



# THE CLOCKTOWER SERIES

## PROMPT ENGINEERING IN CTOC INSTRUCTION

Countering Transnational Organized Crime with Artificial Intelligence

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*This concept note stems from the Countering Transnational Organized Crime (CTOC) course held at the George C. Marshall European Center for Security Studies in February and March 2025. The capstone course exercise focused on developing prompt techniques for large language models to expand CTOC AI efforts.*

### Introduction

This concept note presents a practitioner-oriented approach to the use of artificial intelligence (AI) and large language models (LLMs) in the countering transnational organized crime (CTOC) strategy and policy development process. The concept, entitled “CTOC with AI,” was piloted in the 2025 George C. Marshall European Center for Security Studies (GCMC) CTOC course as an activity and embedded in the course exercise. The exercise was designed to help participants better understand the processes of developing organizational and governmental CTOC strategies and creating policies to counter transnational organized crime challenges in selected countries.

Integrating AI, particularly LLMs, into the CTOC policy cycle can improve analytical efficiency and strategic decision-making processes provided the use of this technology is guided by well-structured prompts, ethical awareness, and process transparency. Importantly, it must also be safeguarded by [humans in the loop](#). This concept note introduces the application and potential use and benefits of CTOC with AI without going into technical details of LLMs and prompt [engineering techniques](#), focusing instead on the key ideas around the application of AI to CTOC policy formulation. This approach aligns with the emerging scholarship on AI’s contribution to [public policy](#), such as evidence synthesis and policy options generation, while considering the

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main principles of policy making such as transparency, accountability, privacy, and fairness.

This concept note assumes two interrelated propositions that are also largely accepted by the field experts. First, TOC operates in a complex, adaptive, and cross-border system. Criminal networks operate across multiple illicit markets and legal domains. Governments working to counter these activities produce large amounts of data in interdependent systems that can easily overwhelm traditional analytical workflows. Using AI capabilities and applying LLMs to the processes of defining priorities ([triage techniques](#)), determining pattern recognition in data, and discovering explanatory causation variables in complex environments can help practitioners improve their efficiency in developing policies.

The second proposition is related to the adaptation of AI use into the educational and professional environments of security experts, policy makers, and decision makers. Professional and security education communities advocate a [middle way](#) approach that encourages [collaboration](#) with AI without completely abandoning human judgement. In a recent article, [Matthew Woessner](#) warns about the “illusion of objectivity” and “programmer’s invisible hand” that can have significant impact on analytical outcomes. The CTOC with AI concept takes a similar approach, emphasizing the user’s control over data collection, analysis, and validation before creating final recommendations for decision makers. Importantly, the power of AI and LLMs cannot be ignored. Doing so will leave practitioners and policy makers behind the curve in a highly [competitive](#) international security environment.

The main objective of the course was to introduce the idea of using AI in a creative way while also raising awareness of potential pitfalls and ethical considerations. Through the exercise, participants practiced using AI and observing the data analytics and policy development capabilities. The core contribution of this concept paper is methodological: it specifies a prompt-engineering centered workflow for each stage of policy making and strategy development, engaging via the exercise a context-driven prompt design to improve both prompt structures and process outcomes.

## Overview of AI Capabilities and CTOC with AI

AI in general and LLMs in particular, offer significant potential for security professionals, policy makers, and decision makers working on TOC-related security issues. Various [international security organizations](#) have [provided](#) guidelines and reports [informing](#) their partner organizations about the potential of AI in their work and related ethical/legal aspects. [Some have even proposed](#) specific implementations of AI to counter TOC challenges.

AI in security can be conceptualized in two complementary terms:

- “+AI”: augmenting existing workflows with AI tools and creating prompt patterns to increase the efficiency and analytical depth of the processes
- “AI+”: embedding AI into services or platforms to enable autonomous or semi-autonomous functions

The CTOC with AI concept is a +AI approach that increases efficiency through the use of available AI systems. This approach emphasizes AI as a powerful tool to augment human capabilities, decision making, and the efficiency of existing operations rather than replacing human actors in the process. The model doesn’t present applications of AI+ that require the presentation of technical capacities of technologies supported by AI such as use of AI in [crime detection](#), [crime prevention](#), and predictive policing.

The CTOC with AI concept presents a methodology powered by an AI tool to develop CTOC strategies/policies and well-crafted policy alternatives for decision makers. In this concept, AI and LLMs are used as force multipliers (+AI) without replacing human expertise. At the same time, CTOC with AI engages the power of LLMs to analyze complex data, generate policy options, and develop scenarios under human supervision. The central aspect of this methodology is the creation of an interactive environment underpinned by robust prompt engineering to facilitate data collection and analysis, feeding an effective decision-making process.

## Integrating AI into CTOC Efforts— A Strategic Necessity

The complicated nature of transnational criminal networks, their operation in multiple illicit markets, and their overlapping activities in licit business environments require a new way of looking at these complex interactions. In addition to this complexity, governments and businesses collect large sums of data related to illicit markets. This overwhelming information environment cannot be effectively analyzed with traditional human analytical methods. Fortunately, AI can amplify human capacities to develop better strategies to counter transnational organized crime and other related threats. The integration of AI into CTOC policy and strategy-making processes not only improves the efficiency of those processes, but also establishes an advantage against extremely [sophisticated criminal networks](#) operating in multiple security domains. Keeping in mind the reality that criminals have already adapted to AI and [use multiple tools](#) to enhance their operations, security professionals cannot ignore the adoption of AI into their efforts countering transnational organized crime operations.

In particular, AI possesses an extremely powerful capacity to collect, process, structure, analyze, and identify actionable insights from these vast and complex interactive systems and the data connected to these systems. As such, the CTOC with AI model can empower human experts to focus on outcomes. The applications of AI to decision-, policy-, and strategy-making processes enhance situational awareness of critical insights and support the process of developing proactive responses rather than reactive measures. Overall, CTOC with AI promotes AI use in data processing, inclusive of ethical considerations and humans in the loop, to generate a more nuanced understanding of CTOC problem sets, thereby leading to better [outcomes](#). Before providing details of the concept, it is important to review select core AI capacities that are relevant to CTOC.

### Core AI Capacities Relevant to CTOC

AI offers a set of capabilities that can potentially transform how policymakers and practitioners approach CTOC. In keeping with the topic of this concept paper, the following capacity improvement [tools](#) are particularly relevant:

- *Data-Driven Insights.* AI can [analyze](#) large [datasets](#) to identify trends in data including patterns and emerging TOC threats. For example, Europol’s Innovation Lab published a report exploring how law enforcement agencies can process large data sets to detect and counter criminal activity.
- *Predictive Analytics.* AI can be used to predict potential future trends in TOC, allowing for proactive [policy responses](#). Based on trends, AI can produce interactive [policy games](#) to increase resilience against potential future TOC activities.
- *Natural Language Processing (NLP).* NLP can analyze text-based data, such as news articles, reports, and social media posts, to extract valuable insights and bring qualitative data into the decision-making and implementation processes.
- *Network Analysis and Visualization.* AI can develop network maps to visualize complex criminal ecosystems and identify key nodes and relationships within the system. This can be operationalized at the tactical and strategic levels to understand the magnitude of a given threat or threats in certain region- or country-specific contexts. As an example of this, a George Mason University professor recently [developed](#) a model using AI to identify human trafficking hot spots.
- *Scenario Simulation and Policy Gaming.* AI can be instrumental in creating interactive simulation games to test policy options in dynamic conditions. The power of AI allows policy makers to explore diverse options in different contexts and (in most cases) in uncertain situations with a lack of significant information ([information asymmetry](#)). AI reduces the time and cost of game design, enhances actor engagements, and analyzes risk and ethical concerns.
- *Multimodal Data Fusion.* AI models can integrate different versions of data (text, image, geospatial, statistical, etc.) to provide an integrated analytical environment. [Multimodal](#) AI can be applied to many TOC fields, as the data sources for areas such as smuggling, illicit finance, and human trafficking are diverse and available in various formats.

## Selected Practical Applications of AI in CTOC

Practical applications of AI in CTOC, in a sense, are only limited by the human imagination and are diversifying and expanding as rapidly as the technology itself. For the purposes of the course, the participants applied the CTOC in AI concept to accomplish certain goals.

- *Identify Illicit Networks.* AI can be used to analyze financial transactions, communication patterns, and other data to identify and disrupt criminal [networks](#).
- *Predict Smuggling Routes.* AI can analyze historical data on [smuggling](#) routes to predict future trends and thereby allocate resources effectively.
- *Enhance Intelligence and Information Analysis.* AI can automate routine tasks, such as data cleaning and [analysis](#), allowing analysts to focus on strategic thinking and decision making.
- *Improve Policy, Strategy and Decision-Making Processes.* AI can act as a powerful tool to consider various alternatives for effective solutions and assist decision [makers](#) in identifying effective solutions to existing issues.
- *Improve Resilience to Counter Emerging Trends in TOC.* AI can detect trends and also develop policy options using multiple-level data to establish [preventive actions](#) that increase institutional resilience against the emerging TOC trends.
- *Use Multimodal Data Fusion to Increase Situational Awareness.* AI can combine multiple data sources (satellite imagery, shipping manifests, financial flows, etc.) and provide a holistic view of region- and country-specific overviews of TOC, supporting strategic and tactical operations with tools such as [security dashboards](#).

## Operationalizing AI in CTOC: Effective Prompt Engineering

Prompt engineering is a crucial and ever-improving component of interacting with LLMs and is the key aspect of the CTOC with AI concept. Overall, prompt engineering [is](#) the art and science of crafting precise and effective inputs to guide AI models toward relevant and accurate outputs. Developing

skills in prompt engineering improves the usage and outcomes of LLMs in specific policy areas. Furthermore, unlike generic queries, well-designed and context-structured prompts reduce [hallucinations](#) and ethical concerns and improve reliable outputs. Effective prompt engineering skills and clear prompt guidance are necessary to ensure LLMs respond most effectively to the context of the TOC operational environment and legal frameworks that the security practitioners must follow.

Prompt engineering also serves as a critical interface for human oversight and human control within the “+AI” framework. It helps to keep humans in the loop, ensuring AI remains a tool serving human objectives rather than acting autonomously. Comprehensive training in effective prompt engineering is as crucial for CTOC practitioners as the underlying AI technology itself. Considering the potential for AI models to produce [hallucinations](#), prompt engineering is essential to reduce such risks and increase the reliability of the outcomes.

## Phase-Specific Prompt Patterns in the CTOC with AI Exercise

With effective prompts, AI can play a significant role in the policy-making process. The following is a list of such prompt examples generated for the participants in different stages of the 2025 CTOC course exercise.

### Phase 1 and 2: Data Collection and SWOT Analysis

During the initial assessment of TOC challenges, participants were encouraged to collect data using traditional methods and limit their use of AI to assist with fact checking and hallucination detection. However, conceptually, AI could also assist in this process to glean the most relevant data from different sources. In the strengths, weaknesses, opportunities, threats (SWOT) analysis phase, participants and assigned faculty entered inputs into the system to scope and define certain terms (“TOC challenge,” “strength,” “weakness”). This allowed the system to focus solely on information relevant to transnational organized crime in specific countries, while ignoring irrelevant topics.

### Phase 3: Policy Solutions with [NotebookLM](#)

[Various patterns](#) were employed to generate policy recommendations.

- The “*Persona pattern*” instructs the AI to act as a policy advisor.  
[Role]: “Act as a policy advisor.”; for example, “You are a senior CTOC policy advisor to the interagency task force.”
- The “*Question Refinement pattern*” helps improve queries for more detailed responses.  
[Task]: “Rewrite the core policy question.”; “List 5-6 sub-questions grouped by the theme (legal, operational, financial).”
- The “*Alternative Approaches pattern*” prompts the AI to list diverse strategies.  
[Task]: “Propose 3 policy options mapped to DIMEFIL and for each, lay out objectives, actions, lead/partners, costs, risks, early warning indicators.”
- The “*Recipe pattern*” can guide the AI to provide a complete sequence of steps for achieving a specific objective.  
[Task]: “Produce a 90-day timeline with weekly milestones, and produce a Gantt table.”
- The “*Fact Check List pattern*” ensures the verifiability of AI-generated facts.  
[Task]: “Extract every factual claim and verify with the uploaded data; remind the user if the claim cannot be verified with the existing data and highlight it as a factual gap.”
- The “*Output Automator pattern*” can be used to produce executable artifacts for identified steps.  
[Task - Output]: “Create a two-page decision memo with the following sections (SECTIONS), and create a six-point talking points memo to present the work to a senior decision maker.”

**Phase 4: Presentation Preparation**

For synthesizing findings and preparing presentations, patterns such as the Reflection pattern can prompt the AI to explain the reasoning and assumptions behind its policy recommendations, enhancing the user’s understanding. The Template pattern allows users to provide a structured format for the AI’s output, ensuring consistency and ease of integration into final reports.

**Table 1. Prompt examples for CTOC with AI**

Prompt Category	Description	CTOC with AI Example
Input	Specifies how the LLM understands the input	“From now on, when I say ‘illicit finance,’ I mean financial activities related to drug trafficking, human smuggling, and cybercrime in, or related to [country name].”
Output	Tailors the output	“Act as a policy advisor specializing in countering transnational organized crime in [country name]. Provide recommendations on how to combat illicit trafficking using diplomatic, informational, military, economic, financial, intelligence, and law enforcement instruments.”
Error Identification	Identifies errors in the input data or detects inconsistent output	“Generate a set of facts that your answer depends on that should be fact-checked, listing them at the end of your output. Only include facts related to crime statistics, legal frameworks, and international agreements relating to [country name].”
Prompt Improvement	Enhances the quality of prompts	“Suggest a better version of my question that incorporates specific details about the types of TOC challenges, strengths, weaknesses, opportunities, and threats relevant to [country name].”
Interactive Policymaking	Creates an interactive model to produce actionable outcomes	“Create a game/simulation for me around cybercrime in [country name]. Simulate a cyberattack scenario and ask me questions about how to respond using different instruments of national power.”

Adapted from White et al., (2023) “A Prompt Pattern Catalog to Enhance Prompt Engineering with ChatGPT”

## Integrating AI into CTOC Strategy and Policymaking: A Step-by-Step Approach

The CTOC with AI model provides a structured methodology to integrate AI into policy and strategy development processes. This systematic approach guides decisionmakers through the entire analysis and policy formulation cycle.

- *Step 1: Data Collection and Entry.* The initial phase involves collecting relevant data and entering this data into an AI platform.
- *Step 2: Data Analysis.* Once the data is entered, the AI processes and analyzes the content. Critically, this phase relies on the effective application of prompt engineering techniques to guide the AI's analytical focus including extracting specific insights and shaping desired outputs.
- *Step 3: Policy Options Generation.* Following data analysis, the AI generates various policy options and recommendations. This step represents a crucial transition from raw data and analytical findings to actionable insights and potential strategic responses for countering TOC challenges.
- *Step 4: Risk Identification and Mitigation.* An essential and integral part of the process, this step involves explicitly identifying potential areas where bias or hallucinations might occur in the AI's output.
- *Step 5: Results Validation.* Human experts conduct a thorough review of the AI-generated results. This validation step is essential to ensure that the outputs are logical, make sense within the real-world context of TOC, and align with broader strategic objectives.
- *Step 6: Findings and Policy Recommendations.* The final step involves synthesizing the AI-driven analysis with human validation. This culminates in a comprehensive summary of findings and the formulation of concrete,

actionable policy recommendations designed to address the identified transnational organized crime challenges.

## Ethical Considerations

Several considerations related to the ethical use of AI are crucial during the application of CTOC with AI process:

- *Bias and Fairness.* Algorithms can create biases in their analysis and outcomes.
- *Privacy and Security.* The process should be aware of the potential challenges to keep sensitive data and user-right issues private when collecting, analyzing, and processing data.
- *Transparency and Accountability.* The process should ensure the collected and processed data is transparent and human oversight is always in action.

## Conclusion

This concept paper introduces a practitioner-oriented model that integrates LLMs into the policy and strategy making processes. By emphasizing a +AI approach, the model enhances human expertise and enables AI to act as a force multiplier. The methodology tested in the GCMC CTOC course demonstrated that prompt engineering can serve as a strategic interface between human judgment and AI capabilities, enabling more efficient policymaking processes. This model is different than [AI+ approaches](#), which offer technical solutions to improve the work of security professionals largely focused on providing tactical advances. By developing a +AI model for specific TOC challenges, human experts have an effective strategic tool supplying an improved understanding of specific TOC challenges. As TOC groups grow into more complex entities, integrating AI into CTOC work is not optional but an essential professional requirement for the workforce of the future. ~ Σ

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