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Content

Where Ideas Meet Action	4
The Strategic Value of the Academic Network	5
acaCIMICs Volume I: Experimentation	6
Innovation for a Collaborative Future	6
Academic Presentation Session I: AI & New Technologies	7
Innovation in the Future: AI Driven Simulations as a Catalyst for Civil-Military Engagement	8
Effective and Responsible Use of Large Language Models in Strategic Wargaming	10
Enhancing Military-Civilian Collaboration through LLM-Supported Wargaming	12
Case Study Demonstrating Innovative Practice: Empowering Military-Civil Organizations with No-Code AI	14
Academic Presentation Session II: Wargaming	17
From Maps to Minds: Human Geography Enabled Wargames	18
VR Integration for Tabletop Wargaming	20
Gamifying CIMIC in Multi-domain Operations and Whole of Society Approach	22
From 'HOPE AGE' to 'Imagined Future N': History, Gaming Experimentation and Exploring Civil-Military Futures	24
Academic Presentation Session III: Simulations & Exercises	27
3D Immersive Environments; Strategies for Heritage Protection Training within CCOE	28
Strategic Simulation Exercises	30
NATO CIMIC Analysis & Assessment in Exercises	32
Academic Sessions IV: Case Studies	35
War in Every Corner: Ukrainian Civil-Military Cooperation Analysis	36
From Blue Helmets to Green Helmets: A New Role for the CAF in Canada and the World	38
Securing CIMIC Operations Against Cyber Threats: Lessons From Modern Cyber Warfare	40
Between Association and Dissociation: The Legitimacy Politics of CIMIC Experimentation	42
Conclusion	46

Where Ideas Meet Action

**NATO
Accredited**

Location

- The Hague, Netherlands

Branches

- Training & Education
- Concepts, Interoperability, Capabilities
- Lessons Learned & Analysis



People

**Mission
& Vision**

Our mission is to assist the Alliance and its partners with effective and interoperable civil-military cooperation through unique expertise, responsive education and training, cohered concepts, valuable lessons learned and future-oriented experimentation.

We are the catalyst working towards a contemporary and future environment where military and non-military actors are seamlessly integrated into military activities, enabling a comprehensive approach to address complex challenges in peacetime, crisis, and conflict.

Website

**7 Sponsor
Nations**

- Germany
- Hungary
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- Netherlands
- Poland
- Latvia
- Slovenia



The Strategic Value of the Academic Network

The CCOE's Academic Network, established to bridge military operational needs and academic research, plays a vital role in advancing civil-military cooperation (CIMIC). Through academic partnership, the CCOE embrace fresh perspectives and independent research, enabling adaptability and forward-thinking in response to evolving challenges. These collaborations are essential not only for enhancing operational readiness but also for ensuring that strategies are informed by the latest research and best practices. Aligned with NATO's Comprehensive Approach and interoperability efforts, the Academic Network integrates cultural, economic, civil, and military viewpoints, thereby fostering holistic solutions to complex security issues and supporting informed decision-making.

By filling gaps in research and strategic analysis, the Network strengthens our strategic advantage across all phases - peace, conflict, and crisis. In times of peace, it supports long-term strategy development, policy formulation, and research, ensuring that military strategies benefit from deep academic insights. This is already the integration stage of academics being involved, leading to the preparation stage for possible futures (Day Zero Integration). During crises and conflicts, the platform enables rapid knowledge exchange and adaptability, allowing both sectors to respond effectively to emerging challenges. Establishing and sustaining such platforms is, therefore, essential for creating a robust, responsive, and informed defence strategy.

On the other side, connecting with military actors presents some benefits to academia and businesses. For academia, engagement with military actors provides valuable opportunities to apply theoretical knowledge to real-world challenges, access to new datasets, and participate in multidisciplinary research with tangible societal impact. Such collaboration enhances academic relevance, fosters innovation and opens new avenues for research funding and publication. For the business sector, partnership with the military opens the door to co-create innovative solutions tailored to complex operational environments. These connections facilitate knowledge transfer, stimulate innovation, and help businesses anticipate and respond to emerging security needs. Ultimately, the integration of academic and commercial expertise into CIMIC not only enhances defence capabilities but also drives societal and economic advancement and sets the conditions for the 'whole of government' and total defence approach.

acaCIMICs Volume I: Experimentation Innovation for a Collaborative Future

Building on the existing Academic Network and the willingness to further integrate academic insight within the military realm, the CCOE has taken a bold step forward by launching a dedicated platform to drive this vision further: the acaCIMICs Series.

This initiative aims to bring together military practitioners, academic researchers, and experimentation experts in a dynamic forum for collaboration and innovation. Driven by the conviction that bridging academia and military practice unlocks new potential, acaCIMICs fosters dialogue, sparks fresh ideas, and builds a robust network to advance CIMIC.

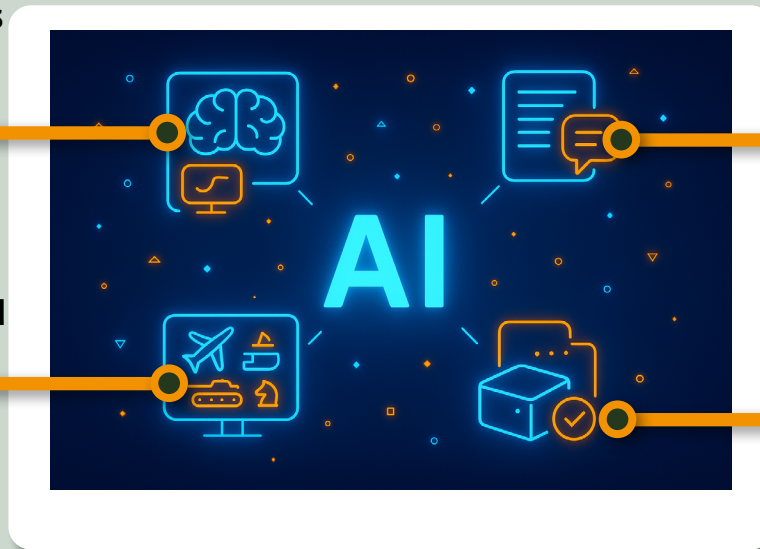
The acaCIMICs Series is not just another academic or professional gathering - it is a platform designed to bring together different perspectives and expertise across the military-academic spectrum. This allows participants to connect with military leaders, engage in thought-provoking discussions, and help shape the future of CIMIC. Together, we aim to build bridges, strengthen academic partnerships and foster a growing community of interest that can contribute to current and future operational needs.

In this first Volume, acaCIMICs aims to co-create analytical and experimentation tools, enhancing CCOE's own experimentation process through academic methodologies and exploring new avenues for collaborative projects. Looking forward, the acaCIMICs Series will continue to evolve as a flexible and inclusive initiative - responsive to emerging needs and committed to supporting a vibrant and effective civil-military academic network.

Academic Presentation Session I: AI & New Technologies

**Innovation in the Future:
AI Driven Simulations as
a Catalyst for Civil-
Military Engagement**

**Enhancing Military-
Civilian Collaboration
through LLM-Supported
Wargaming**



**Effective and Responsible
Use of Large Language
Models in Strategic
Wargaming**

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

"SUCCESS IN CREATING AI WOULD BE THE BIGGEST EVENT IN HUMAN HISTORY. UNFORTUNATELY, IT MIGHT ALSO BE THE LAST UNLESS WE LEARN HOW TO AVOID THE RISKS."

- **Stephen Hawking**, *Centre for the Future of Intelligence (CFI) launch 2016*

Artificial Intelligence and emerging technologies are fundamentally altering the contours of the defence and security sector, introducing new possibilities for strategic insight, operational effectiveness, and civil-military synergy. This session illuminates the vital convergence of academic research and practical innovation, demonstrating how this intersection strengthens decision-making processes and prepares organisations for the complexities of modern security challenges. Drawing on case studies and expert perspectives, presenters delve into ground-breaking advancements ranging from AI-driven simulations and immersive wargaming platforms to the ethical application of Large Language Models and user-friendly no-code AI solutions. Particular emphasis is placed on how these technologies promote inclusivity, enhance accessibility, and equip stakeholders to excel in Multi-Domain Operations (MDO). Together, these discussions reveal how technological innovation is not only redefining military capabilities but also broadening opportunities for cross-sector collaboration, agility, and resilience. As you engage with this chapter, reflect on how these advances can be harnessed responsibly to address the multifaceted demands of today's security environment, aligning with the strategic priorities outlined in professional contexts such as CIMIC and AI-driven simulations.

Innovation in the Future: AI Driven Simulations as a Catalyst for Civil-Military Engagement

Simulations
Large Language
Models
CIV-MIL
Cooperation

Simulations are a powerful tool for knowledge exchange and collaboration, particularly in civil-military engagement where mutual understanding is often lacking. By immersing participants in decision-making roles, simulations reveal the realities and trade-offs of crisis response and long-term planning, fostering empathy, challenging assumptions, and shifting mindsets toward more effective cooperation across disciplines and institutions.

Valens Games' AI-powered simulation platform, Providence, leverages large language models (LLMs) and immersive media to make simulation design and adaptation accessible to users of all experience levels. News, social media, videos, and memos are woven into a rich, believable game world, supported by deep world-building and compelling narratives that make learning both impactful and engaging. The platform enables rapid scenario creation and mid-game adaptation, empowering facilitators to maintain control over learning outcomes while AI manages complexity and logistics.

Valens Games' approach democratises access to complex learning experiences, bridging the gap between civilian and military actors. Their simulations immerse participants in realistic roles, enriching the experience with evolving media and social feeds that encourage empathy and reveal trade-offs. This results in a learning environment that builds confidence, teamwork, and leadership skills. Institutions such as Canada's Department of National Defence, Georgetown University, and the U.S. Foreign Service Institute have adopted these tools, demonstrating their real-world impact on integrated preparedness and whole-of-government response.

For CIMIC, simulations represent a vital link between operational practice, academic analysis, and strategic foresight. The integration of AI scales the connection between civilian and military stakeholders, making cooperation more immersive, adaptive, and accessible. Shared insight is transformed into shared capability, moving from fragmentation to cohesive action. AI-driven simulations are a force multiplier for CIMIC, accelerating planning, enabling responsive scenario design, and supporting whole-of-society responses in complex environments. This approach sets a new standard for civil-military engagement, making collaboration more effective, responsive, and scalable than ever before.

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Valens Games

Effective and Responsible Use of Large Language Models in Strategic Wargaming

Military Strategic
Decision-Making
Strategic Wargaming
Large Language
Models

Wargaming is essential for military strategic decision-making, providing a safe space to test strategies and improve judgment under pressure.

This study explores how Large Language Models (LLMs), such as ChatGPT 4.0, can transform the wargaming process by generating realistic scenarios, player briefings, and adjudication narratives. Working with wargaming experts and using the CONTESTED scenario (Dstl, UK), this discussion compared LLM-generated content with human-created texts across key quality metrics for effectiveness. An independent panel of 27 experts found that AI-generated outputs consistently matched or even surpassed traditional human work - especially in player briefings and adjudication narratives - while also achieving high marks in game design. These results show that LLMs can make wargaming more accessible and efficient by reducing the reliance on scarce expert resources and speeding up content creation. More than just automating tasks, LLMs enhance human-machine collaboration, making wargaming a more adaptive and inclusive tool for strategic decision-making. This is particularly valuable for CIMIC: AI-supported wargames can quickly produce complex, realistic scenarios that reflect the nuanced challenges of civil-military interactions, humanitarian concerns, and operational environments.

By facilitating better collaboration and mutual understanding between military and civilian stakeholders, these tools help CIMIC teams prepare for and respond to crises more effectively. The research also highlights the importance of responsible use of AI in the military, advocating for ongoing evaluation and principled integration as technology advances. Further research, for instance, is conducted on LLM explainability in the wargaming context. In summary, this work demonstrates that LLMs are not just tools for automation but are collaborative partners that can elevate the quality, speed, and inclusivity of wargaming -strengthening both military decision-making and CIMIC's ability to address complex, real-world challenges.

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DSCE



HERWIN MEERVELD

Enhancing Military-Civilian Collaboration through LLM-Supported Wargaming

Women in Defence
Wargaming
Diversity

Despite the recognised importance of wargaming in defence planning, participation barriers - particularly for women and civilian stakeholders - persist. This project introduces an AI-supported platform designed to foster inclusive, confident engagement in wargaming, thereby addressing these systemic challenges. Developed in collaboration with the NATO Communications and Information Agency (NCIA) and Allied Command Transformation (ACT) and field-tested at the SHINE event, the platform enables equitable collaboration between military and civilian actors.

As part of the award-winning "Women in Command" initiative - engaging over 500 participants globally - the project advances diversity, innovation, and accessibility in defence-oriented wargaming. The platform leverages Large Language Model (LLM) facilitation to level the playing field, empowering participants from varied backgrounds to contribute meaningfully and collaborate effectively. Field testing with 16 participants at SHINE demonstrated the platform's capacity to enhance CIMIC through inclusive, interactive environments. The initiative has received multiple accolades, including UK Women in Defence, Modelling and Simulation, and Serious Game Gold Awards.

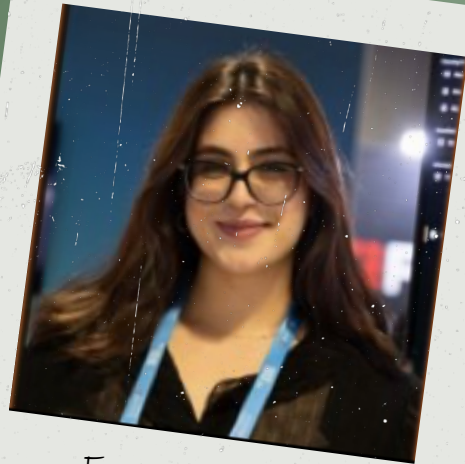
For NATO, this project supports strategic priorities by promoting inclusive participation, driving innovation in simulation, and strengthening the alliance's interoperability and adaptability. For CIMIC, the platform delivers unique value: it lowers traditional barriers to entry, fosters trust and enables deeper collaboration between military and civilian partners.

By ensuring all voices are heard and valued, the initiative enhances CIMIC's ability to address complex operational and strategic challenges, ultimately contributing to more effective civil-military integration and mission success.

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NATO STO SAS-HFM-208



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

Rapid Decision-making
Artificial Intelligence
Operational Self-sufficiency

ARTI Analytics is a leading company specialising in advanced artificial intelligence (AI) and information technology solutions designed for both business and military-civil organisations. Their core product, DSML™, is a no-code AI platform that makes AI accessible to non-technical users - such as those in CIMIC - enabling them to automate data analysis, build situational awareness models, and manage sensitive information without needing external AI experts. The platform is built by a team of PhDs, Math Olympians, and top software developers, ensuring robust and innovative solutions tailored to complex operational needs.

In modern civil-military operations, rapid decision-making and secure information management are essential for mission success. DSML™ addresses this by offering a secure, on-premises environment that meets military-grade data protection standards. Its intuitive drag-and-drop interface allows users to process mission-critical intelligence, enhance crisis response, optimise resource allocation, and improve real-time command, control, communications, and intelligence (C3I) operations. Field deployments and live demonstrations have shown that DSML™ significantly reduces data processing times, boosts operational self-sufficiency, and strengthens data security.

For CIMIC, the value of DSML™ lies in its ability to empower diverse personnel - regardless of technical background - to harness AI-driven insights securely and independently. This not only bridges the AI expertise gap but also enhances collaboration, trust, and responsiveness between military and civilian stakeholders. By automating routine data tasks and supporting secure, compliant workflows, DSML™ enables agile, informed decision-making and accelerates innovation across complex operational settings. Ultimately, DSML™ exemplifies the strategic value of accessible AI tools for CIMIC, supporting core elements such as situational awareness, rapid response, and robust security - key to effective CIMIC in dynamic and sensitive environments.

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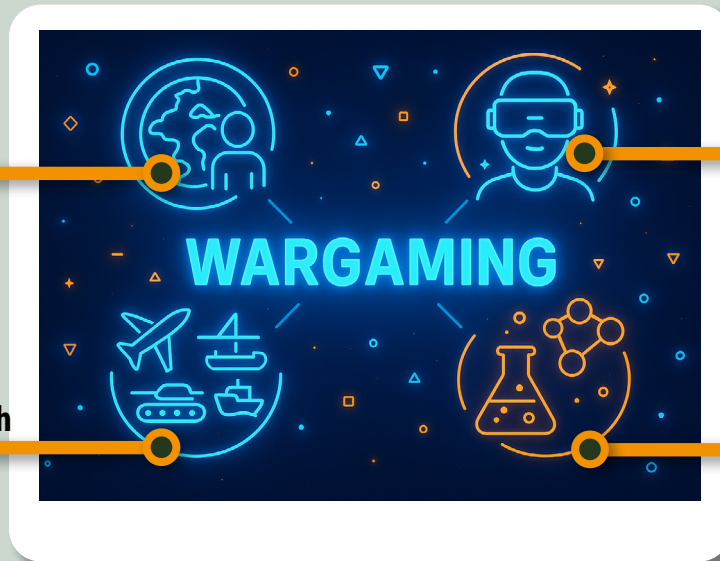


FARUK HERENDA, MSc

Academic Presentation Session II: Wargaming

From Maps to Minds:
Human Geography
Enabled Wargames

Gamifying CIMIC in Multi-
domain Operations and
Whole of Society Approach



VR Integration for
Tabletop Wargaming

From 'HOPE AGE' to
'Imagined Future N': History,
Gaming Experimentation
and Exploring Civil-Military
Futures

"THE SUPREME ART OF WAR IS TO SUBDUCE
THE ENEMY WITHOUT FIGHTING."

- Sun Tzu, *The Art of War*

Wargaming has emerged as an indispensable instrument for equipping both civil and military actors to navigate the multifaceted and unpredictable security challenges of today. Transcending the boundaries of conventional planning, it now serves as a dynamic platform that informs decision-making cultivates collaboration, and rigorously tests assumptions across MDO. This chapter presents a diverse array of innovative methodologies - spanning from human geography-driven planning maps and virtual reality-enhanced tabletop exercises to serious games designed to confront online manipulation and disinformation. Readers will also discover practical guidance for crafting their own wargames, examining belief systems, and leveraging cutting-edge technologies such as artificial intelligence and advanced simulation tools. Collectively, these perspectives illustrate how academic insight and real-world operational experience are jointly propelling the evolution of wargaming. As you progress through the chapter, reflect on the transformative potential of these tools: not merely as training aids but as strategic assets that shape mindsets, reveal hidden vulnerabilities, and prepare organisations for the complex demands of CIMIC.

From Maps to Minds: Human Geography Enabled Wargames

Human Geography
Wargaming
Collective Identities

Advancing military planning and wargaming now benefits from the integration of human geography with traditional geographic information systems, resulting in the creation of Human Geography Enabled Wargame Maps. In an increasingly complex and dynamic world, where political, economic, and social factors significantly shape military strategy, conventional maps no longer suffice for capturing the full operational environment. The Defence Geographic Agency addresses this limitation by embedding a cognitive layer that visualises human relationships, perceptions, and influences within the geographic context of conflict zones. This approach emphasises the core principles of human geography - how people interact with their environments and how cultural and social factors impact military operations. While traditional wargames and planning tools focus primarily on physical terrain and logistics, they often overlook these vital human dimensions, limiting their effectiveness in anticipating complex scenarios.

Human Geography Enabled Wargame Maps expand military analysis by integrating several cognitive dimensions: social network maps reveal connections between individuals and groups; information flow maps track the dissemination of information across networks; perception and attitude maps depict how different groups interpret key issues; influence and manipulation maps highlight areas affected by propaganda or disinformation; and local power structure maps identify key leaders and decision-makers. Together, these layers provide commanders and planners with a richer, more nuanced understanding of the operational environment.

For CIMIC, the value of these tools is especially significant. Artificial intelligence and advanced analytics support CIMIC by rapidly processing diverse data - from policy documents to social media - and simulating complex scenarios for training and real-world operations. When combined with human geography-enabled maps, CIMIC practitioners achieve deeper situational awareness, improve coordination with civilian actors, and make more informed, context-sensitive decisions. This integration represents a substantial advancement in military strategy, enabling CIMIC to better anticipate challenges, enhance resilience, and achieve more effective outcomes in complex environments.

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Human Geography NLD



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VR Integration for Tabletop Wargaming

Virtual Reality
Wargaming
Terrain awareness

In the rapidly evolving domain of tabletop wargaming and operational planning, the incorporation of Virtual Reality (VR) presents a transformative opportunity to elevate strategic analysis, enhance situational awareness, and foster immersive collaboration. This conceptual framework introduces a VR-based system designed to visualise wargaming maps in three dimensions, allowing participants to gather around a shared virtual tabletop and interact with dynamic, data-rich environments in real-time. The proposed system is engineered to preserve the tactile and social elements inherent to traditional tabletop wargaming while harnessing the flexibility and interactivity of digital technology.

Participants equipped with VR headsets or augmented reality (AR) glasses engage with a shared virtual battlefield projected over either a physical or fully virtual table. This hybrid model maintains face-to-face collaboration while enriching gameplay with multi-layered geospatial information and real-time scenario manipulation. The platform's core functionality is rooted in a layer-based visualisation model, enabling users to toggle between essential operational data such as elevation, population density, infrastructure, vegetation, weather conditions, and spheres of influence. Embedded advanced planning tools - including range measurements, line-of-sight calculations, and demographic heatmaps - empower participants to conduct complex civil-military decision-making processes.

Real-time data input and scenario modification facilitates dynamic red-teaming, promoting adaptive thinking and immediate response to evolving operational conditions. The flexibility of this approach supports nearly limitless scenario customisation and replayability, offering a sustainable and scalable tool for both training and operational planning.

For CIMIC, this integration of VR into tabletop wargaming is particularly valuable. It enables practitioners to visualise and analyse strategic and humanitarian scenarios with unprecedented clarity, supporting CIMIC's mission to enhance experimentation and improve coordination in complex environments.

The presentation outlines a development roadmap for a proof of concept, with planned pilot testing among wargaming communities and CIMIC practitioners. The ultimate objective is to modernise the wargaming experience and demonstrate how digital immersion can serve as both a pedagogical and operational asset. By leveraging VR, the CIMIC community gains a powerful tool for simulating, visualising, and analysing scenarios critical to effective civil-military operations and humanitarian planning. This innovation not only advances technological capabilities but also represents a paradigm shift in how strategic and humanitarian challenges are approached and managed.

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Eye-Concept

Gamifying CIMIC in Multi-domain Operations and Whole of Society Approach

Multi-Domain
Operations
Simulation Gaming
Whole of Society
Approach

This interactive workshop engages participants in exploring the evolving role of CIMIC within MDO and 'Whole of Society' approaches, utilising applied wargaming and serious game design. Designed for both experienced practitioners and newcomers, the session introduces the fundamentals of creating CIMIC-relevant games and identifies limiting beliefs that may obstruct effective collaboration in complex security environments. By leveraging the Wargaming Community of Practice (CoP) as a foundation for ongoing support and development, the workshop offers hands-on experience with the full lifecycle of wargame design, fostering collaborative innovation and practical skill-building in game design and facilitation.

The workshop is structured into five experiential learning stages. First, participants define a realistic conflict or crisis scenario, specifying operational frameworks, civilian challenges, and domain-specific threats. Next, they identify key military and civilian stakeholders and assign missions to each. In the third stage, participants divide into two groups: one explores limiting beliefs that hinder cooperation, such as negative stereotypes about NGOs or military personnel, while the other develops domain-specific dilemmas that reflect operational tensions. The fourth stage involves guided role-play, where participants act out the scenario, beliefs, and dilemmas while observers analyse how assumptions and cognitive biases influence cooperation. The session concludes with a debrief and reflection, encouraging group discussion and shared insights into belief-driven barriers and the importance of perspective-taking.

Through immersive gameplay and reflective discussion, the workshop demonstrates how assumptions and cognitive biases can shape - and sometimes obstruct - effective CIMIC in real-world operations. It provides participants with practical tools for designing their own simulation-based training or analysis exercises, emphasising methodologies that are transferable across civil and military domains. The workshop highlights the value of CIMIC by showing how structured, experiential learning can enhance understanding, foster collaboration, and improve outcomes in complex, multi-stakeholder environments. By embedding CIMIC principles within interactive scenarios, participants gain a deeper appreciation for the necessity of CIMIC in contemporary security challenges.

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From 'HOPE AGE' to 'Imagined Future N': History, Gaming Experimentation and Exploring Civil-Military Futures

Humanitarian
Gaming
Serious Gaming
Diplomacy game

As rapid technological innovation and heightened risk of major conflict reshape global security environments, traditional CIMIC norms are evolving. New challenges emerge, from delivering humanitarian support in volatile regions to protecting cyber-physical systems against emerging threats. International and national organisations respond by advancing active planning capacities to address unprecedented scenarios, ranging from large-scale conflicts in countries with little recent experience of war to adversaries exploiting disruptions caused by extreme space weather or flooding.

The University of Glasgow Games and Gaming Lab (UofGGamesLab) explores how academic research and experimentation contribute to CIMIC planning. The lab collaborates with a diverse set of partners, including national defence and security practitioners as well as UN OCHA. Recent experimental projects highlight the value of CIMIC in practice. HOPE AGE, a joint workshop with UN OCHA CMCS, uses serious gaming to prepare for humanitarian operations in countries with robust governance structures during major conflict, testing new approaches for staff training and planning in civil-military coordination. Imagined Future N, a pilot initiative, investigates the use of advanced technologies - such as VR and AI - alongside non-digital methods to support decision-making, diplomacy, and deterrence in hypothetical scenarios.

The value of CIMIC lies in its capacity to foster critical thinking, problem-solving, and effective communication by immersing participants in realistic, dynamic scenarios that require cooperation between military and civilian actors. Serious gaming provides a safe environment for testing strategies, receiving instant feedback, and learning from mistakes without real-world consequences. This approach enhances operational readiness and strategic planning while strengthening collaboration between military, governmental, and non-governmental organisations.

UofG GamesLab continues to develop and evaluate innovative gaming and simulation tools for training and planning. Ongoing and future initiatives, including Projects AWARE, Damocles, and Gamestorm, reflect a commitment to working with public, private, and non-profit organisations to address global challenges through serious gaming. These efforts open opportunities for deeper academic involvement in the future development of CIMIC wargaming and simulation approaches.

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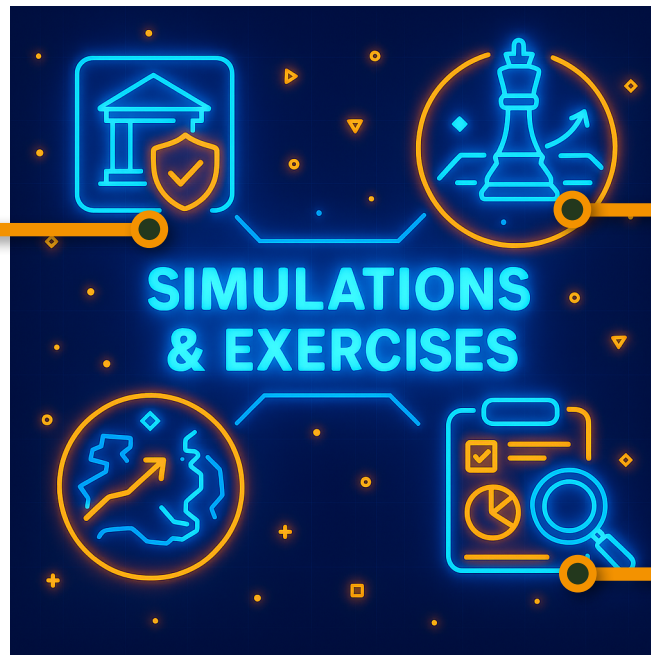
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Academic Presentation Session III: Simulations & Exercises

3D Immersive
Environments; Strategies
for Heritage Protection
Training within CCOE



Strategic Simulation
Exercises

NATO CIMIC Analysis &
Assessment in Exercises

"I FEAR NOT THE MAN WHO HAS PRACTISED 10,000 KICKS ONCE,
BUT THE MAN WHO HAS PRACTISED ONE KICK 10,000 TIMES."

- Bruce Lee

Simulations and exercises have evolved beyond their traditional roles as training mechanisms, emerging as pivotal strategic assets in a rapidly shifting security environment. This session delves into the dynamic interplay between academic inquiry and practical innovation, illustrating how these forces are reshaping our approach to preparing for multifaceted crises - ranging from safeguarding cultural heritage to navigating high-stakes geopolitical decisions. The chapters ahead introduce readers to the transformative potential of immersive technologies, data-driven assessment models, and real-world experimentation, all of which play a critical role in bolstering the capabilities of both civil and military organisations. Through thoughtful design and structured simulation, these contributions collectively advance resilience, coordination, and the capacity for agile, informed responses in challenging contexts. As you proceed, reflect on how these evolving tools not only challenge conventional assumptions but also foster unprecedented collaboration, bridging the gap between theoretical planning and the complexities of real-world operations.

3D Immersive Environments; Strategies for Heritage Protection Training within CCOE

Cultural Property
Protection
Immersive Training
Reality Capture

Immersive 3D environments, exemplified by the Igloo CAVE system, are transforming heritage protection training for military personnel. Photogrammetric models of cultural sites are integrated into these environments, creating realistic and interactive platforms that enable remote site assessments. Military teams can explore and analyse site conditions in detail without the need for physical deployment, reducing operational risk and logistical burden. This technology fosters improved collaboration between military units, local stakeholders, and international partners operating in conflict zones, supporting coordinated efforts to safeguard vulnerable cultural heritage.

The immersive approach significantly enhances deployment preparation by providing personnel with a deeper contextual understanding of operational environments. This aligns closely with NATO policies on cultural property protection, where situational awareness and cultural sensitivity are critical. Traditional wargaming methods, relying on written scenarios and participant imagination, are surpassed by the realism and engagement offered by 3D immersive environments. The Igloo CAVE, as part of UWE's Digital Engineering Gallery, leverages advanced simulation and digital engineering tools to support teaching and research across multiple disciplines. By adapting 3D photogrammetric models for this platform, the project enables remote collaboration for site damage assessment and the effective communication of stabilisation and management strategies with partners in sensitive regions.

For CIMIC, immersive 3D environments deliver substantial value by bridging operational readiness and cultural preservation. The technology enhances situational awareness, enabling collaborative engagement and remote evidence collection without exposing personnel to physical risk. These capabilities directly support CIMIC's core objectives: fostering cooperation between military and civilian actors, protecting cultural heritage, and improving mission effectiveness in complex environments. The integration of VR into strategic training represents a significant advancement, strengthening the military's role in safeguarding vulnerable cultural assets during challenging missions.

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Strategic Simulation Exercises

National Government
Practices
International Crisis
Simulation
AI Innovation

Since 2015, the University of Cambridge Centre for Geopolitics (CfG) has conducted strategic simulations that immerse participants in realistic geopolitical crises within the UK government's Crisis Response Centre (COBR). These exercises engage senior officials, diplomats, military officers, academics, students, and professionals, offering them a unique opportunity to experience complex decision-making processes at the highest level of government in real-time and in a hyper-realistic setting. Former senior officials often participate, further enhancing the authenticity and educational value of the exercises.

The simulations are designed to foster critical thinking, problem-solving, and effective communication as participants collaborate across disciplines to address multifaceted international challenges. Academics gain deeper insights into governmental decision-making, enriching their research and its practical impact. Students acquire vocational experience relevant to international affairs careers, while professionals test and refine innovative policy ideas. Over the past decade, these simulations have demonstrated notable predictive accuracy, addressing issues such as NATO cohesion, the geopolitics of Greenland, Brexit's Irish border, undersea infrastructure vulnerabilities, and maritime disputes in the Black Sea.

Artificial intelligence (AI) increasingly supports these exercises by providing predictive analytics, real-time data processing, and advanced scenario modelling, enhancing realism and educational impact. CIMIC is a central value of these simulations, promoting collaboration between military and civilian sectors. By anticipating complex challenges and supporting coordinated, informed responses, the simulations strengthen CIMIC's role in fostering stability, coordination, and resilience in dynamic international environments. These exercises prepare decision-makers to navigate uncertainty and enhance the preparedness of national and international response systems.

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Cambridge's Centre of Geopolitics

NATO CIMIC Analysis & Assessment in Exercises

Situational Awareness
Assessment
Capabilities
CIV-MIL Cooperation

In today's complex and hybrid security environment, marked by urbanised conflict and interconnected threats, effective CIMIC emerges as a vital component for successful NATO operations. The NATO CIMIC Analysis and Assessment Capability (NCAAC) provides a standardised framework designed to address previous inconsistencies by defining a structured analysis workflow, analytic techniques, and product guidelines, thereby enabling better integration of civil factors at tactical, operational, and strategic levels. This framework supports a more consistent and comprehensive understanding of complex environments, facilitating improved coordination between military and civilian actors.

The NCAAC enhances NATO's situational awareness and decision-making by systematically collecting, analysing, and sharing data on the civil environment. Its value lies in bridging the gap between military and civilian spheres, ensuring that operations are conducted with a nuanced understanding of local contexts and needs. The capability leverages both AI-driven simulations and human geography insights, supporting commanders with actionable intelligence and fostering informed, coordinated decision-making across all command levels. By embedding CIMIC analytical functions within NATO's planning and execution cycle, the Alliance strengthens its ability to anticipate, respond to, and manage crises across a wide spectrum of scenarios.

To validate the NCAAC's effectiveness, ongoing research employs a mixed-methods approach, combining quantitative surveys and qualitative semi-structured interviews with approximately 200 civilian and military personnel during multinational exercises that simulate diverse operational contexts. The study assesses both awareness of the capability among personnel and its practical application, aiming to validate its added value while identifying areas for improvement. Findings highlight the importance of standardised frameworks in adapting to modern security challenges and enhancing NATO's operational responsiveness.

CIMIC's value is further demonstrated through its role in mitigating risks, promoting effective collaboration, and supporting resilience in dynamic settings. The NCAAC represents a critical tool for improving the systematic inclusion of civil considerations in military planning and execution, ultimately contributing to the long-term stability and sustainability of mission outcomes. This research also underscores the significance of experimentation and collaboration with academic partners in fostering innovation and adaptability within NATO's evolving security landscape.

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Academic Sessions IV: Case Studies

**War in Every Corner:
Ukrainian Civil-Military
Cooperation Analysis**

**From Blue Helmets to Green
Helmets: A New Role for the
CAF in Canada and the World**

**Securing CIMIC Operations
Against Cyber Threats:
Lessons From Modern
Cyber Warfare**

**Between Association
and Dissociation:
The Legitimacy Politics
of CIMIC Experimentation**



*"LIKE THE LABOURS OF HERACLES, A CASE STUDY IS A
JOURNEY THROUGH TRIALS AND TRUTHS"*

- Perplexity, 2045

CIMIC stands at the crossroads of academic inquiry and operational necessity, where the rigour of scholarly analysis meets the unpredictable realities of conflict and crisis. This volume invites readers to explore the dynamic interplay between theory and practice as it unfolds in some of the world's most demanding security environments.

Through a series of illuminating case studies, the chapters that follow chart the evolving landscape of CIMIC, from the battlefields of Ukraine, where cross-national academic-defence partnerships are redefining collaboration, to cutting-edge strategic simulations that push the boundaries of human geography and AI-driven planning.

These examples not only showcase the innovative spirit driving the field but also highlight the critical importance of integrating new technologies and interdisciplinary approaches to address complex challenges.

Readers will encounter pioneering initiatives such as the Green Helmets, which are shaping sustainable practices within military operations, and witness the growing centrality of cyber resilience in the era of hybrid warfare. Each chapter serves as a masterclass in practical problem-solving, offering fresh perspectives on issues of legitimacy, trust, and the effective coordination of civil and military actors. By delving into real-world stories and grounded insights, this volume provides actionable lessons for policy, strategy, and partnership that are shaping the future of the global CIMIC community.

War in Every Corner: Ukrainian Civil-Military Cooperation Analysis

Ukraine war
Whole of Government
approach
Coalition Warfare

CIMIC in Ukraine and internationally increasingly relies on robust collaboration between academic institutions and defence agencies. The ongoing conflict in Ukraine, characterised by asymmetric and hybrid warfare, exposes both internal and international divisions, highlighting the urgent need for unified approaches to civil-military engagement. Joint crisis simulations, developed through partnerships such as those between Ukrainian and UK institutions, serve as critical tools for enhancing preparedness and response capabilities amid complex security challenges. These collaborations not only build national resilience but also reinforce global defence capacities by integrating academic research with military expertise.

Within Ukraine, CIMIC units bridge the gap between military operations and civilian needs, ensuring that military actions minimise harm to non-combatants and that essential services remain accessible. The value of CIMIC is further amplified by its integration into a whole-of-government approach, where coordination with state agencies, volunteer networks, and international organisations enables a unified response to occupation, displacement, and infrastructure destruction. The academic-defence partnership model, exemplified by joint crisis simulations, fosters innovation, shared understanding, and coordinated responses. By leveraging human geography and AI-driven simulations, these initiatives improve crisis management and strategic decision-making for both national and international security objectives.

Ultimately, sustained engagement between academia and defence organisations demonstrates the power of integrating academic insight with military practice. This synergy strengthens civil-military coordination, supports broader security goals, and contributes positively to global civil-military defence capabilities. The CIMIC model, enriched by cross-sector alliances, remains essential for addressing today's multifaceted security environment effectively.

JENNIFER DICKSON IS A MISSION-DRIVEN STRATEGIC PLANNER WITH OVER FIFTEEN YEARS OF EXPERIENCE IN DEFENCE, SECURITY, AND INTERNATIONAL RELATIONS, WITH IN-DEPTH EXPERTISE ACROSS US COMBATANT COMMANDS, NATO, AND THE UN SECURITY COUNCIL. CURRENTLY PURSUING A PHD IN WAR STUDIES AT KING'S COLLEGE LONDON, THEY HAVE LED WARGAME DEVELOPMENT AND PLANNING FOR THE US MARINE CORPS, US INDO-PACIFIC COMMAND, AND OTHER HIGH-LEVEL DEFENCE ORGANISATIONS. THEIR BACKGROUND INCLUDES FIELDWORK IN AFRICA, UKRAINE, AND THE CONGO BASIN, AS WELL AS EXTENSIVE WORK IN CONFLICT MAPPING, POLICY ANALYSIS, AND THE TECHNICAL ASPECTS OF STRATEGY AND WAR GAME PRODUCT DEVELOPMENT.

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From Blue Helmets to Green Helmets: A New Role for the CAF in Canada and the World

Natural Disasters
Climate Change
Collaboration

The Green Helmets Initiative (GHI) emerges as a visionary proposal to broaden the Canadian Armed Forces (CAF) mandate beyond traditional defence roles, integrating global humanitarian and environmental disaster response into its core mission. Inspired by Canada's peacekeeping heritage and the increasing frequency and intensity of climate-related disasters, the initiative calls for the establishment of a specialised, multinational military capacity under United Nations leadership designed to address crises such as extreme weather, wildfires, floods, and climate-induced displacement. GHI builds on proven CAF efforts like the Disaster Assistance Response Team (DART), which demonstrated effective collaboration between military and civilian agencies in both domestic and international emergencies, but aims to formalise and expand these capabilities into a standing, coordinated force.

At the heart of the GHI is a commitment to international cooperation and robust civil-military collaboration. The initiative envisions a structure where military forces, civil organisations, research institutions, and local communities work together, with special attention to the gender-differentiated impacts of disasters and the unique vulnerabilities of affected populations.

GHI proposes regional expertise centres for rapid response, training, and technology deployment, ensuring that military logistics, engineering, and rapid deployment capabilities are leveraged for humanitarian relief while respecting local governance and humanitarian principles. NATO's recognition of climate change as a "threat multiplier" and its integration of disaster relief into defence planning, as exemplified by the Euro-Atlantic Disaster Response Coordination Centre (EADRCC), provide a strong foundation for this approach.

The Green Helmets Initiative is designed to complement existing defence and development frameworks - such as those of NATO and the OECD - without duplicating efforts or overstressing military resources. It addresses organisational, legal, and operational challenges, emphasising coordination, rapid deployment, and inter-agency collaboration. In addition, the GHI incorporates the proposal of Judge Louise Otis to establish an International Unit for Climate Mitigation, which would intervene in cases of litigation, especially those involving cross-border natural disasters.

For CIMIC, GHI represents a transformative model, redefining military engagement as a proactive contributor to humanitarian and environmental resilience. By fostering innovation and partnership across sectors, GHI aims to adapt security institutions to evolving global realities, enhancing CIMIC's value in building sustainable, resilient responses to the multifaceted security threats posed by climate change.

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GHI



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Securing CIMIC Operations Against Cyber Threats: Lessons From Modern Cyber Warfare

Cyber Warfare
Digital
Infrastructure
Resilience

Cyber warfare now profoundly influences CIMIC, reshaping its operational context as high-profile cyberattacks - such as WannaCry and SolarWinds - target both civilian and military infrastructures, disrupt critical services, and erode public trust. These incidents illustrate how cyber threats have evolved from digital disruption to strategic targeting and cognitive manipulation, directly affecting the civil-military decision cycle and saturating the information environment with blended hybrid risks. The growing reliance on civilian-managed digital infrastructure means that up to 85% of systems supporting CIMIC are vulnerable to cyber incidents, which can halt humanitarian operations, compromise essential services, and undermine the legitimacy of civil-military engagement.

CIMIC's value lies in its ability to foster essential liaison between military and civilian actors, ensuring continuity of humanitarian support and operational coordination. However, NATO doctrine clarifies that CIMIC is not an intelligence collection channel, and there is no formal ownership of information validation at the tactical level, creating a doctrinal gap that hybrid threats exploit.

Cyber threats such as deepfake impersonations manipulated OSINT and targeted disinformation campaigns further erode trust and disrupt effective civil-military interaction. This vulnerability is compounded by the fact that most cyberspace infrastructure is built, owned, and operated by non-military actors, making effective CIMIC dependent on cross-sector collaboration and the integration of civilian expertise.

To address these challenges, integrating cybersecurity into CIMIC operational planning is urgent. Practical solutions include quick-win protocols, embedded OSINT validation, and the introduction of a CIMIC-Cyber Liaison Officer to bridge civil-military and cyber domains.

By advancing digital risk management and fostering cross-sector collaboration, CIMIC can enhance resilience, safeguard essential services, and maintain trust between civilian and military actors. Ultimately, adapting CIMIC strategies to include cyber threat awareness and response capabilities is critical for operational success, mission continuity, and the protection of both military and civilian infrastructure in today's interconnected, complex environments. This integration represents a necessary evolution for CIMIC, strengthening its ability to navigate and mitigate emerging digital risks while supporting mission continuity and civil-military trust.

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Between Association and Dissociation: The Legitimacy Politics of CIMIC Experimentation

Legitimacy Scale
CIMIC Co-Creation
Comprehensive/
integrated
approach

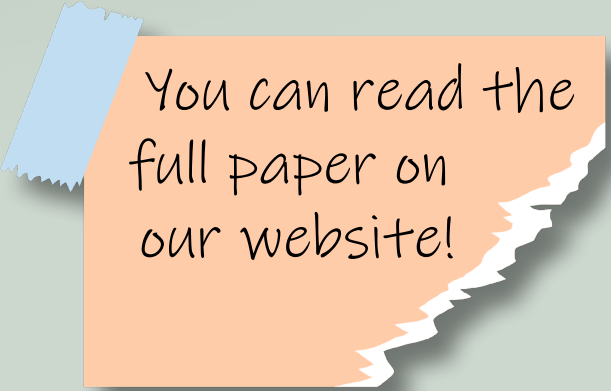
NATO's Concept Development and Experimentation (CD&E) doctrine works superbly when the subject under test is a discrete technology, such as a new radio, a drone or a software patch. When the capability in question is civil-military cooperation (CIMIC), however, the same laboratory logic falters, because the capability is not hardware but a relationship among organisations whose legitimacy is drawn from markedly different sources. The paper, therefore, first reframes CIMIC experimentation as co-creation: the joint development, transformation and innovation of civil-military capacities.

To explain why such co-creation advances in some theatres yet stalls in others, the authors merge regime-complex scholarship with organisational sociology and place the idea of relational legitimacy at the centre of the analysis. In the crowded governance landscape - today more than 66.000 international organisations operate across 300 issue areas - actors constantly weigh the functional gains of collaboration against the identity risks that partnership may impose. The 'legitimacy scale' is presented as a metaphor, reflecting on the spectrum between associative and dissociative strategies that organisations employ within this environment. When pooled resources, expertise or political cover outweigh the danger of blurring mandates, organisations seek legitimisation by association; when neutrality, brand or legal status are threatened, they opt for legitimisation by dissociation. Context, we contend, loads the weights on either side of the scale.

Three ideal-type cases illustrate the argument and link relational-legitimation theory to real-world CIMIC practice. In stabilisation missions, high violence and politicisation render humanitarian neutrality paramount. Identity risks dominate the scale, dissociation prevails and innovation proceeds in parallel military and NGO silos.

Sudden-onset disasters, by contrast, invert the balance. Host-government invitations and urgent life-saving imperatives lower identity costs while magnifying functional incentives, so the scale tips to association; joint logistics hubs, shared drone surveys, and EU civil-protection drills confirm that co-creation becomes routine. Territorial and collective defence in the hybrid, pre-Article V environment occupies the middle ground. Cyber-attacks and infrastructure sabotage generate acute functional need for military-industry collaboration, yet unresolved legal and reputational questions temper public alignment. Co-creation is therefore selective and low-profile, confined to classified cyber-range exercises or silent space-domain agreements.

From these patterns, five lessons emerge. 1. Planners should begin every CIMIC initiative with a legitimacy scan; 2. align the depth of cooperation with contextual tolerance; 3. use living labs and table-top games as low-visibility, safe-to-fail spaces; 4. build structured legitimacy reflection into every training cycle; and 5. scale up gradually once trust is earned. Recognising legitimacy as both constraint and resource equips practitioners to design CIMIC experimentation that is not only technically sound but also politically and ethically sustainable.



You can read the
full paper on
our website!

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Conclusion

The success of this acaCIMICs forum underscores the immense value of bringing together diverse participants - from academia, military practitioners, technologists, and civil society, in a truly interdisciplinary and collaborative environment. This format has proven to be a powerful catalyst for knowledge exchange, innovation, and mutual understanding, emphasising that collaboration within the CCOE and beyond is not only beneficial but essential.

The rich variety of contributions demonstrated the broad spectrum of possibilities for cooperation, from joint research projects and shared experimentation platforms to co-development of new methodologies and technologies. The CCOE stands as a hub that facilitates these partnerships, enabling continuous interaction among game designers, engineers, cognitive scientists, military operators, and policy experts. By fostering such inclusive collaboration, we create a shared language and a unified framework for tackling the increasingly complex challenges of CIMIC.

Looking forward, the intention of acaCIMICs is clear: to raise awareness not only about CIMIC itself but also about the wide array of experimental efforts ongoing in related fields. These annual volumes will serve as a sustained platform for connecting like-minded individuals and institutions, spotlighting innovations, and advancing collective understanding. By continuing this tradition, we reinforce the critical role of collaboration and cooperation in bridging the gap between academic insight and operational application.

As we advance, the intersection of academic research, emerging technologies, and practical CIMIC operations will only grow in importance. The synergies we cultivate here, across disciplines and sectors, will be pivotal in shaping the future of civil-military partnerships, making them more adaptive, ethical, and effective. Together, through shared knowledge and joint innovation, we can prepare for the complex crises of tomorrow, ensuring that CIMIC remains a dynamic, responsive, and integral element of security and humanitarian efforts worldwide.

AI & NEW TECHNOLOGY



Large Language Models application to enhance data collection



Effective and Responsible Use of Large Language Models in Strategic Wargaming



Empowering Military-Civil Organizations with No-Code AI Platforms

Diversity and representation in Wargames



Enhancing Military-Civilian Collaboration through LLM-Supported Wargaming

AI-Driven Simulations as a Catalyst for Civil-Military Engagement

JOINED EFFORTS



Guest lectures and One DAY @ CCQE

SHAPING MINDSETS

Need to create "acaCIMICs Arena Platform"

From Maps to Minds: Human Geography enabled wargames

From "HOPE AGE" to "Imagined Future N": History, Gaming Experimentation and exploring Civil-Military Futures

Building Mutual TRUST

VR Integration for Tabletop Wargaming

Develop Capability Set

Gamifying CIMIC in Multi-Domain Operations and Whole of Society Approach

Civilian Resilience Initiatives

Strategic Simulations

Lessons learned

Integrate in CIMIC Training

3D Immersive Environments: Strategies for Heritage Protection training within CCQE

Exchange of personnel

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

DATA SECURITY LIMITATIONS

TEST IT!

Integrate in CIMIC Training

Strategic Simulation Exercises

Resilience Through Civil Preparedness

Disaster Relief

Building partnerships

Work on data accessibility and create new datasets

POLITICAL WILLINGNESS

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