



LEADERSHIP INSIGHT

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*The Centre for Army Leadership (CAL) is the British Army's custodian of leadership debate, thinking and doctrine. It seeks to stimulate discussion about leadership and to further the institution's knowledge of best practice and experience. **Leadership Insights** are published periodically by the CAL to feed and shape the leadership debate within the Army through a range of themes and ideas designed to inform and challenge its readership. The views expressed in **Leadership Insights** are solely those of the author and do not necessarily reflect official thinking of the British Army or the Ministry of Defence.*

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New Challenges for Army leaders?

Tech-Craft and Being Tri-Lingual

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'Commanders, therefore, must be systems integrators first and foremost, understanding the technology of their lethality as well as the tactical application of it – and this is what some are already beginning to call techcraft – the marriage of field craft and technology.'

CGS, [RUSI Land Warfare Speech](#), 2024.¹

In July 2024, the Chief of the General Staff spoke about 'pulling the future in the present' and laid out his vision for the transformation of the Army; in June 2025 he did so again.² Yet, for all the attention paid to doubling and tripling lethality, there were several other important asks on us all as Army leaders. In this *Insight*, we focus on the notion of 'techcraft', in the words of CGS, 'the marriage of field craft and technology';³ the partnering of tacticians and technicians at every level to build fighting power at the speed of relevance, a reference made again in 2025. Without due attention to this notion, we will not be able to maximise the potential of our soldiers as our competitive advantage: our point of difference; neither respond to the threats posed by our adversaries and equip ourselves with the right capabilities; nor to learn how to fight them effectively.

The British Army has of course brought together field craft and new technologies many times before. However, the Russian full-scale invasion of Ukraine has brought these challenges into stark relief. Military leaders must be well versed in the utility of new technologies, their applications, understand current trends, and anticipate future requirements. Techcraft is also a mindset to foster the adaptability that allows leaders to orientate to the most pressing problems

¹ ['Pulling the Future into the Present', RUSI Land Warfare Conference 2024](#), 23 Jul 24.

² [RUSI Land Warfare Conference 2025: Chief of the General Staff keynote speech](#), 17 Jun 25.

³ ['Pulling the Future into the Present', RUSI Land Warfare Conference 2024](#), 23 Jul 24.

or impactful opportunities and deliver. There have always been organisations and programmes working on innovation, research and experimentation across Defence and the Army. Project Asgard, for example, is a contemporary effort to enhance command and control; intelligence, surveillance, target acquisition, and reconnaissance (ISTAR); one-way effectors; decision making and networks for the UK force committed to the defence of Estonia, all part of a wider drive to deliver the ability to 'see further, strike harder and cheaper, and decide much quicker'.⁴ However, for change to be successful, mindsets and behaviours must shift as well, and – as leaders – we all have an important part to play. Bridging the gap between technical and operational skills is the basis of our Capability and Acquisition career stream and the need for us to be 'dual-lingual' has been known for some time. However, today, we see discussions around the value of being 'tri-lingual', which means being able to confidently speak tactics, technology and money in a way that cuts across several career fields.

This *Insight* explores what the focus on techcraft might mean within the context of the 'combination of character, knowledge, and action that inspires others to succeed'⁵ and explores this in practice through examples and testimonies. The officers below share their perspective on both techcraft and how 'tri-lingual' they feel as well as what knowledge, skills, experience and behaviours they consider important to develop, and how. The focus is necessarily narrow and limited due to the short nature of this piece, but the examples below provide a flavour of the extensive ramifications of the techcraft approach and what it means for us. Not everything will be applicable to every role, but I hope that most is. We start with one of the most well-known recent case studies.

Project Maven is the story of how the US Army turbocharged their information support to the Ukrainian armed forces through the combination and rapid development of intelligence gathering with artificial intelligence. Plenty has been written about it and the CSET report from August 2024 is a great place to start.⁶ Here the 'tri-lingual' officer/soldier is celebrated as critical to success with a mix of operational experience, understanding of science/technology, and an ability to drive acquisition and contracting strategies. The primary output has been the Maven Smart System (MSS), an AI-enabled platform for geospatial visualisation of data; many of the wider principles that are at the core of Project Maven are highly relevant for military leaders. Here 'tri-lingual' means leaders conversant with 'DevSecOps' (Development, Security and Operations); a continual iteration in concert with field troops; flexible contracting arrangements; and a continual and close conversation with industry. Again, this is close to techcraft in action, both as a mindset and as a way of organising that builds the flexibility to orientate towards the most pressing problems or impactful opportunities and to deliver. Project Asgard and the Army's RAPSTONE Directorate represent two of several Army organisations currently delivering in a similar manner.

Chris is a Royal Artillery Officer currently on the Army's Advanced Development Programme (AADP). One of the first British users of Project Maven, Chris deployed with the US 18th Airborne Corps and Security Assistance Group – Ukraine. 'I was privileged to work directly for Colonel Joseph O'Callaghan, experiencing firsthand this exceptional 'tri-lingual' officer considered a 'unicorn' amongst his peers and directed to remain in post for several rotations to see the project through. Colonel O'Callaghan was a 'Rockstar', a highly talented individual totally invested in their craft. Rockstars found their groove and do not want (or are not permitted) to move away from the mission.⁷ O'Callaghan was listened to and ruthlessly supported by 'Superstars' such as General Chris Donahue. This shows the value of having deep SMEs in post for longer than normal; posing the question of how talent needs to be appropriately recognised and rewarded to ensure key skills are not churned too soon.'

⁴ Ebbutt, G. "[British Army's Project Asgard network enhancements revealed](#)" *Janes*, 24 Mar 25.

⁵ Centre for Army Leadership, [Army Leadership Doctrine](#) (2021), AC 72029.

⁶ Probasco, E. "Building the Tech Coalition" *Centre for Security & Emerging Technology*. Aug 24.

⁷ See Kim Scott's classification in her book *Radical Candor: Be A Kick-Ass Boss Without Losing Your Humanity* (New York, St Martin's Press, 2017).

Alan is a Royal Signals Officer working in an innovation hub called 'jHub'. He was intimately involved in projects helping Ukrainian partners. 'My professional training has given me a great grounding in technologies and potential uses in a military context, specifically the Battlespace Technology Course on promotion to Major. My experiences in the capability and acquisition world have been central: working on battlefield communications programmes which are large, slow and beset by delays and funding issues, versus the jHub focused on getting a Minimum Viable Product (MVP) into the hands of the user as fast as possible. Personal development also remains key, the Harvard Business School's Disruptive Strategy Course was recommended by others in innovation and had a great impact on me.

Being tri-lingual to me means understanding three things. The first is using lessons from current conflicts and your own experiences to bring context to industry and guide them. The second is understanding the technology, what is in the market, its maturity and how could it be used in a military context, and then being able to explain it simply. The third is understanding the market itself: how it approaches problems; what trends there are; how companies might make money; and how can the military help them achieve this?'

Ron is an armoured and one time engineering officer now currently delivering Pj ASGARD.

'There is a risk in the British Army that we often over celebrate those few who show technical flare within the military. This, of course, is bound to be the case within our extremely standardised training system. In the era of software-defined warfighting, we must however remain totally obsessed with our core purpose, which is to come close with and destroy the enemy. 'Trilingual' is rare and even in the basics there is enormous room for improvement. For example, commercial skills could be improved by simply training our soldiers and officers to take accountability and ownership of funds at the earliest opportunity. We must spend money as if it is our own and encourage everyone to understand value for money.

Trilingual refers to being a 'polymath'. First and foremost, we are all war fighters; we are born into this when we join the Army, and it becomes our primary language. After perfecting that we should look to diversify and select other languages of interest. For me, that is programming and data analytics (fashionable now) however for others it might be philosophy, endurance sports, or art. All these fields exercise different parts of the mind and when combined with creativity they produce results and approaches unforeseen before. So what? Be a war fighter first, be more than a war fighter second. We must prioritise being multilingual and make time for it or we risk becoming (or continuing to be) unidimensional and uninteresting on the battlefield. In short, know all you can about tactics, and know enough to be dangerous when it comes to technology and commercials (but leave the detail to the experts).'

Helen is a onetime Royal Signals Foreman of Signals now Late Entry ETS officer in the Information Directorate delivering the data network for Pj ASGARD.

'Being an ex-Foreman of Signals with over 20 years engineering experience across the breadth of communications platforms has provided me with a technical background enabling the understanding of technologies within the military context. I have experience of project management but I have never been fully exposed to finance and commercial processes, which are vital to enabling rapid delivery. Being tri-lingual to me means not only understanding your own area of expertise, but also the underlying technology. The 'third arm' of commercial is about understanding the freedoms and constraints within your area to enable innovative practice. As the world becomes ever more technical, 'business as usual' must be replaced with the drive to innovate. Not in the context of doing 'more with less' but incremental improvements and exploiting opportunities. Without this we see 'stove pipes' which result in limited interoperability. Being tri-lingual I believe would reduce this risk.

For me in ASGARD, my technical knowledge and understanding of the military context have been my saviour; however, humility is as important as KSE (Knowledge, Skills and Expertise). The learning curve required to understand the commercial process was immense, and regardless of how hard I tried to learn, without humility and the support of the team, I would

have failed. Another key characteristic of being tri-lingual is 'people skills.' Being able to engage with industry and speaking their language also enables professional relationship building and provides the ability to see through the fog of sales pitches and accurately assess options against the need of the business.'

Rich is an armoured infantry officer working in RAPSTONE, the Field Army Directorate focused on fielding transformative capabilities to the 'fight tonight' force. My role is to help turn a product into an operational capability; in this case, the product is the 'ASGARD System'. To do this, I must understand that system, how to procure it and how to integrate it into the force.

My earlier knowledge of the digital system was limited to my Warrior COMBAT terminal. I have been able to understand a lot, and quickly, by focussing on an operational problem set – in this case Estonia – and through being close to the experts, both those in D Info, but also the end-users in the Field Army. Although not responsible for procurement, understanding the process allowed realism to be inserted into the process. The short Capability and Acquisition courses available through Cranfield University are helpful for providing a foundational understanding of the processes, as are the commercial team in Army HQ. Integrating the capability (also known as 'fielding') is the main role of the Field Army in this process. I found two things critical to making this work. Firstly, leaning on previous experience allows you to stay honest on the 'real-world' requirements of deploying a capability. Secondly, and most importantly, is working in tandem with the end-users. Maintaining regular forums, reinforced by orders, allows the end-user to inform, influence and aid in the planning of fielding.'

Conclusion

In talking about techcraft, the Chief of the General Staff asked the Army to embrace and to drive the technological changes that we urgently need. As a mindset, techcraft is vital if we are to exhibit the ability to change 'in contact' as we have seen the Ukrainian armed forces do with devastating effect. Much of what we learn and train for is of course entirely complementary to this. Mission Command is about decentralisation and equipping our soldiers with the resources that enable them to outthink and outmanoeuvre the enemy. The difference now is that we must consider a much greater range of technologies and potentially develop our weapons much further forward and faster than we have been used to. This approach reaches across the Force, both deployed and at home. As leaders, we can consider the example of tri-lingual 'unicorns' such as Colonel Joe Callaghan and ask ourselves if we really understand the technology we use, what is coming and how we can, as leaders, begin to engage with it. Not everything will be applicable for everyone, and we must not forget that as soldiers we still must be prepared to close with and kill the enemy, but the more we can embrace techcraft, the more chance we have of getting them first.

Questions

1. How much do I really understand about the current technology in my own area of expertise? Can I explain its positives and limitations to my peers? If not, where can I find out more?
2. What the technologies of the future likely to be? Can I see how they are going to change the way we fight, operate, and train?
3. Do I understand how to use resources within my own part of the organisation to effect change?

References:

- ['Pulling the Future into the Present', RUSI Land Warfare Conference 2024](#), 23 Jul 24.
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