

The background of the slide is a green topographic map with black contour lines. Overlaid on the map are several yellow tactical symbols, including plus signs, asterisks, triangles, and circles, arranged in a pattern that suggests a strategic or gaming environment.

TECHMODAL

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Using AI-Developed Tools in Wargaming

Cosmo Forbes
At Connections UK 2026

BAE SYSTEMS

Introduction

- Background
 - Wargaming at University of York (2018-2022)
 - Analyst at Dstl DWC (2022-2024)
 - Contested
 - MOD, FCDO, Cabinet Office
 - US, Japan
 - Consultant at BAE Techmodal CWS (2024-2026)
 - STRIKFORNATO, Royal Navy
 - cosmo.forbes@baesystems.com
 - [Cosmo Forbes - LinkedIn](#)
- AI usage statement
- Why does this presentation matter to you?



Wargaming at Techmodal - [Wargaming for Decision Advantage](#)

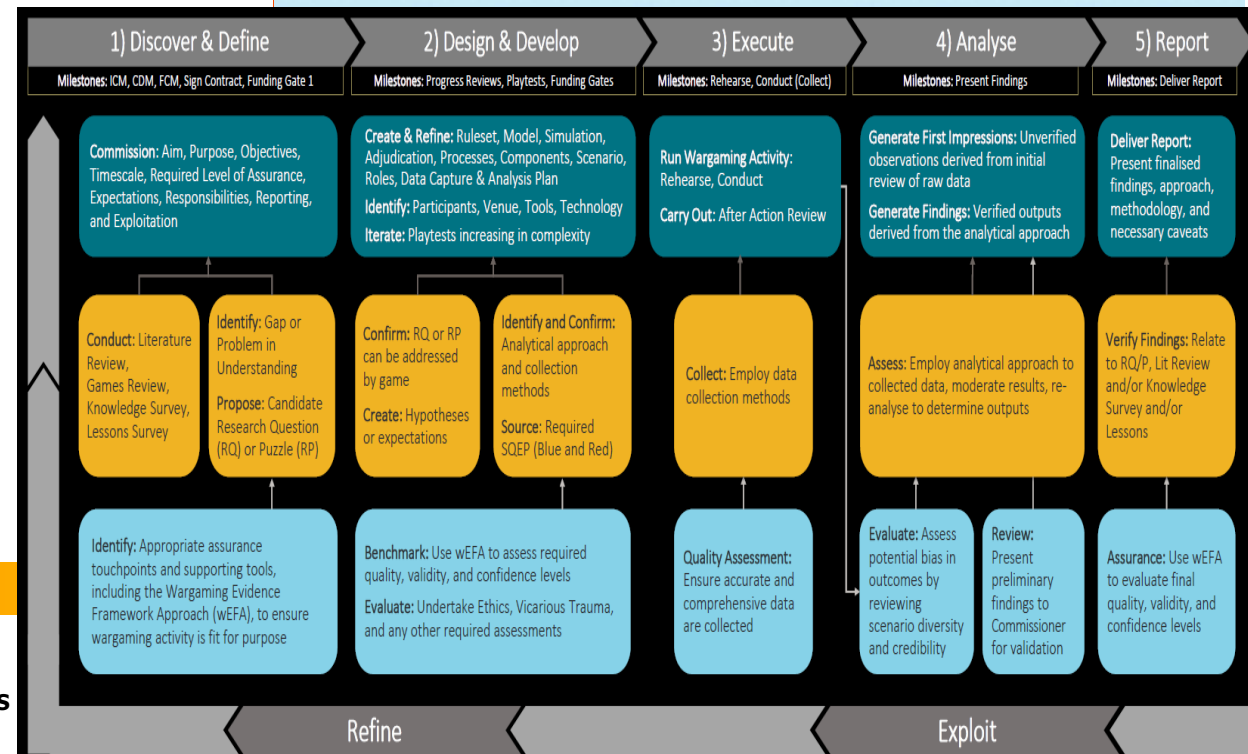
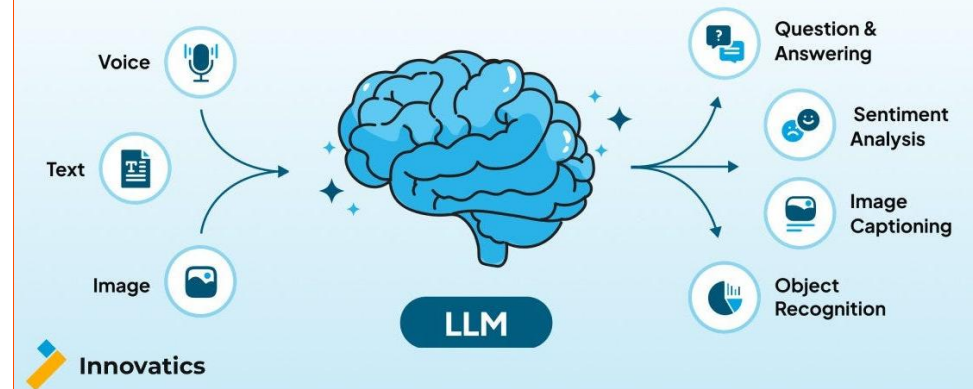
- Defence Experimentation and Wargaming Hub IWC CSOC MOD - [Defence Experimentation and Wargaming Hub - GOV.UK](#)
 - “Better Decisions, Faster”
 - **Core Wargaming Services** + MOD + Dstl + Contractors
 - First Sea Lord’s Baseline/Hybrid Navy/Commando Force games
 - DMS/NHS Games
 - Industry Wargames
- Technology-Based Aids
 - SOLO: Record, transcribe, interrogate
 - CAGE: Digital mapping and development log (used in DMS game)
 - Warmind: Portal to a suite of BAE systems and LLM tools (in development)

- Problem Set
 - Wargaming is unique!
 - Wargaming has not necessarily adopted to the frontier of AI!
- Why can AI-developed tools solve this?
 - Wargame designers/analysts are often left with “dull work”.
 - AI as a force multiplier.
 - This is **not** about using AI “live” in wargames – it is about using **AI-developed tools**.
- BLUF
 - **“Wargame designers and analysts must be comfortable using AI-developed tools, as cheap, quick and reliable aids in their workflow.”**

Definitions

- AI
 - “AI” means large language models (LLMs) and their subsequent systems, trained on large data sets to response to natural language prompts.
- AI coding
 - The use of an LLM to write, modify, debug or explain the software, often allowing the AI to read/edit/run code with limited supervision.
- AI-developed tools
 - Bespoke software tools produced by AI coding, which may contain **no AI once built**.
- Workflow / ways of working
 - End-to-end sequence of activities by which a wargame designer/analyst takes the project from commissioning to delivery then reporting (project lifecycle).
 - From the perspective of the designer/analyst.
- Wargaming...

Exploring Large Language Models (LLMs)



3 Case Studies

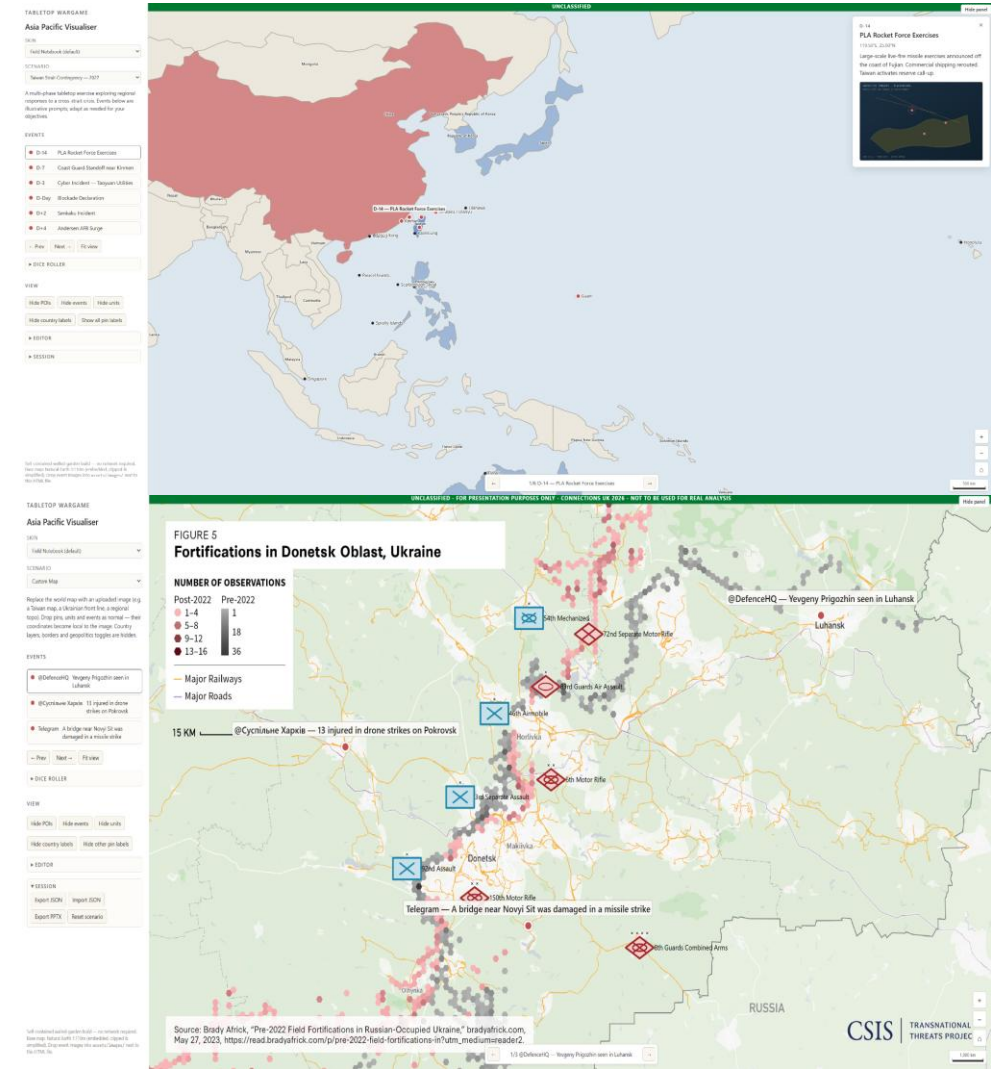
- Developed over ~2 months
- Claude Code, Codex, Copilot
- Self-developed
- No real world/project work data provided
 - Synthetic or for testing purposes



Case Study 1 – Map Visualiser

7

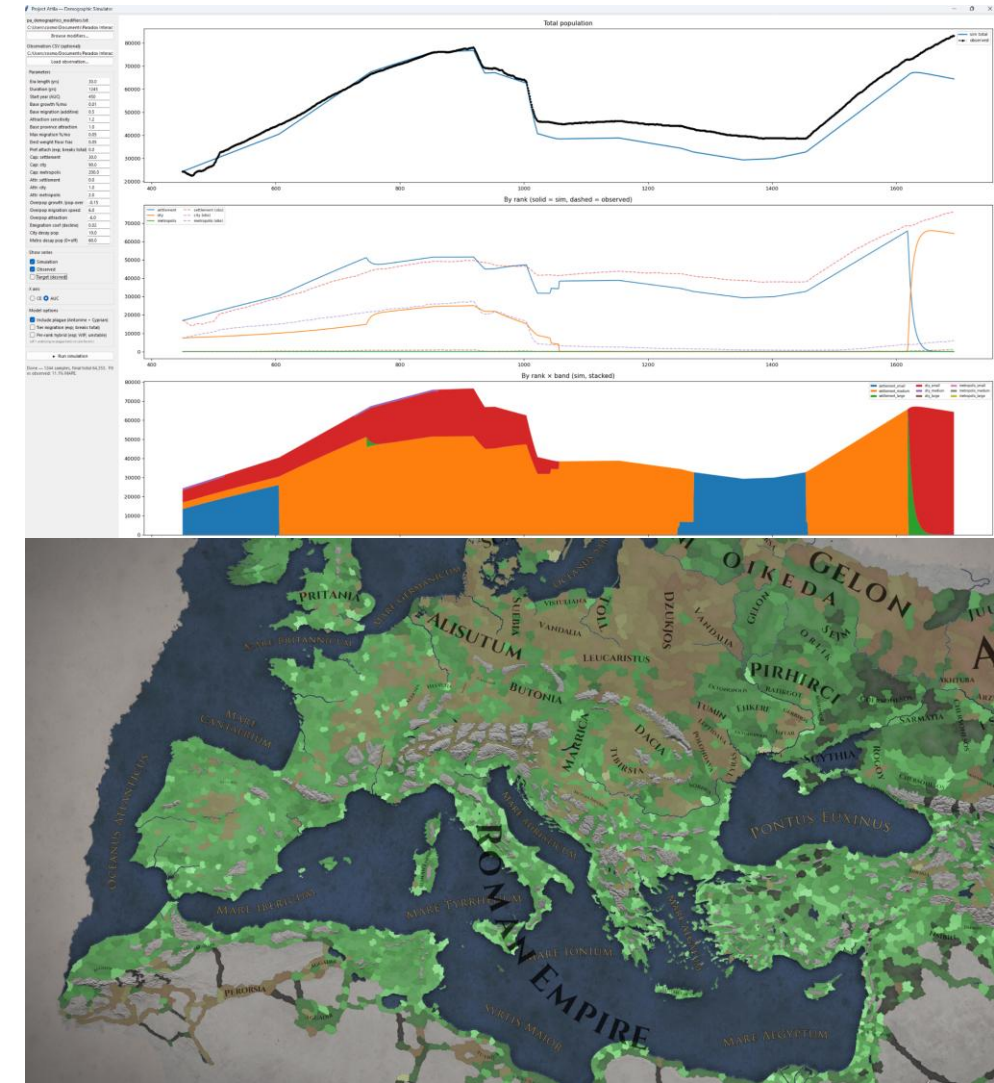
- Problem Statement: Wargames require bespoke map visualisations. PPT/Word/Paint are primitive, other options are costly or slow, or unavailable in secure environments or on weak IT...
- HTML+JSON tool to visualise FDs/TTXs/WGs.
 - Events, pins, units, map colours, lines, custom geopolitics, dice rolling.
- Contains option to import/export scenarios locally, can export directly to PPT.
- Works offline, in a walled garden environment, single HTML file.
- AI Advantage: An effort that could take a large team weeks took an individual days.
- Key Point: AI-developed tool provides a **generic solution**, at speed with low cost, without specific skills required.



Case Study 2 – Demographic Simulator

8

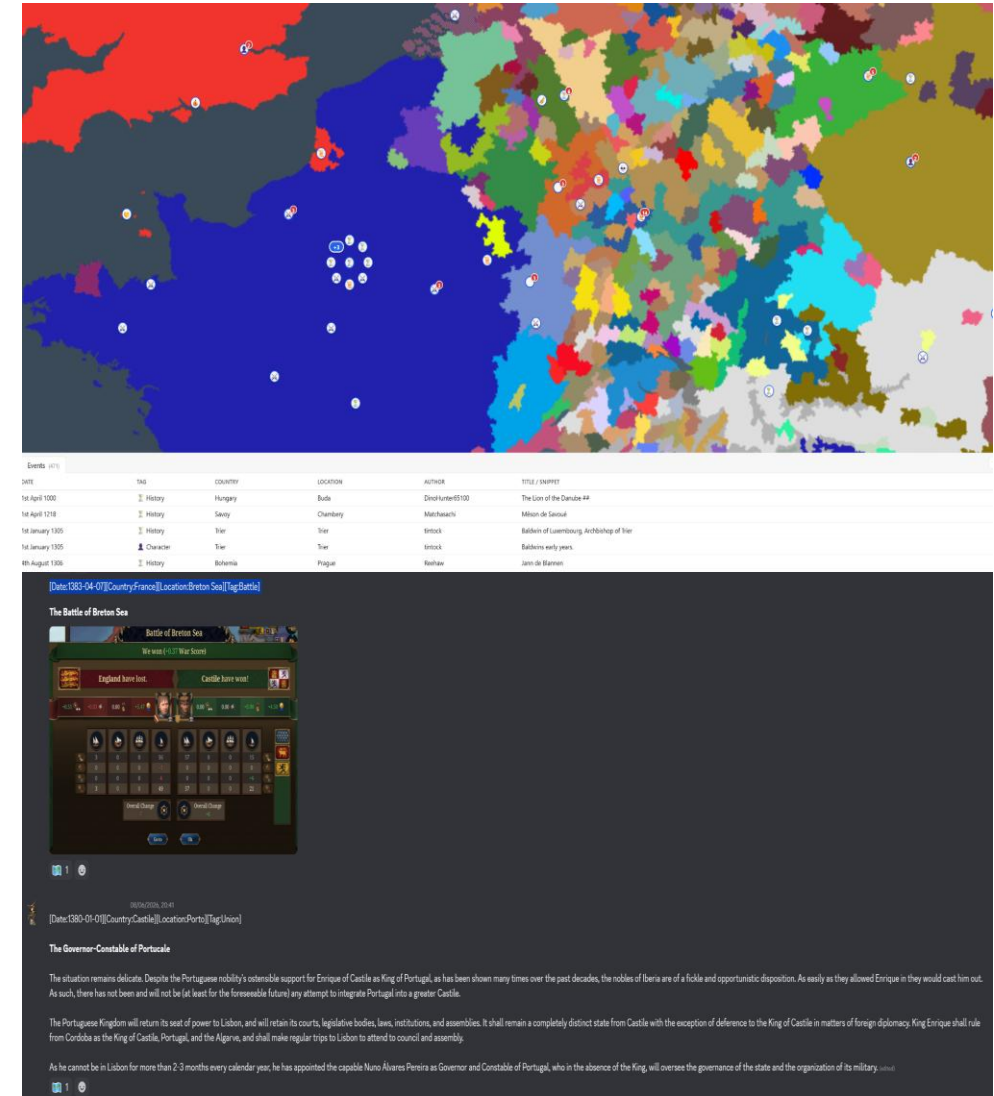
- Problem Statement: COTS games/tools can provide sophisticated solutions, but can require expensive/difficult SAAS support or bespoke knowledge...
- Python interpretation of COTS game.
- Reads, captures, analyses, projects and simulates data based on the game engine + plaintext save files.
- Acts as decision support tool for either human or AI modifications to COTS game software.
- AI Advantage: AI interpreted COTS software in minutes and allowed for immediate, simple analysis and modifications. Acted as a force multiplier to an existing tool.
- Key Point 1: Rather than learn an entire COTS software and conform my work around it, I can use an AI-developed tool to make it work for me.
- Key Point 2: AI-developed tools can be used not only for design tasks, but also for analysis tasks.



Case Study 3 – Automated Data Capture

9

- Problem Statement: Player actions in large games can take a large amount of time to display in an interactive or useful way. Doing this while also adjudicating and facilitating is often impossible...
- Python script scrapes standardised, player-formatted Discord posts.
- GitHub actions checks for updates ~hourly during play sessions.
- Live updates to HTML-based online map players can interact with to see world/player events.
- AI Advantage: Highly complex software tasks can be handled by AI-developed tools; these tools being free rather than bespoke commercial software.
- Key Point: The entire data capture pipeline can be significantly simplified and automated, minimising human error, cost and time.



Risks and Caveats

Classification

- Can AI-developed tools be used in a classified environment?
- If they can, what's the best use case?

Accuracy

- Do these tools produce accurate (enough) results for valid analysis?

Bias

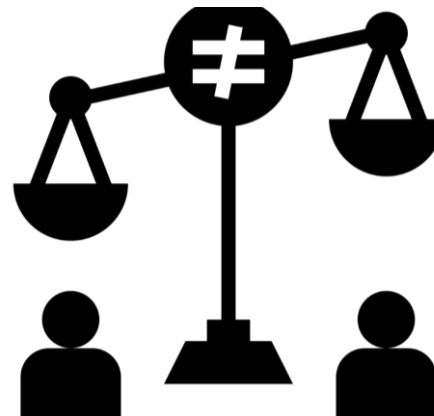
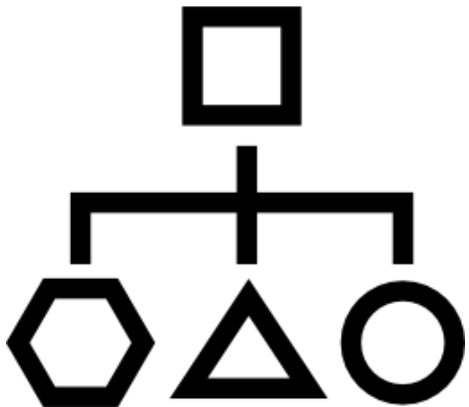
- What inherent bias might these tools contain?

Sovereignty

- Does foreign ownership pose a legal/ethical/policy risk?
- Who *really* owns the outputs of these tools?

Cost/Time

- Is money/time actually being saved, or are we simply generating new, spurious lines of work?



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Thank you!

Any Questions?

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