Innovating the Future: Al-Driven Simulations as a Catalyst for Civil-Military Engagement



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acaCIMICs Vol. 1: *AI-Driven Simulations as a Catalyst for Civil-Military Engagement*

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Why Simulations Matter for Civil-Military Engagement

- In today's fragmented world, civilians and military actors often lack mutual understanding.
- Simulations offer a bridge & immerse participants in complex decision-making roles.
- These experiences foster empathy, reveal tradeoffs, and challenge assumptions.

What We've Learned from the Field

- At Valens, we run simulations for universities, policymakers, and the private and defense sector.
- Many participants say it's their first real encounter with national security dilemmas.
- Simulations shift mindsets and build understanding between civilian and military spheres.
 - <u>Use Cases</u>: Stimson Center and National Defense University, Canada's Department of National Defence, Georgetown University, U.S. Foreign Service Institute, and Global Counterterrorism Forum







The Valens-Style of Game Design: Immersive Exercise

- Immersive Media: News, social media, videos, and memos create a rich, believable game world
- **Deep World-Building**: Step into a world that feels alive closer examination makes it better, not worse
- **Compelling Stories**: Humans are storytellers. Games with strong narratives teach lessons that stick
- **Fun Factor**: Insightful and entertaining. These games are as fun to play as they are meaningful

Profile: Meir Cohen The 'Steady Hand' Strategist Who Doesn't Blink

Written by: Yael Azoulay, Senior Correspondent, TIME, Jerusalem Bureau Published: February 4, 2026

If Israeli national security has a memory, it's Meir Cohen. Thirty years of wars, warnings, and nearmisses have shaped his reputation as the person who sees the next crisis coming while everyone else is still arguing about the last one. A veteran intelligence analyst turned senior advisor at the Ministry of Defense, Cohen is not interested in bravado or buzzwords. He's spent his career tracing the Middle East's escalation patterns – the flare-ups, the lulls, and the subtle shifts in posture that "he knows" signal something far worse is on its way.

Born in Be'er Sheva to Holocaust survivors, Cohen came of age during the tail end of Israel's post-Oslo whiplash. He studied at Tel Aviv University and earned a master's in war studies at King's College London, where classmates recall him as deeply skeptical of ideology, but obsessive about detail. That skepticism shaped a worldview built not on hawkishness or hope, but on contingency planning.

Cohen's pragmatism has earned him quiet respect across Israel's defense and diplomatic communities – and suspicion from some within his own camp. When asked about denuclearization and talks with Iran, his repeated proposals for a strong-but-imperfect deal have raised eyebrows among more hawkish voices, particularly within Mossad and Likud's right flank. But he remains unconvinced of their objections. "We don't need a perfect deal," he said at a recent Tel Aviv policy forum. "We need one that works long enough for Israel to survive, and the next government to fix the rest."

Cohen may not be the loudest voice in Israel's security apparatus. But as the region edges toward another high-stakes year, he has the ear of Prime Minister Netanyahu.



<u>The Problem:</u> Games are currently inaccessible to many and time-consuming to create – and even more so - to adapt...

LLMs are the solution.

- LLMs are the great equalizer and democratize access to learning through gaming
 - Simple games? Easy to create.
 - Complex games? More immersive and epic than every before.
- LLMs allow you to build a world that lives and breathes with intense detail
- LLMs allow you to adapt pre-existing games to a changing environment.





Protests Surge Across Iran as Azadi Girls' Lyrics Become Rallying Cry

7:49

Demonstrations have erupted in 60+ cities, including traditionally conservative strongholds and throughout the religious community; officials report the highest level of youth participation since 2009



Al as a Force Multiplier

- Traditional exercises are time- and resource-intensive.
- Al enables faster, smarter, and more scalable design.
- Facilitators retain control over learning outcomes and scenario design, while AI manages complexity, logistics, and adaptation behind the scenes.
- Providence, Valens' AI-powered simulation platform, allows users to build missions, update settings, generate media, and adapt mid-game – all in minutes.
 - Our goal: Make it easy to engage both civilian and military stakeholders.



20K

422K

1] 2.3K

0 524

When they say it's just enrichment and not weaponization 🙂 #ViennaSummit2026 #IranDoesntKnock /IFNN **IRAO** V 7,435 likes ShinBetMemes Iran walking into Vienna like it's Aroma and they just skipped the line. Bro. We see you. 🛎 靠 **d** ... more View all 566 comments 0 TelAvivTrafficTruths Imagine trusting Iran with enrichment when they can't even handle a group chat without leaking it to a Telegram channel more FalafelStrategist Bro really said "death to 0 inspections" and showed up like it's a job interview

ShinBetMemes . 1w

Petah Tikva, Israel

...

Al-Driven Simulations for Civil-Military Cooperation

- •Accelerated Civ-Mil Planning: Quickly build and adapt exercises for real-world coordination.
- •**Responsive Scenarios**: Create new games as civil-military dynamics evolve.
- •Bridging Sectors Through Shared Experience: Expand access and foster empathy through role-based training.
- •Integrated Preparedness: Support whole-of-government and whole-of-society response through simulation.
- •From Fragmentation to Collaboration: AI turns disconnected systems into cohesive civ-mil action.





Final Thoughts

Simulations have always brought civilians and military professionals to the same table.

Now, with AI, we can scale that connection. Shared insight can now become shared capability.

The future of civil-military cooperation isn't just collaborative. It's immersive, adaptive, and within reach.

Thank You!

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Effective and Responsible Use of Large Language Models in Strategic Wargaming



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Effective and Responsible Use of Large Language Models in Strategic Wargaming

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Data Science in Military Decision-Making: Foci and Gaps (Meerveld & Lindelauf, 2024) Effective and Responsible Use of LLMs in Strategic Wargaming

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Ministerie van Defensie

Effective and Responsible Use of LLMs in Strategic Wargaming



Wargames and AI: A dangerous mix that needs ethical oversight

By Ivanka Barzashka | December 4, 2023



Ivanka Barzashka

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vanka Barzashka is ar entrepreneur and scholar working at the intersection technology and internation security. She has a background in physics... More



The Wargaming Lifecycle

- Initiation
- Design
- Development
- Execution
- Validation
- Refinement

Successful Professional Wargames A Practitioner's Handbook



Graham Longley-Brown

Editor: John Curry



What is the potential of LLMs to produce useful texts that support wargaming activities?





Contextualization

- LLM selection: ChatGPT 4.0
- Retrieval-Augmented Generation
- Wargame material: CONTESTED (Dstl, UK)
- Policy documents





Generation

- Selected tasks:
 - 1) Draft a scenario
 - 2) Draft a player briefing
 - 3) Draft an adjudication narrative
 - 4) Draft a game design
- Prompting

Contextualize	Provide context to LLM		
Generate	Generate LLM output		
Assess	Assess quality		
Compare	Compare quality		
Analyse	Analyse & discuss findings		



Example, scenario

Create me a new scenario, focussing on a conflict in the arctic region, where resources and minerals are becoming subject of dispute as a result of the melting ice cap.

Use 8 players, using the same colours as the provided scenarios. Let the scenario be fictitious but realistic. Let the history and the start state of the scenario be as elaborative as the provided scenarios.

The history part must at least contain 400 words. The start state at least 200.

Also consider special rules for this scenario. Only create those if this would add value for using the scenario in an actual wargame.



Scenario: The Arctic Ambition

Complexity: High Minimum Players Required (8): Red, Yellow, Blue, Green, Cyan, Pink, Black, White

History

In the late 21st century, the Arctic region, once a desolate expanse of ice, has become the frontier for a new global race. The melting ice caps, a stark indicator of climate change, have revealed vast deposits of rare minerals and opened new navigable sea routes. These changes have not only attracted the attention of global powers but also sparked a complex web of geopolitical tensions.

For decades, the Arctic was governed by a fragile balance of power, upheld by the Arctic Council, an international body comprising eight countries including Red, Blue, and Green, which advocated for sustainable development and cooperation. However, as the ice receded further, the untapped wealth of the Arctic, including vast reserves of oil, gas, and rare earth minerals, became too enticing to ignore.

Red, a major international power, was the first to assert its dominance, extending its military presence under the guise of scientific research and search-and-rescue operations. Blue, another major power with significant technological capabilities, responded by increasing its investments in Arctic infrastructure, aiming to ensure its access to the emerging sea routes and to counter Red's growing influence.

Yellow, Green, Cyan, and Pink, countries with direct Arctic coastlines, found themselves caught between the interests of the larger powers. Yellow and Green, traditionally focusing on the protection of their sovereignty and the Arctic environment, began to militarize their regions. Cyan, with its economy heavily dependent on maritime trade, saw an opportunity to expand its influence by advocating for open sea routes. Pink, meanwhile, sought to capitalize on the new mineral wealth, investing heavily in mining technologies.

Black and White, although not Arctic states, have significant interests in the region. Black's economy is highly dependent on energy resources, making the Arctic's oil and gas reserves critical to its future. White, a global leader in environmental advocacy, has been vocal in its opposition to the exploitation of the Arctic, pushing for international treaties to protect the region.

The situation reached a tipping point when a satellite revealed a massive deposit of "Unobtanium," a hypothetical mineral with unparalleled energy properties, located in a disputed area of the Arctic. The discovery led to an immediate escalation, with Red and Blue deploying naval fleets to the region, and Yellow, Green, Cyan, and Pink announcing joint military exercises. The world watched as the Arctic, once a symbol of untouched wilderness and cooperation, became the center of a potential global conflict.



Start State

The race for "Unobtanium" has led to an unprecedented militarization of theArctic. Red and Blue have established forwardoperating bases on disputed islands, with naval and air units patrolling key areas. Yellow and Green, despite their military enhancements, find themselves in a precarious position, seeking alliances to bolster their defenses without escalating tensions further. Cyan and Pink, leveraging their economic strengths, have initiated mining operations, albeit under the threat of military intervention by Red and Blue.

The discovery has also reignited dormant territorial disputes, with all Arctic states (Red, Yellow, Blue, Green, Cyan, Pink) asserting overlapping claims over the region containing "Unobtanium." International bodies and treaties that once managed Arctic affairs are now under strain, as member states prioritize national interests over collective agreements.

With the Arctic Council paralyzed by divisions, and with Black and White pushing for a diplomatic resolution to prevent an environmental catastrophe, the stage is set for a complex conflict where diplomacy, resource management, and military strategy will determine the future of the Arctic.

Special Rules - Arctic Operations

- I. Melting Ice Mechanics: The melting ice caps introduce dynamic map changes At the start of each turn, roll a d20; on a roll of 15 or higher, one ice zone melts, becoming navigable water. This can open new routes or access to resources but also exposes new territories to conflict.
- 2. Environmental Impact: Players engaging in mining or military operations in the Arctic must roll a d20 at the end of each turn. On a roll of 1-5, their actions have caused a significant environmental disaster, leading to global condemnation and a temporary suspension of their operations in the region (-2 to their economy tracker for two turns).
- 3. Technological Race for Unobtanium: To simulate the technological and logistical challenges of extracting "Unobtanium," players must invest in research and development. This requires dedicating an action slot and rolling above a 15 with a d20 to successfully develop the necessary technology. Success grants significant economic and military advantages, reflecting the strategic value of "Unobtanium."

These special rules are designed to add layers of strategic depth to the scenario, emphasizing the challenges of operating in the Arctic, the importance of environmental stewardship, and the high stakes of securing a game-changing resource.



Example, adjudication

- Provide an immersive narrative for the facilitator, when Red decides to execute an action with code MII against Blue in scenario 1.
- For the Red-Blue relationship, see Game Information in the Player Setup Cards for scenario 1.
- The total score of the dice roll, including the effect of modifiers, is 2.
- Use the guidelines of the rulebook and the adjudication outcomes publisher. Take information from scenario 1 into account when drafting the narrative.
- End your narrative with the clear results on the modifiers that are stated in the adjudication outcomes publisher at code MII in the column that indicates the outcome of 2.
- Provide a plausible explanation for the resulting change in modifiers.



MILITARY ACTIONS (M11-M12)

CODE	ACTION	MODIFIER	GREAT (19-20)	GOOD (10-18)	BAD (3-9)	7 ERRIBLE (1-2)
			+1 COMBAT TOKEN TARG: -2 MIL -1 POL	TARG: -1 MIL -1 POL	-1 DIP TARG: -1 POL	-1 INF -1 DIP TARG: +1 POL
M11	CONDUCT	MIL COV	"The attack strikes military command and control nodes, severely degrading the effectiveness of enemy military functionS."	"Missile strikes damage a mixture of civilian and mili- tary infrastructure, causing minor dis- ruption to enemy military capabili- ties "	"The missile attack damages civilian infrastructure but shows no sign of affecting military preparedness of capability."	"The missile strike causes severe dam-
	MISSILE					age to civilian infra- structure, with im- ages of the attack published online prompting allega- tions of war
	STRIKES					
				ues.		crimes."



In the strategic theatre of Scenario 1, the Red faction, under escalating tension with Blue, launches action code M11 – a missile strike intended to cripple Blue's operational capabilities. However, the dice of fate roll to a disastrous 2, triggering the worst possible outcome.

The narrative unfolds with Red's missiles, veering off course, ravaging civilian structures within Blue's domain. The world watches as the calamity unfolds, with live feeds and aerial footage capturing the scale of the devastation. Red's intended show of strength mutates into a scene of heart-wrenching tragedy, the debris of their action a stark testament to the folly of war.

The consequences are immediate and severe:

- Red's Influence (INF) diminishes by 1: The global community recoils in horror, and Red's standing, already precarious, plummets. What was meant to be a demonstration of military precision is now a diplomatic disaster, with allies retreating and neutrals turning their backs.
- Red's Diplomacy (DIP) also decreases by 1: As cries for justice rise, international bodies convene in urgent sessions. Red's envoys face cold shoulders in halls where they once commanded respect, their pleas and explanations drowned by the clamor for accountability.
- Blue gains 1 in Political (POL) score: From the ashes of destruction, Blue's political stature ascends. Sympathy pours in, alliances are fortified, and Blue's narrative of victimhood garners untold support, turning a moment of vulnerability into a pulpit of political leverage.

In the aftermath, as Red grapples with the fallout, Blue maneuvers the political chessboard with renewed vigor, bolstered by the world's goodwill. For Red, it is a moment of reckoning; for Blue, an unexpected opportunity to galvanize global opinion and fortify their position.



Quality metrics

- Effectiveness
 - Comprehensiveness
 - Fidelity
 - Contribution to immersion
 - Relevance

Contextualize	Provide context to LLM			
Generate	Generate LLM output			
Assess	Assess quality			
Compare	Compare quality			
	101 Otototototototototo			
Analyse	Analyse Analyse & discuss findings			



Online survey

- Independent review
- 27 wargame experts
- Scoring human-created texts (HCTs) and LLM-generated texts (LGTs)





Statistical significance



- Sub-components of *Effectiveness*: high correlation
- Separate paired samples t-tests per task
- Results
 - Scenario:
 - Player Briefing:
 - Adjudication narrative:
 - Game design:

no difference between HCTs and LGTs LGTs score significantly higher LGTs score significantly higher high average scores LGTs (8+)

Conclusions

- 1. Quality assessment method
- 2. Capability LLMs
- 3. Accessibility wargaming
- 4. Human-AI teaming
- 5. Speed of relevance



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Thank you!



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Enhancing Military-Civilian Collaboration through LLM-Supported Wargaming



<u>Mrs. Elçin Ada Sayin</u> Research Task Group "Inclusion of Generation Z+ to Defence Organisations" (SAS-208) NATO Science & Technology Organisation

Case Study Demonstrating Innovative Practice: Empowering Military-Civil Organizations with No-Code AI Platforms

