) from industry, academia, allies and partners with British Army HQ FD staff and senior leadership.
A web platform to create shared situational awareness of military FD thinking, through interaction with vetted partners.

- Civilians and military members have free access via the Defence Gateway
- Membership by request, invitation or sponsorship
- Unrestricted ability to upload media, make comments and further analysis
- Access to workshops, webinars, Arranged and unarranged events
- Monthly analytics to all members
- Website is configurable to any device.

HOW DO I ACCESS IT?

- To request access email: armycap-fd-nexus@mod.gov.uk
- Search for www.fdnexus.mod.uk
- Sign in via the Defence Gateway.
- Create a...

WHO IS IT FOR?

- Industry, academia, military, partners and allies
- Anyone who wants direct access to senior British Army FD decision makers
- Individuals, SMEs, large and small organisations.

WHAT ARE THE BENEFITS?

Members get:

- An opportunity to access senior Army leadership through an intuitive interface
- Access to a tailored military capability CoI

The Army gets:

- Diversity of thinking to inform future Development decision making
- Improved collaboration with a diverse CoI.

Defence Gateway

Nexus

COMMITMENT STATEMENT

(A New Approach to Industry)

1. The Army will work with Industry to help mature Land capability, to seek efficiency through the supply chain and align investment to meet future capability needs; particularly technology needs. Industry should challenge the Army on the Force Development Nexus portal via the following link: [Nexus](#) and identify integration opportunities for mutual benefit to save money. Without subverting the leading role and industrial engagement of our primary delivery agents (Defence Equipment and Support and Information Systems and Services) in project delivery, our new and strengthened approach will include:

- **Annual Key Engagement Events.** Commitment to a series of open access industrial engagement events, each with a defined purpose to promote an on-going and meaningful dialogue with Industry. The Army will provide a dedicated single office to provide the coordination and continuity for these events, following a similar approach to the Army Warfighting Experiment series.
- **Feedback Opportunities.** The Army will give Industry a voice and opportunities for feedback on their concepts. Through a programme of lower level events, hands-on troop trials and demonstration days, Industry will gain feedback and opportunities for further engagement. Industry will be invited to demonstrate their concepts, have regular contact, support innovation, build relationships and foster trust.
- **Sharing Policy with Industry.** The Army commits to publish releasable versions of key policies, which will be hosted on the Force Development Nexus. The Capability Management Sub-

Strategy being a key example, containing the Future Force Headmark description and Capability Plans of many Land capability programmes. Open source information on the British Army can also be found through the Army Portal. <https://www.army.mod.uk/>.

- **Greater Exposure of the Army Capability Portfolio.** Commitment to early exposure of the Army's capability portfolio and to engage Industry in programme development and delivery.
- **Whole Force By Design.** Commitment to a Whole Force Approach to capability development and delivery across the Defence Lines of Development; ensuring that human capability remains at the heart of decision-making and that outputs are delivered efficiently, by the right mix of skilled and motivated people, both now and in the future.
- **Optimising Acquisition.** Commitment to the Routes to Market (Optimising Acquisition) initiative. This approach relies upon integrated demand forecasting with early visibility of requirements (with a 10-5-3-1-year outlook) to allow more time to assess options, plan resourcing and aggregate spend. This will enable rapid convergence to the right commercial approach by setting commercially informed requirements at the outset. In return, Defence Equipment and Support and Information Systems and Services will drive a step change in their ability to be more flexible and agile through simplification of Routes to Market, earlier gateway review and consistency. There



will also be a need to speed up the acquisition approach for the acceptance of sub-systems.

- **Agility and Pace in Procurement.** Commitment to increasing agility and pace in Land capability acquisition and procurement. This approach will mean adopting a culture focused on finding the right solutions and maximising competition while ensuring value for money.
- **Support Solutions.** Commitment to develop a strategic approach to Support Solutions across the Land arena.
- **Profile Decisions.** In addition to the overarching force design principles, the Army commits to publish key decisions and a forecast of decision points for future capability acquisition and cooperation. This will enable Industry to align its priorities and investment against long-term decisions and to identify further opportunities for collaboration.
- **Exploit Science & Technology.** Commitment to exploit the best science and technology capabilities on demand, specifically through more effective collaboration with Industry, academia, suppliers and through international relationships.
- **Accelerating Research & Experimentation.** Commitment to leading, promoting and accelerating research and experimentation with Industry, to mitigate risk by embracing Technology Demonstrators, which will provide an opportunity for Industry to test

and develop their own products.

- **Exploit Opportunities.** Commitment to collaborate with the Defence Chief Information Officer, Chief Scientific Advisor, and Joint Forces Command. Together, these entities will exploit opportunities to integrate command, control, communications, intelligence, surveillance, target acquisition and reconnaissance, cyber and electromagnetic activities and information activity and outreach with the Land Environment.
- **Innovation.** Commitment to the Army Rapid Innovation and Experimentation Laboratory, to promote and accelerate capability-related innovation.
- **Cooperate with Partners and Allies.** Commitment to defining the greatest range of opportunities for cooperation with partners and allies, optimising industrial, economic, military and academic opportunities that delivers maximum benefit to each nation.
- **Monitoring Health.** Commitment to monitor the health of industrial and government skills, capability and capacity critical to the delivery of our national objectives. The monitoring will be developed with input from Industry partners and used to assess the success of interventions to maintain key skills such as armour technologies.
- **Optimise Force Development Nexus.** Commitment to the constructive use of the Force Development Nexus to increase transparency of Army capability development and generate greater collaborations to support annual Industry engagement.



HVM Stormer within the Air Defence Availability Project (ADAPT). On 18th Oct 18 the Future-ADAPT contract was signed and announced by the Defence Minister, Stuart Andrew. F-ADAPT is crucial in safeguarding the UK's Close Support Air Defence capability. DE&S worked collaboratively with industry to deliver the enhancements needed to deliver this project.



CAPSTONE INDUSTRY ENGAGEMENT EVENTS

Land Industry Symposium

May (Annual)

RUSI Land Warfare Conference

June (Annual)

Eurosatory

June (Biennial)

Senior Army Industrial Gathering

November/May (Biannual)

Defence Vehicle Dynamics

September (Biennial)

Defence and Security Equipment International

September (Biennial)

Land Combat Power Demonstration

October (Annual)

Association of The United States Army Exposition

October (Annual)

NATO Future Force International Exhibition

October (Annual)

Agile Warrior Conference

Spring/Autumn (Biannual)

Land Capability Industry Days

September - November (Annual)

Army Warfighting Experiment

(Annual)

