MANATŪ KAUPAPA WAONGA
NEW ZEALAND MINISTRY OF DEFENCE

Long-term Insights Briefing summary 2026

HOW TECHNOLOGY INNOVATIONS ARE LIKELY TO INFLUENCE NEW ZEALAND'S DEFENCE CAPABILITIES BEYOND 2035

FOUR THEMES

Harnessing the power of data: C5ISRT technologies will elevate software as the core capability

The future of Command, Control, Communications, Combat Systems, Cyber, Intelligence, Surveillance and Reconnaissance (ISR), and Targeting capabilities (C5ISRT), is about turning more data, into deeper knowledge, for maximum decision advantage.

Innovations in C5ISRT will have a particular influence on defence investments in:

- *IT Infrastructure*
- *Computational power*
- *Integrated communications*
- *Intelligence & combat management systems*
- *Next-generation sensing*
- *People & training*

Next-generation effectors: Technology innovations will widen the continuum of effectors available to defence forces

A wider range of offensive and defensive effectors will operate along the continuum between peace and war, transcending boundaries between traditional domains. These effectors will complement, not replace, conventional capabilities.

Innovations in future effectors will have a particular influence on defence investments in:

- *Offensive & defensive cyber*
- *Information warfare*
- *Space*
- *Directed Energy*
- *Sub-threshold effects*
- *Test & development infrastructure*

Human-Machine Teaming: Defence forces will increasingly leverage operating models founded on Human-Machine Teaming

HMT is a force multiplier for future defence forces. Machines will take on tasks they can do better than humans, freeing up personnel to focus on duties that only they can or should perform.

Innovations in HMT will have a particular influence on defence investments in:

- *Reseach & Development*
- *Attracting expertise*
- *Robotic Autonomous Systems*

Expeditionary Sustainment: Technology will assist, but not resolve, expeditionary sustainment challenges

The wicked problem of supporting expeditionary defence forces will be assisted, but not solved, by technologies that enhance the agility, survivability, responsiveness, and efficiency of military sustainment functions.

Innovations in expeditionary sustainment will have a particular influence on defence investments in:

- *Research & Development*
- *Energetics*
- *Advanced logistics management*
- *Robotic Autonomous Systems*

THREE SHIFTS

Adapting to these four technology themes will create significant change and is not without challenges, risks, and uncertainty for Defence. This research identified three shifts that carry operational, policy, and system level implications for defence systems.

From human accountability by default, to human accountability by design:

When acquiring advanced military capabilities that leverage EDTs, human accountability, and adherence to domestic and international law, must be built into the system design.

From software supporting hardware, to hardware supporting software:

Military success will be increasingly defined, not by platforms and capabilities, but by the software that operates and connects them. The increasing importance of software carries implications for defence personnel, and for capability planning, acquisition, and management.

From public engagement, to public inclusion:

Public trust in defence forces is earned, not assumed. Ensuring Defence maintains public trust will remain essential, and possibly more challenging, in an environment defined by increased contestation and technological change. It will be important to ensure that long-standing democratic, legal, humanitarian and military conventions continue to apply.

Looking ahead, technology innovations will provide new ways to deepen interoperability and technical integration. Keeping pace with technology innovations will be critical for defence force interoperability as well as meeting minimum theatre-entry standards of the future. Any benefits of interoperability must carefully balance the considerations around cost, sovereignty, legality, and social licence.

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