



WARGAMING FOR FUTURE FORCE PLANNING

Date: November 21, 2025

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KEY EVENTS

On November 21, 2025, David Redpath, Senior Wargames Designer and member of the Canadian Joint Warfare Centre and the Department of National Defense, presented *Wargaming for Future Force Planning* at the 2025 West Coast Security Conference. The presentation was followed by a question-and-answer period with audience members and CASIS Vancouver executives. The session addressed the purpose and design of wargames, their role in military decision-making and force development, their limitations, and their value when integrated with exercises and analysis from contemporary conflicts.

NATURE OF DISCUSSION

The discussion examined wargaming as a practical and analytical tool for force planning, capability development, and strategic decision-making. Mr. Redpath outlined the advantages of wargames when used alongside live exercises and lessons drawn from modern conflicts. The session explored the distinction between tactical and strategic wargames, their economic and institutional benefits, and their applicability beyond kinetic conflict. An interactive workshop component was used to demonstrate core wargaming concepts in practice.

BACKGROUND

Wargames were presented as a means of discovering variables and interactions that may not be apparent through abstract analysis alone. By rehearsing potential future scenarios, wargames allow participants to explore conflicts and competitive dynamics in a structured environment, reducing untested assumptions in decision-making.

Mr. Redpath defined wargames as events that depict action and reaction between two or more adversaries within a realistic representation of time, space, environment, capabilities, and constraints. A defining feature of effective wargames is the presence of uncertainty, including the possibility of deception by adversaries, which forces participants to respond as they might in real-world conditions. Wargames can range from tactical engagements, such as small-unit operations, to strategic campaigns played out over days or weeks.

The scope and scale of wargames were framed as highly flexible and cost-effective. Economic efficiency was identified as a major advantage of wargaming. Compared to live exercises involving high-cost platforms, wargames allow militaries to explore new tactics and concepts at a fraction of the cost. Their simplicity, portability, and minimal infrastructure requirements enable them to be conducted in varied settings, including online environments. Wargames also provide opportunities to test alternative approaches and operate across different security classifications. Their interactive nature was highlighted as particularly effective – producing measurable improvements in comprehension and retention compared to passive instruction.

Mr. Redpath emphasized that wargames are most effective when they bring together experts from diverse domains, such as land, air, maritime, space, logistics, maintenance, and sustainment. This interdisciplinary participation often reveals vulnerabilities or opportunities that would otherwise be overlooked. He cited examples where insights generated through wargaming informed subsequent force structure and procurement decisions.

Wargames were positioned as one component of a broader analytical cycle that includes exercises and real-world conflict analysis. While a wargame alone cannot validate the feasibility of a strategy, it can help identify options that merit further testing through exercises. Conversely, data and observations from ongoing conflicts can feed back into wargame design. Mr. Redpath illustrated this iterative process with examples where lessons from the war in Ukraine prompted a return to wargaming after live exercises revealed flawed assumptions.

A central theme of the presentation was that wargames are inherently fallible. Mr. Redpath stressed that they cannot replicate human factors such as fear,

fatigue, stress, and error, which shape real combat behavior. Participants in a wargame do not face physical conditions that mirror those of the battlefield and therefore do not revert to muscle memory in the same way as soldiers in combat. Examples from recent conflicts were used to illustrate how seemingly minor human errors, driven by exhaustion or the flog of war, can have outsized tactical consequences that wargames may fail to anticipate.

Question and Answer

What are the most significant changes that the Russian war in Ukraine has prompted for strategic planning and war gaming?

Two major lessons can be identified. First, conflicts between relatively well-matched adversaries can become prolonged and attritional, contradicting early assumptions of rapid resolution. The duration of the Ukraine war has challenged planning assumptions within NATO and prompted a reassessment of readiness for sustained conflict. Second, the rate of ammunition expenditure observed in Ukraine has exposed critical shortfalls in stockpiles and industrial capacity across NATO states, driving changes in both wargaming scenarios and real-world production planning.

What aspect of the modern conflict environment has been the most disruptive to war gaming and strategic planning in recent years? Are there any weapons or use of weapons that has prompted a 'rethink' on this front?

The increasing use of unmanned and semi-autonomous systems across land, sea, and air domains have proved disruptive to traditional planning. Personnel shortages and equipment constraints have accelerated reliance on such systems, particularly in Ukraine. This shift has raised legal and ethical questions, as reduced human control over weapons systems challenges existing interpretations of international humanitarian law.

How does Canada's approach to war gaming differ to that of other states? Specifically, are you aware of major discrepancies between NATO states and countries like Russia, China, and Iran? Or even perhaps between discrepancies between NATO states?

Practices vary based on resources and institutional philosophy. Canada operates smaller teams but conducts a high volume of games, while the United States tends to maintain large, service-specific wargaming organizations. China has invested heavily in wargaming, including university-based competitions linked to military exercises. Russia retains wargaming capabilities, though details remain opaque, while Australia was highlighted as particularly innovative among Five Eyes partners.

KEY POINTS OF DISCUSSION

- Wargames enable the exploration of future conflicts and competitive scenarios, reducing uncertainty in decision-making and supporting analysis beyond purely military considerations.
- Wargames can be designed at tactical or strategic levels and are valued for their economic efficiency, flexibility, repeatability, and ability to integrate diverse expertise.
- Wargame exercises are inherently imperfect, as they cannot fully account for human factors such as fear, fatigue, and error, underscoring the need to use them alongside exercises and real-world conflict analysis.

FURTHER READING

Talbot, M., Arbour, E., Jeffrey, J., Painchaud, G., & Redpath, D. (2025). *Medical wargames: Preparing for success in high-intensity conflict*. *Canadian Army Journal – Short Bursts*.



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