

# Giving people the edge

How will we recruit, train and retain our Armed Forces in the future? It's an important question – one that seeks to ensure UK Defence maximises the talents of its people and maintains a strategic edge in the future.

**T**HE Strategic Edge Through People (SETP) 2040 project is at the centre of finding answers. Specifically, SETP (pronounced 'set-pee') is exploring concepts that could enhance human performance, accelerate learning and support cultural transformation within MOD. The aim of this is to provide MOD with evidence-based options on how the UK's future force is recruited, trained and retained by 2040.

In November, more than 250 people from military, MOD, wider government, academia and industry gathered at Tidworth Garrison Theatre for the second SETP2040 Symposium. The event, with many military personnel present, is important for ensuring research is on the right track to meet the needs of those who will eventually exploit it.

Many of the delegates in military uniform were young recruits – a key audience for SETP2040 research, as many of the senior personnel and decision makers will have likely retired by the time any outputs from this research are seen in service.

The scene for the symposium was set by ballot boxes in the theatre entrance, asking delegates to vote for which 'future world' they'd like to serve in: green tokens for Future World A, where autonomy and virtual learning is commonplace, machines have replaced dangerous front line roles and decisions are made by artificially intelligent systems; and purple tokens for

Future World B, where autonomous systems are monitored by humans who can take control at any time, machines enable human workers rather than replace them, and people have responsibility for decisions but are aided by machine inputs.

These two distinct stances – the votes for which looked fairly balanced during registration – could be sensed throughout the

Trying out virtual reality technology. Could this be how troops train in the future?

symposium, in the questions after presentations and in workshops.

Air Vice-Marshal Garry Tunnicliffe, Assistant Chief of the Defence Staff (Personnel Capability), seemed firmly on the purple token side in his keynote opening speech. He said, "Defence will need to increase outputs with fewer resources. Advances in science and technology can achieve savings while maintaining, if not extending, our winning edge. We're not replacing humans with machines, but teaming them. Technology should enhance capability and deliver efficiencies but humans remain at the heart of decision making."

One example of how machines can be teamed with humans is through training. Virtual mentors – not just in the classroom but also to advise in the field – could be something we see in the future; they could even connect with humans on an emotional level. EMPATIC (Emotion Measuring Partner Agent for Training Control) is showing how a machine could recognise human emotions, such as stress, anger or enjoyment, and respond to this in real time to adjust its behaviour. In training, this could get more out of the student and accelerate learning.

Other areas of research include training to boost troops' mental resilience and motivation in order to help them adapt to complex changing environments. Personnel could also learn to self-monitor for things like fatigue to maintain peak performance and be empowered to self-administer interventions to improve their own wellbeing.

The idea of a more personalised approach to personnel was highlighted by the Chief of Defence People (CDP), Lieutenant General Richard Nugee, who appeared via pre-recorded video. He said: "We have already personalised medical intervention if people need it, so why not other aspects, like training and even terms and conditions? How can the individual get the most out of being in the Armed Forces, and how do Forces get the most out of personnel?" This, he said, would be key to remaining agile in the future.

CDP also spoke about how we need to look at social media and better exploit data – particularly Big Data – to retain and recruit. He asked delegates to consider: "Has social media changed the way people view the Armed Forces? With two years of not having troops return from conflict, while the UK has some involvement in Syria, has this changed society's view? Is it affecting our ability to recruit? How do young people respond?"

Understanding social media outputs and taking account of people's views could go a long way to MOD being more agile and responsive as an employer. This

would not only be better for engaging with personnel and potential recruits but would also improve efficiency and save money. A novel digital footprints study is supporting this concept, as well as how to analyse suitable candidates for recruitment.

Crucially, the symposium gave the opportunity for feedback and debate. This was achieved via a world café session and workshops for each of the studies. During the café, delegates were asked to choose a question from the menu and capture their thoughts by writing on the tablecloths. Debates about topics from risk appetite to ethics were stimulating and quite deep at times!

Each study team ran two hour-and-a-half workshops, involving discussions and table-top exercises, with a small selection of delegates. Workshops were designed to elicit feedback about proof of concepts, risks, benefits and potential barriers to exploitation, which will help inform the direction of the next phase of research and experimentation for each study.

Delegates were asked to leave their final thoughts before the end of the event. One offered a poignant observation: "The truth is, the pain of war is the reason why people seek to avoid it. If technology offers the false premise of 'clean' war, it ignores the reality that war will lead to suffering. Technology can assist the selection, training and treatment of soldiers but it is – and must remain – a tool, not a replacement, for soldiers in the field of battle."

Attendees agreed with this sentiment, and that of the AVM; the ballot result showed more than three times as many people voted for a future world in which intelligent machines enable defence people rather than replace them completely. [1]

**The SETP2040 project is delivered by Dstl in partnership with BAE Systems' Defence Human Capability Science and Technology Centre (DHCSTC).**

**Full details of SEPT2040 research can be found on WikiD (for Dstl staff) or contact [distil@dstl.gov.uk](mailto:distil@dstl.gov.uk).**

Delegates tried out the latest research outputs.

