SILENT WAVE – How the Simulation Actually Works

Berlin, 13–15 August 2025

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EU CYBERNET SUMMER SCHOOL 2025

Cyber Crisis Management: Navigating Disinformation and Cyber Attacks in the AI Era

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Outlook

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- **Understanding the Mission and Setup**
  - Get familiar with the purpose of the simulation, what "Silent Wave" is, and how the "Exec" platform supports it.

- **2. Exploring the Scenario and Structure**
  - Learn how the simulation unfolds: the fictional country under attack (Virenia), the timeline, and the 10 teams involved.

- **3. Your Team's Role in Action**
  - Discover what your team is expected to do, how injects work, and what success looks like in a fast-moving cyber crisis.

- **4. Behind the Scenes: How the Exec Operates**
  - A look into how the Exec platform works, what you'll interact with, and the kind of data it captures throughout the exercise.

- **5. Wrapping Up and Moving Forward**
  - What happens after simulation, why the Exec matters beyond this exercise, and technical insights.

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What is Silent Wave?

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Silent Wave is a strategic tabletop exercise simulating a hybrid crisis in the fictional European country of Virenia. Played entirely through pen-and-paper team tasks, no technical skills required. It combines:

- AI-generated disinformation
- Coordinated cyberattacks
- Social media manipulation
- Stress on democratic resilience

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What is the Exec?

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The Exec is the simulation engine behind Silent Wave. It makes Silent Wave dynamic, adaptive, and evaluable. Think of it as the invisible game master:

- Schedules and delivers scenario events (injects)
- Logs team decisions and response time
- Triggers escalation or containment based on actions
- Powers the disinformation dashboard and timer
- Enables structured post-exercise analysis

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How the simulation is played

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The experience is not digital, but fully immersive and decision-driven. You will act as if you were leading a real national response. Each team receives:

- A team-specific enhanced dossier
- A set of mission objectives
- Access to the Matrix chat platform
- Tools: paper templates, live timer, and the disinfo dashboard

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The country under attack: Virenia

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Virenia, a fictional Baltic EU & NATO country. Under hybrid attack by the authoritariann state of Novgorod.
Your team must respond under pressure, protect public trust, and defend democratic processes. Threats include:

- Fake news of a nuclear incident
- Deepfakes targeting political figures
- DDoS attacks on hospitals and finance
- Rumors of NATO withdrawal
- Riots triggered by online manipulation

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The 10 Teams Involved

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Team	Strategic Focus
1 – Presidential	*National leadership, crisis decisions*
2 – Cybersecurity	*Digital defense and infrastructure*
3 – Intelligence	*Threat analysis and actor profiling*
4 – Diplomacy	*International coordination, NATO/EU diplomacy*
5 – Media Relations	*Public communication, press strategy*
6 – Fact-Checking	*Verification of information, deepfake detection*
7 – Civil Rights	*Legal oversight and civil liberties*
8 – Infrastructure	*Service continuity and critical systems*
9 – NATO Coordination	*Multilateral defense response*
10 – Adversary Team	*Simulate Novgorod's hybrid offensive*

Timeline of the Simulation

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Time	Phase	Focus
12:30–13:00	*Tabletop Briefing*	***Intro to scenario & tools***
14:00–14:30	*Phase 1 – Disinformation Surge*	***Information chaos begins***
14:30–15:20	*Phase 2 – Cyberattacks + Unrest*	***Infrastructure under fire***
15:50–16:40	*Phase 3 – Strategic Decision-making*	***Peak crisis coordination***
16:40–17:00	*Phase 4 – Communication & Response*	***Managing public narrative***
17:00–17:10	*Phase 5 – Internal Wrap-Up*	***Lessons learned & summary***
Next Day	*Team Presentations*	***10-min debrief per team***

Total duration:
4h 40m + team debrief next day

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What your team actually does

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Everything must be written, decided, and justified under time pressure and every team is asked to produce paper-based deliverables, including:

- Emergency speeches
- Crisis memos and incident reports
- Public statements and press releases
- Continuity plans and coordination notes
- Legal evaluations, diplomatic messages, threat assessments

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What events look like in practice

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Sample inject from Phase 2 (14:38): "Massive DDoS disables ATMs and e-banking. Rumours of collapse spread on Telegram and TikTok. Public unrest grows in 3 cities.”. The Exec records all response timing and decisions

- Team 2 must isolate the source
- Team 5 must counter the narrative
- Team 1 must decide whether to declare a banking emergency

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How the Exec works

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The Exec powers everything under the hood, No one controls it manually; it reacts dynamically, just like a real crisis:

- Injects pre-scripted events (from YAML files)
- Triggers escalation if teams fail to respond or if the narrative deteriorates
- Logs each team's response, action, and timing
- Feeds real-time data to dashboards
- Supports the after-action report (AAR) for learning

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What you'll see and use

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These tools help simulate reality but don't replace your decisions. You will interact with:

- **The Timer** tracks each crisis phase in real time
- **Disinformation Dashboard** shows narratives spreading, engagement data
- **Your Dossier**, all materials and templates
- **Matrix Chat** is used for real-time inter-team communication

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What you'll see and use – The Timer

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What you'll see and use – The Dashboard

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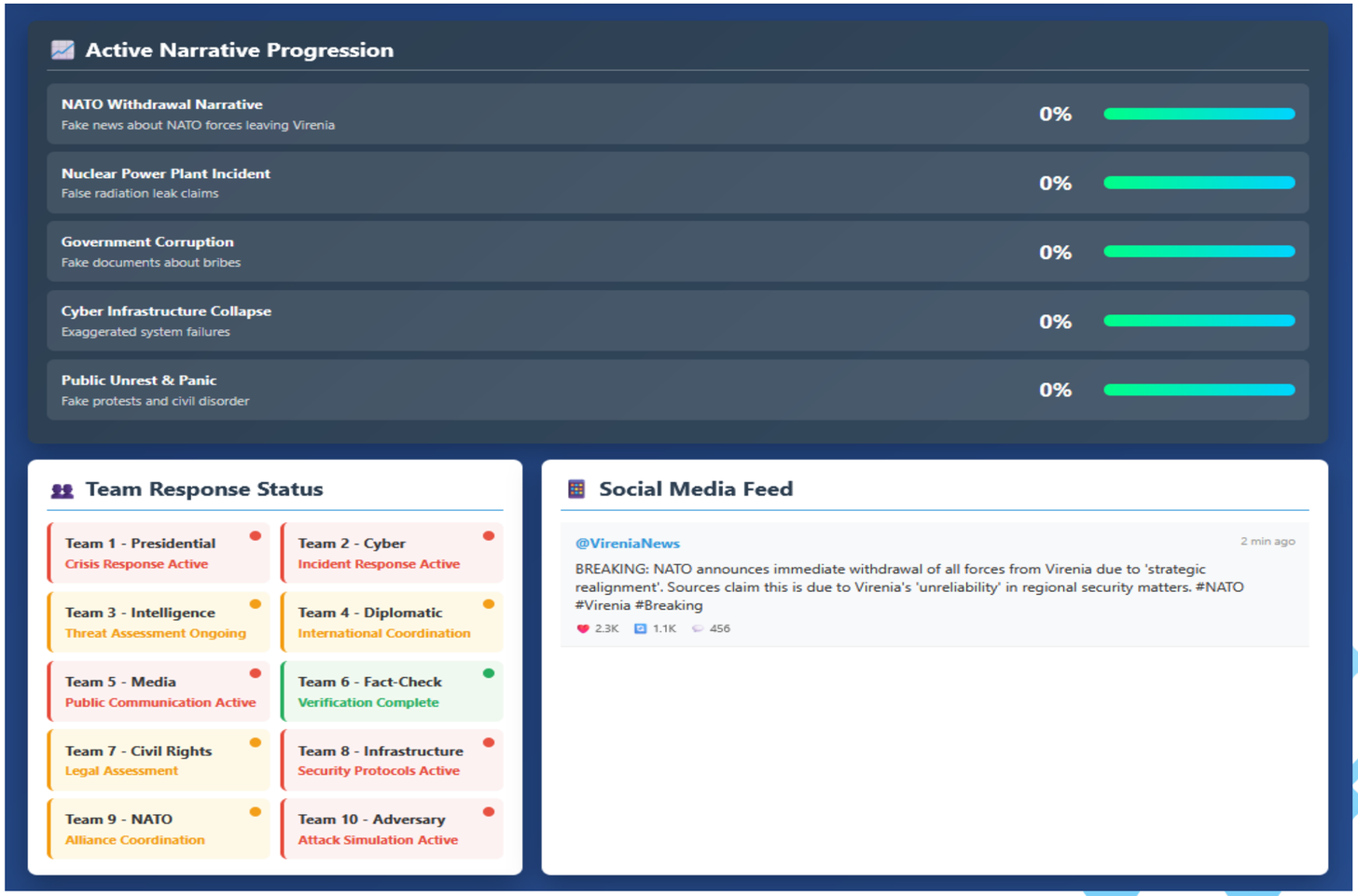

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What you'll see and use – Matrix Chat

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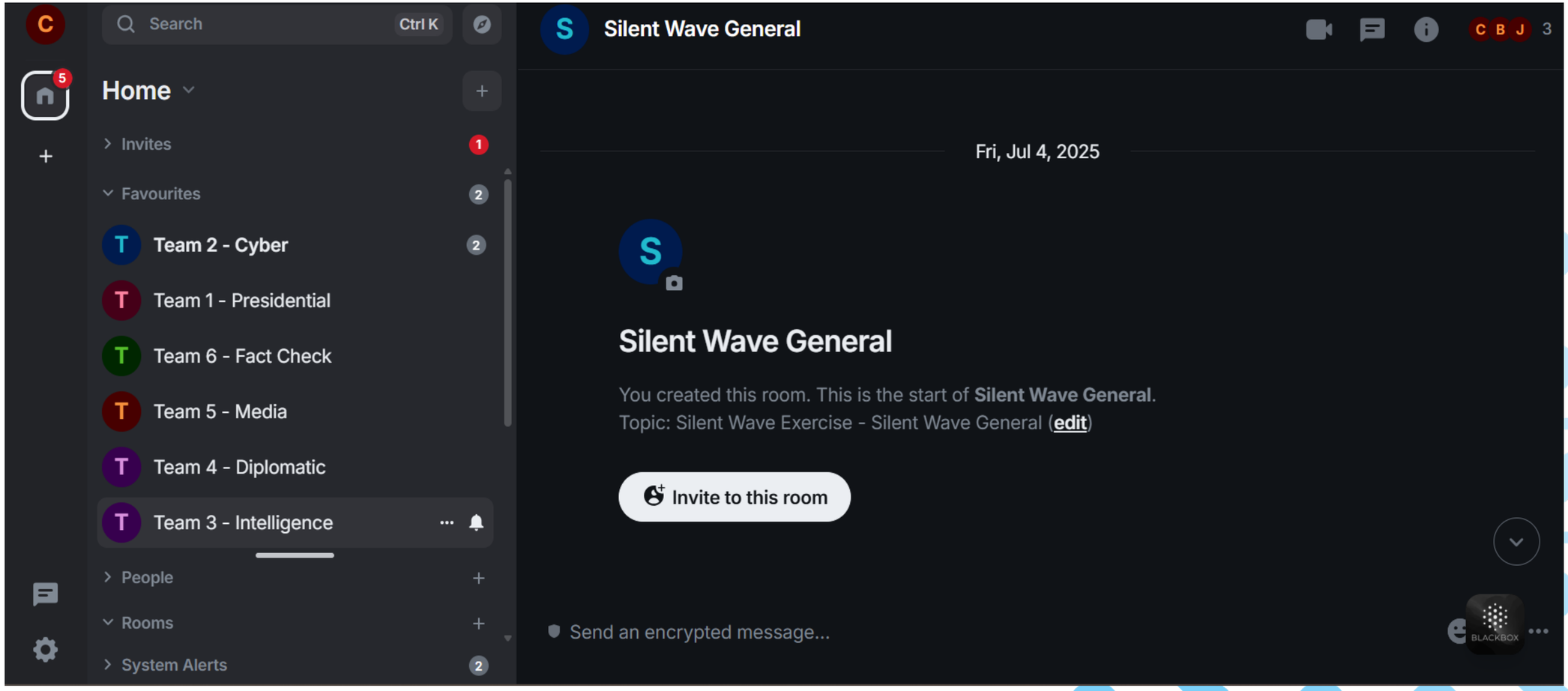

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What the Exec collects

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This data is not used for scoring, but for evaluating resilience and preparedness During the exercise, the Exec logs.

- Timing of team reactions
- Type of decisions taken
- Coordination patterns between teams
- Counter-narrative effectiveness
- Balance between urgency and democratic integrity

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What does success look like?

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It’s not just a cyber game; it’s a test of modern governance under pressure You don’t win by points. You succeed if you:

- React swiftly and proportionally
- Protect democratic values
- Maintain public trust
- Coordinate across silos
- Contain the threat and stabilize the nation

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What happens after the simulation?

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The Exec data enables a data-driven debrief for all teams and facilitators. The next day, every team will:

- Present a 10-minute recap
- Share what worked, what failed
- Explain decision rationales
- Reflect on communication and coordination
- Suggest future improvements

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Recap: Why the Exec matters

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Silent Wave is not a drill. It’s a controlled chaos generator, and the Exec is its engine.

- Creates a realistic crisis tempo
- Enables structured, reactive storytelling
- Captures behavioural data for strategic learning
- Scales across teams, domains, and sectors

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Technical Appendix (Optional – For Observers & Facilitators)

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- Architecture: Python engine, RabbitMQ, PostgreSQL, WebSocket frontend
- YAML scenario scripting + FSM logic
- CLI tools for exporting logs
- API for tracking injections and responses
- Extensibility and customisation

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Closing & Next steps

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Key Takeaways:

- Silent Wave simulates a complex hybrid crisis in real time
- The Exec engine drives dynamic injections, logging, and analysis
- Success hinges on swift, coordinated, democracy-preserving responses

What's Next

- Team presentations & debrief tomorrow
- After-Action Report informed by Exec data
- Recommendations for strengthening national resilience

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Thank You!

Questions ?

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