

# NEWSLETTER

WORKING TOGETHER TO ACHIEVE STRATEGIC CHANGE IN DEFENCE



*Team Defence Information are a collaborative trade association that informs defence information policy and pilots new ways of working. Members gain invaluable business intelligence to align and enhance their products, services and working practices.*

## About us

Our members work in close collaboration with our MOD stakeholders to help define requirements and develop support solutions that truly meet the objectives of the front line.

TD-Info provides a trusted environment for MOD and the UK Industry to collaboratively work together and share the output from projects. TD-Info Member companies and MOD gain mutual benefit from these research and innovation activities which invariably lead to a multiplier effects and knowledge sharing that helps drive pace in solution development and delivery within a trusted environment.

TD-Info addresses this significant challenge as part of a trusted defence community, enabling Members to be well-informed and ready to support MOD in developing resilient and cost-effective solutions that support the DSF strategic objectives. This is achieved by actively leading a programme of Research and Innovation pilot projects through various specialist Working Groups (WGs).



Members and MOD also work together to review and improve relevant policies and procedures. This is reinforced by TD-Info's active involvement and chairing of international standards such as Defence Standard 00-600, and being an influential voice at the Aerospace and Defence Industries Association of Europe (ASD).

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## Foreword

*Phil Williams, Managing Director*

Welcome one and all to the new Team Defence Information newsletter. Well done Jack and Philippa!

I am delighted to write this first foreword and reflect on the past 12 months or so, recognising the tumultuous time in the world and casting an eye to the future.

As with many of our colleagues in the Ministry of Defence and the industrial base, TD-Info has sought to learn the lessons from the disaster that is unfolding in Ukraine, noting that as General Jim Hockenhull said: "If you squint hard enough, you can learn any lesson you like from Ukraine." Nevertheless, Ukraine has refocussed the UK's review of supply chain resilience as championed by General Richard Wardlaw in his role as Chief of Defence Logistics and Support, and many others.

TD-Info has continued to grow its engagement with an increasing number of member companies, taking its lead from the 3\* Advisory, the Defence Suppliers Forum and of course the membership as a whole. As is typical, we have seen three large conferences, a Support Chain Seminar, focussing on Digital Engineering, a Support Net held again at Heathrow and the "season" is soon to conclude with Defence Information 2023. A few tickets remain!

Aside from the big events, we have seen hackathons with robot dogs, sustainable energy conferences, engagement with academia and others as we explore the consequences of the adoption of artificial intelligence.

While the conferences anchor the year's activities, a glance at the SharpCloud map of TD-Info's activities, ranging from MOD Cloud, Digital Twins, Asset Management through to my own *bête noire*, the world of product support specifications, will give an indication that we have had a most industrious time and there is more to come. I can only thank our excellent in-house team, and naturally recognise that without the support from our members and MoD partners we would be ploughing, a most lonely and empty furrow.

And so, as we all strive to enhance the UK's defence capability I am minded of Pericles:

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**“ What you leave behind is not what is engraved in stone monuments, but what is woven into the lives of others. ”**

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### Defence Information 2023

*Don't forget to register for the upcoming DI23! Hear from our 3\* Charlie Forte and other key speakers!*

*Theme - Delivery of the Defence Digital Strategy*

*Date - 5-6 July 2023*

*Active Conference Centre, Alveston Hill, Thornbury, BS35 3JB*

**Registration  
now open!**

**CLICK HERE TO  
BOOK YOUR TICKET**

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## MOD API Strategy Whitepaper for Robotic and Autonomous Systems (RAS) Steve Green, *TD-Info/Conceptare*

**Robotic & Autonomous Systems (RAS) has the potential to remove people from direct danger, deliver military effect, and enable the UK MoD to outpace, outwit and outfight its adversaries.**

To maintain an operational advantage, it is necessary to match and often exceed the rate of change adopted in the commercial sector and by our peer enemies. For many years Defence has looked to adopt open and modular systems architectures to enable technology insertion, accelerate capability development and manage cost through access to commercial solutions. Today's capability is becoming more digital and digitised in nature and as part of the architectural approach, there is a need to understand the potential for Application Programming Interfaces (APIs).

This paper outlines the core challenges that exist today, the resulting impact of these in terms of delivering against strategic objectives, and the opportunity presented by APIs that allow these to be addressed. Consideration is given to wider sector API strategies, industry-leading practices, observations and lessons from the private sector, and the current architectural approach to RAS capability in Defence to provide a number of recommendations and calls for action, namely:

- 1. Establish an architecture framework** to ensure strategy, principles, reference architectures, patterns, standards, guidelines, decision-tree matrices, catalogues, and data models are defined, aligned with the business strategy and are available through self-service.
- 2. Define and adopt a common functional ontology and data model** to enable better interoperability by allowing data to be linked at the semantic level.
- 3. Adopt a composable architecture with levels of abstraction** through an API-led approach to drive delivery agility and reuse while providing separation of concerns.
- 4. Expand the logical solution architecture** (outlined in section 5) to define the physical capabilities and technologies, either existing or new, required to deliver against the target architecture.
- 5. Create a RAS digital marketplace** consisting of APIs, SDKs, a DevSecOps environment and an online presence offering disruptive technology.
- 6. Establish a Community of Interest/Practice** to provide the ability to share and generate awareness of new capabilities across RAS, new frameworks, new Defence/non-Defence related standards, and provide an opportunity for practitioners to showcase work they have undertaken that can be reused in other areas.

Adopting these recommendations will help address the technology, data, people, skills, and talent challenges whereby knowledge is more readily available in terms of open frameworks and standards as opposed to niche custom and closed-system specific skills.

To read more of Steve Green's API4RAS Whitepaper, please follow this link to the full document

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## Multi Domain Integration (MDI) Monthly Blog – May 2023

Steve Worsnip, *TD-Info/Logistics Transformation Co*

*The MDI Working Group have committed to an MDI Monthly Communication Blog to keep the MDI Community and wider stakeholders informed of developments in the fast-moving world of integration associated with our operational state of constant competition.*

*The blog provides context for MDI and connection to our 2023 programme plan; associated policy documents; and signposts to future events.*

### **Multi Domain Integration (MDI) Monthly Blog – May 2023**

This May 2023 **TD-Info facilitated MDI Working Group** blog draws its inspiration from two events, the recent MDI Working Group 17th May deep dive into Integration through Partnership, plus 18th and 19th May SupportNet23 and its focus on Resilience.

Both events included leading influencers in these topics of integration, partnership, and resilience, and were championed by UKStratCom in the form of Lt General Tom Copinger-Symes and Lt General Richard Wardlaw.

### **MDI Working Group – Integration through Partnership – Reflections**

Detailed notes and associated presentations can be found [here](#).

The MDI working group reflections start from the reality that the tensions in the world and conflict in Ukraine have revealed the new status-quo: digital capabilities and novel uses of data driving new approaches to defence and deterrence. Digital is at the core of conflict, and central to the plans, thinking and fighting.

Acknowledging that Digital is disrupting nearly all aspects of our lives and is disrupting the way we do politics, defence, and deterrence, therefore the new status-quo demands a fundamental shift in our collective mindset: digital technologies powered by data are not just ‘enablers’, but an essential part of a credible deterrence strategy.

A key lesson from Ukraine has been to starkly illustrate that we must focus relentlessly on the Digital up-skilling of our people. People are arguably the capability that matters the most, supported by innovation and technology, in the pursuit of Strategic Advantage.

**To read the rest of Steve’s MDI blog, please follow this link**

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## Activity Updates

### Additive Manufacturing (AdM) as a Service - Working Groups

Contract awards have now been published for Project TAMPA Spiral 1, with the intent of achieving the integration of a non-safety critical metal AdM part onto an in-service platform.

<https://des.mod.uk/first-framework-for-additive-manufacturing-awarding-industry-contracts/>

Team Defence Information is supporting the AdM as a Service Working Groups, running in parallel with the Project TAMPA activity and assisting with the investigation of challenges and opportunities across the areas of IP, Certification, Digital Thread and Inventory Management. These Working Groups sit on a regular basis, and consist of volunteers from MoD and industry.

For further information visit our dedicated [webpage](#) or contact [stu.olden@teamdefence.info](mailto:stu.olden@teamdefence.info).

### Developing support for MOD DE&S Future Capability Group (FCG)

Team Defence MOD support activity in the 'Futures Space' is currently focused on the Sustainability, Deployed Energy, Digital Twinning and AI fields. The common strands linking this overarching direction of travel is how emerging technologies are being recognised, embraced, and robustly investigated to ensure MOD gains the operations and capability advantages they will inevitably deliver.

It also illustrates that modelling, simulation, AI software, hardware and asset/equipment

management in the field still run complementary together. A few events are taking place or are in the advanced planning stage to ensure the wider Defence community (MOD and Industry and Academia) can lean into the shaping of the thinking surrounding these topics. Please ensure you sign up for the activities that fit you, they really are valued by MOD and will make a significant, positive difference to the way investment evolves. Events can be found on the FCG page [here](#).

For further information, please contact Darin Tudor at [darin.tudor@teamdefence.info](mailto:darin.tudor@teamdefence.info)

### Team Defence Information Lunch and Learn

*Would you like help with expanding understanding of who TD-Info is and what we do with colleagues in your company?*

We have now successfully delivered over 20 lunch and learn sessions. Feedback has been outstanding with attendees significantly increasing their awareness of the TD-Info organisation, operation, roles and activities. The session is a Teams call with a specific member company and their staff. We have had calls with over 30 people attending so there is no limit on numbers.

If you would like to arrange a lunch and learn session please contact:

**Julian Dayment**

[julian.dayment@teamdefence.info](mailto:julian.dayment@teamdefence.info)

**Andy Whatman**

[andy.whatman@teamdefence.info](mailto:andy.whatman@teamdefence.info)

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## A View on Diversity and Inclusion

Philippa Arter, *TD-Info/BAE Systems*

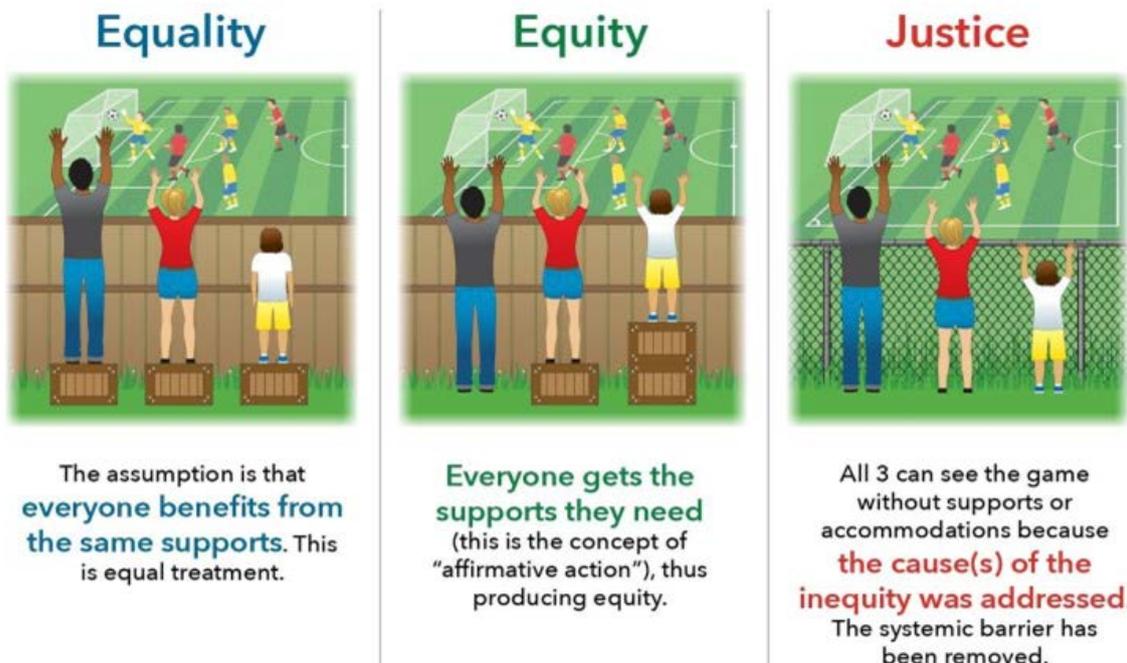
Within TD-Info and Defence, Diversity and Inclusion is seen as a key driver to future success. It can help business innovation, improve individual mental health and improve the overall working environment. When we talk about diversity, we don't just mean on a gender, race, sexual orientation or disability level, or any other "visible" diversity box. I mean on a neurodiversity, behavioural and thinking style diversity. Thinking of diversity beyond what we can see and leveraging difference across the board to our advantage.

Using a psychometric profiling tool like Lumina Sparks, which matches personality types onto a colour scale, leadership in our society often looks "red". Where are our greens, yellows and blues? These are often the people leaders, the big picture thinkers and those who like to look at the detail. On an introvert vs. extrovert level, I'd pose that most lean towards extrovert and have learned to navigate the networking world and have the predisposition to reach out to strangers

looking for advice. Where are those that sit and think, quietly assessing problems and identifying critical solutions.

We need to start leveraging people's differences to design teams – not have teams of people who all sit in the same thinking space agreeing with each other, but design in the disruptors, or those on the other side of the colour wheel that complement the team dynamic, but we also need to ensure the leadership capability is within the team to manage the diversity of thought accordingly.

However, when trying to improve our inclusive culture, we need to remember that while both equity and equality promote fairness. However, equality achieves this by treating everyone as the same, whereas equity does so by treating people differently dependent on their need. In order to achieve equality, equity is needed to give everyone the same chance of getting there.



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## Digital Twins – Engineering to the Power of 2, Robert Buldock, *Clustre*

Developing products that meet every design and cost requirement can be an extremely expensive and time-consuming process. And nowhere is this truer than the automotive industry.

It is estimated that 99% of valuable engineering data is never recycled or re-used because of complex, often incompatible data formats – such as CAD, CAE and CAM. But it doesn't have to be this way. Past design engineering data can be utilised and monetised. For example, the automotive industry could cut 6 costly weeks off track testing programmes simply by combining historic track data with contemporary wind tunnel trials. And by optimising past test campaigns, the car industry could cut future track tests by a staggering 70%. (Source: Monolith AI)

But don't stop there. Just imagine that you could develop a perfect new car design and comprehensively test it for performance without cutting any metal...



### Cue digital twins.

This is one of the most talked-about concepts in technology. The notion that a virtual representation can serve as the real-time counterpart of a physical object – or process – is hugely liberating. So, not surprisingly, the impact of digital twinning has been instant and far-reaching. But, amid all the hype and excitement, it's easy to forget that this is a very new concept. It is barely ten years since NASA started using AI to improve the design of their rockets. And one of the first people to be head-hunted to NASA's formative digital twinning programme was Richard Ahlfeld – the founder and CEO of Monolith AI, a member of the Clustre ecosystem.

Combining a PhD background at Imperial College, immersive NASA experience and Founders Factory support, Richard leads an eclectic bunch of engineers, data scientists and software developers. Together they pursue one simple, but very clear vision: 'The firm belief that traditional engineering will soon change dramatically as it is reimaged by Artificial Intelligence.'

Since, digital twinning is the master key to unlocking this vision, I recruited Richard's support to answer the most basic question of all...

### What are Digital Twins?

*To find out the answer, the rest of Robert's article on Digital Twins can be found here.*

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## The UK Social Value Model and its Impact on the Defence Sector, Max Parylo, Social Value Consultant - [Epscot](#)

The defence sector is frequently viewed through the lens of security, technological advancements, and large investments, often overlooking the fast-growing facet of social value. As more institutions come to recognise the importance of wider societal benefits, answers surrounding effective and fair implementation and assessment are becoming pertinent issues.

Since January 1st, 2021, the social value model has been used across all MOD procurements and is currently given a minimum of 10% weighting in the scoring of tender applications. This is only a minimum however and is subject to increase depending on the level of commitment each authority places on delivering Social Value. Contracting authorities, along with stakeholders, decide which of the five themes should be applied to each tender.

Defence Procurement Minister, Jeremy Quinn MP, set out the [implications of social value for defence businesses](#) in his statement to the House of Commons in March. As ministers see it, this is a prime opportunity for contracting businesses to demonstrate the positive impact they have on the UK economy, environment, and society.

Given the defence sector's substantial contribution of 50% to the UK central government's emissions, it is imperative to start tackling defence's carbon footprint, which nests in the Social Value theme of "Fighting Climate Change". In this respect, the defence sector has already taken action to tackle food wastage, a global problem that is responsible for 8-10% of the world's greenhouse gas emissions. For example, the defence sector has partnered with Sodexo to introduce WasteWatch – an initiative designed to minimise food waste by tracking and monitoring usage – at many of its sites. The programme has been running at Colchester Garrison since 2015, preventing close to £100,000 of food

waste. That is the equivalent of almost 53,000 meals, avoiding 200 metric tons of CO2 emissions. Arrangements like this example provide bidders with a competitive edge in tender allocation. Other behaviours that bidders can begin to take include:

- **Assess opportunities for social value within your existing ways of working.**
- **Update existing processes and policies to provide the greatest social value return in the areas that have been identified as being a required policy outcome for that tender.**

Going forward all tenders will continue to maintain a minimum 10% social value. Each response must be tailored to the individual project and be measurable. It is therefore an area that requires strong consideration and thought alongside a wider understanding of the specific challenges affecting the defence industry regarding each of the specific Social Value policy objectives.

It is vital that those with an interest in winning bids in the defence market (Primes and SMEs alike) start to understand the implications of these new requirements quickly if they have not done so already. These requirements are no longer just a tick-box exercise where they can repurpose an existing CSR policy to cover themselves. Rather, they require organisations to showcase they will deliver a specific amount of social value, which will then be tracked and assessed over the duration of the contract.

If you are a potential bidder requiring assistance in building out effective responses or organising your social value, the team at Episcot has expertise in producing benchmark responses and assessing the current state of your company's social value to collect all relevant social value in one place. Please reach out to [shreya.sharma@epscot.co.uk](mailto:shreya.sharma@epscot.co.uk) for more information.

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## A Secondee's Perspective SupportNET and Experience at Team Defence Information *Joseph Marinaccio, TD-Info/Babcock International*



Joe (loving) SupportNET 2023

I joined TD-info at the end of April, seconded from Babcock as part of my graduate scheme. I am here to assist some of the activities run by TD-info and to develop some project management and stakeholder engagement competencies, which I have already had numerous opportunities to do through supporting some of the consultants. When I started my career in the defence industry I was astonished by how complex and diverse it was. Having already been given the opportunity to attend various TD-Info meetings (council, exec, townhall) and events such as SupportNET, I have already had an invaluable exposure to what is planned for future defence support. This has greatly aided my understanding of how industry and MOD collaboration is facilitated and how there is a drive for the continuous improvement of defence technologies and processes.

Having been in the Defence industry for just shy of a year, SupportNET 2023 offered a great opportunity to diversify my understanding of defence and the importance of a strong collaboration between the MOD and its extensive list of industry partners. It was fascinating to gain insights from a number of keynote speakers about the significance of resilience in defence, especially given the current situation in Ukraine. It was great to hear the ambition to build upon current working relationships between the MOD and industry whilst also improving the ability of new companies to assist, bringing new ideas and ways of working to the industry which is of key interest to strengthening the security of the UK and its allies. I came away from it with a sense of excitement and intrigue for how the industry will develop in the coming years.

It is clear that the workstreams and topics pursued by Team Defence are key to developing the industry and it is good to see the active part both MOD and Industry play for the betterment of defence. It has also been great to learn about TDI Vanguard, and the active role TD-info has in giving young professionals within the industry the platform to discuss and potentially contribute to the direction of some of the ongoing workstreams. It is a great initiative that encourages new ideas and ways of thinking.

Thank you to everyone for their warm welcome and support so far, I look forward to completing the final month of my placement!

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## Opportunity for future leaders – Position open for the MOD co-Chair of the TDI Vanguard group, David Hawken, *Defence Digital*

### Leading in a MOD-Industry environment

The Team Defence Information Vanguard (TDI-V) is a group of people from MOD and Industry who have recently joined their respective organisations, so typically in their first couple of years. They are self-organising under the guidance of an experienced leader and investigate sponsored topics from an early career professional's viewpoint.

For example, the TDI-V created a white paper on 'creating a circular economy in Defence ICT' that influenced the content of the Sustainable Digital Technologies and Services Strategic Approach. They supported an Ethics in AI conference, exploring how artificial intelligence is currently being used in Defence and providing a deep-dive into some of the key ethical issues associated with its application through presentations, panel debates and Q&A sessions. Through their initiative, they created a MOD acronym buster application, which is useful for everyone! As a final example, they supported DE&S' Future Capabilities Group with the robot hackathon looking at robotics and autonomous systems to inform MOD strategy. They also present to senior staff at conferences, for example at DI22 they gave thought-provoking talks on 'space' and 'dis-information in the supply chain'.

Sounds interesting? Well, you are in luck, as the MOD co-Chair position is currently vacant and we are always looking for new members - people

cannot be early career professionals forever! If you are interested and also want a leading role in DI23, discuss your career aspirations and development plan with your line manager and I look forward to hearing from you.

### Military Airlift 2023 | 5-6 September 2023 | London, UK

Defence iQ are pleased to announce the return of the esteemed Military Airlift Conference taking place on 5-6 September in London, UK.

The two-day conference will delve into the interconnected challenges faced and the solutions sought by the airlift community. Focusing on improving equipment, capability, strategy and tactics, top level speakers and decision-makers will present their solutions and experiences over a structured two-day conference.

#MilitaryAirlift



[Click here to register or for more information](#)

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Thank you for reading the first edition of our Team Defence Information Quarterly Newsletter!

As with everything we do, your feedback is always appreciated and as part of our collaborative efforts, we are always looking for opportunities to showcase the work of our members. For comments and queries, or to contribute an article to our next newsletter, due in November, please contact [jack.thompson@teamdefence.info](mailto:jack.thompson@teamdefence.info)

If you have any questions about any of the individual articles presented, each author can be contacted by clicking their names next to each of the titles.

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