

Multi Domain Integration (MDI) Monthly Blog – August 2023

The foundations of DSEI MDI Discussions

As we drive towards DSEI23 the TD-Info Multi-Domain Integration (MDI) Working Group Leadership felt it would be beneficial through this blog to offer context that enables the Defence community to contribute to the important debates, specifically the MDI working group sessions on the 13th and 14th September.

Through this Blog we reinforce the mind-set change that is critical to MDI success, the importance and impact of Integration, what this means for the defence enterprise and the associated policies and functions.

Multi-Domain Integration (MDI) ([JCN 1/20](#)) is a **mind-set change, driving change towards Integrated Action across Front Line Commands (Air, Land, Sea, Air, Cyber, Space) in Defence, in tandem with Partners Across Government (PAG) and with our Allies and international partners (e.g. USA/NATO).** This ambition is reinforced in ([UK Defence Doctrine \(pages 16-18\)](#)) and was re-iterated as a policy headmark for UK Defence in the recent [Defence Command Paper \(Refresh\) 2023](#). The aim for the Defence Enterprise to act in a way that is greater than the sum of its parts, through integration, will not happen by accident; Strategic Command as Defence's integrator is responsible for implementing this change.

Achieving Multi-Domain Integration is more than being better at joint operations, or simply adding more domains to the list and using them all. It means extending the range of activities available to decision makers, ensuring that the combination of available options and effects are synchronised and optimised, and that the most appropriate course of action can be employed at tempo to create and exploit vulnerabilities in UK's adversaries.

This goes beyond equipment to a mind-set shift. It is about building a strong culture to start acting, at all levels, to enable the Integrated Force to succeed.

The realisation of Multi-Domain Integration across Defence **is intrinsically linked to NATO's headmark to move towards Multi-Domain Operations (MDO). In support of this ambition, UK Defence must ensure that our equipment and technology, in all domains, work seamlessly together.** A commander should have a full range of military options available to choose from, safe in the knowledge that regardless of the combination, they will work. There will be a culture shift towards Industry integrating by default at every level, whether procuring or designing equipment, training, monitoring intelligence or developing operational plans, with the aim of Exploitation – and in future this may involve deploying industry and technical expertise to further forward to solve problems and generate integrated solutions directly at the point of need. There will be a need to train personnel to work together through Integrated Experimentation with our Government partners and wider Allies who together will strive for the same goal (such as CJADC2 in USA).

Achieving the Integrated Force is consistent with the Defence Command Paper (Refresh), and will:

- Be Integrated across Maritime, Land, Air, Cyber & Electromagnetic and Space domains.

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- Be capable of conducting synchronised and simultaneous effects across multiple domains and levels of warfare – from the tactical to the strategic.
- Put our people first, as our people are the foundation of our strategic advantage.
- Enable Integrated Action in support of national objectives.
- Be fused with the whole of Government – the integrated approach - using all levers of power, able to act in unison with allies and international partners and supported by our industry partners.
- Continue to be developed alongside the continued transformation of the NATO alliance, against the headmark of the NATO Strategic Concept.
 - And will evolve alongside NATO's Multi-Domain Operations Concept and, in turn, will make a key contribution to NATO's 360-degree deterrence.
- Be tested with our NATO partners and alongside the Joint Expeditionary Force and the Combined Joint Expeditionary Force.
- Need to be able to operate above and below the traditional threshold of conflict, enabled by the policy and legal freedoms to compete with our adversaries.
- Be supported by a credible and resilient strategic base, as set out in the Defence Support Supply Chain Strategy.
- Be able to adapt to new threats, fusing old technology into the new, to enable strategic advantage.
- Be underpinned by investment in novel technologies, supported by an optimised Defence workforce; and, an enhanced sustainment network, providing resilience and reach.
 - Responsive to the challenge of Climate Change and the opportunity to embrace more sustainable means of support to drive operational advantage.
 - Enabled and supported by a closer and more collaborative relationship with industry.
- Be a sustained and credible integrated force, ready sooner for strategic state competition to gain advantage over our adversaries in a more contested world.

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*What does this mean **for Industry partners**?*

As recognised in the [Defence & Security Industrial Strategy \(DSIS\)](#) Integration between Government and industry has always been fundamental to sustaining the fighting force, developing, and exploiting new technologies, and producing the equipment we need to sustain the fight. An effective Defence Enterprise, including both Government and industry, and a strong national economy will be mutually reinforcing - protecting the nation and helping it prosper.

The [Defence Suppliers Forum \(DSF\)](#) – which the TD-Info Multi-Domain Integration (MDI) Working Group formally reports to - provides the means for strategic engagement between Government and suppliers to share information effectively, align objectives and optimise delivery of Defence capability.

The Defence Command Paper Refresh 23 emphasises the need for closer partnership across the Defence Enterprise, with far more flexibility and earlier collaboration than has traditionally been the case. One of the key lessons from the conflict in Ukraine is that Governments cannot succeed on their own.

Given the threats we all face, our approaches must be integrated by design, and we cannot afford to consume time and resource integrating exquisite single domain capabilities, often after they have come into service. As a rule, we must buy simpler platforms more quickly and design into them the capacity to upgrade at speed. The acquisition of modular and adaptive platforms that are designed to be part of a system of systems will become the norm. Spiral development will be routinely pursued with technology upgrades “built in” not “bolted on.”

Industry can help leverage the contributions and creativity of our people, especially as autonomy and Artificial Intelligence come into the workplace. This also means working in partnership, upstream, on shared problem sets, not fixed requirement sets, with a focus on generating enhanced effects and, in turn, options for decision-makers.

It means continuing to reform our acquisition processes and commercial models to be more flexible and responsive,

- ...learning from the experience of the conflict in Ukraine to act on user feedback and rapidly deliver – and continually iterate – capability solutions where they are most needed,
- ...leveraging industry support to where it is most needed, meaning the deployment of engineering and technical expertise further forward to resolve problems sooner.
- ...improving resilience across our industrial supply chains, as borne out by the experience of the conflict in Ukraine.

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- „,increasingly adopting a more integrated approach across the domains – scaling capabilities from one domain, applying them to the others, and working in partnership to deliver integrated solutions across the supplier base.

Critical to an *Integrated Force* is investing in our people across the Defence Enterprise, promoting the means – and employing different models - to attract, incentivise and retain our talent and strengthen and diversify their skills.

What will this look like?

- We must Deter, Defend & Compete across all domains.
- The Defence Enterprise will be more agile... meaning we have the ability to adapt and innovate, rapidly and constantly as the situation demands.
- Leading and harnessing technological change – including Digital Transformation - and investing in capabilities fit for the future.
- Pursuing closer integration our allies and partners.
- Digital Deterrence will be at the forefront of our posture and how we operate.
- Defence will become a truly integrated digital enterprise, with data exploitation at its heart.
- Strategic Command is establishing the Integration Design Authority, which will be central to the design and delivery of the Integrated Force.
 - Its principal role will be to optimise integration across the Defence Enterprise: by taking a Portfolio-level view of Defence and beginning to offer Integration as a Service for Defence.
 - The Integration Design Authority will be the lead for UKStratCom in engaging with Industry, to help them develop the best-in-class Integrated capability for Defence.
- NATO will be at the core of our effort in pursuing the integrated approach, with a strengthened focus on interoperability including digital and data exploitation.

To address the increasing range and complexity of threats globally, in space, and cyberspace, we will enhance integration across all the Services, and the broader Defence Enterprise – **working to a One Defence Mindset.**

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For DSEI23

The theme of DSEI23 is Achieving the Integrated Force. We want to take the conversation beyond shared awareness and engagement (though this remains important) and identify and agree on areas we can work and collaborate together.

Key Questions for the Working Group at DSEI23 are...

- 1. What are the Solutions or Capabilities (or “Services” / “Platforms”) that you believe could be leveraged more effectively, now or in the future, by MoD?**
- 2. Where is MoD sponsorship required to join up and enable an integrated approach?**
- 3. What are the specific MoD actions required to enable or facilitate in this space?**
- 4. What elements of current approaches across the Defence Enterprise, already align well to an integrated approach MoD do you feel align to this space.**
- 5. What further mechanisms/measures should we jointly pursue to help join up and integrate across the Defence Enterprise?**

Additional Reading

A core emphasis of the Integrated Review 21 was on integration – bringing together all of the UK’s levers of power, breaking down barriers between domestic and international policy, and strengthening cooperation and burden-sharing with Allies and partners to better navigate a more competitive and contested world. [The Integrated Review 2021](#)

The Defence Command Paper 2021 reinforces many of these key themes. [Defence Command Paper 2021](#)

The Defence Security & Industrial Strategy (March 2021) sets the baseline for Achieving an Integrated Force with industry as a whole Defence Enterprise effort. [Defence and Security Industrial Strategy - GOV.UK \(www.gov.uk\)](#)

The Defence Capability Framework (July 2022) outlines guiding principles that inform our approach to investment decisions and military capability development over the next decade - [The Defence Capability Framework - GOV.UK \(www.gov.uk\)](#)

The Defence Supply Chain Strategy (DSCS) (Nov 2022) is Defence Support’s response to the challenges faced within the fragile nature of supply chains in Defence and industry. The threats and disruptions to our supply chains have become more prominent when looking at consecutive global events such as COVID-19 and state-led aggression in Ukraine. This builds on the ambition for Support Advantage,

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outlined in the Defence Support Strategy, as we drive towards a proactive, integrated, resilient and collaborative supply chain - [Defence Supply Chain Strategy - GOV.UK \(www.gov.uk\)](#)

Strategic Command at DSEI23 - #SharpeningDefencesEdge and at GOV.UK - [Strategic Command will be at DSEI 2023 - GOV.UK \(www.gov.uk\)](#)