



4th Psychological Operations Group (4 POG) CE Problem Statement Template

TEAM: TEAL Number: #1

Problem Statement Title: Human Behavior Model

Problem Statement: Reliance on single points of data limits the ability to comprehensively understand and model the factors that drive human behavior.

Effective Outcome: Analysts can combine relevant data points for specific environments globally to build a more complete picture of the factors influencing behavior and support human behavior analysis.

Unique Conditions: Relevant data varies by environment and may include survey data, population data streams, purchasing power, economic data, and other sources that must be linked to specific behaviors.

Standards/Desirements: The capability should integrate multiple relevant data sources, preserve their context, and support analysis of relationships between environmental factors and specific behaviors across global environments.

Technology Research Areas of Interest: Multi-source data fusion; human behavior and cognitive modeling; survey and population analytics; economic and purchasing-power data integration; AI/ML methods for identifying relationships between data points and behavior.



4th Psychological Operations Group (4 POG) CE Problem Statement Template

TEAM: TEAL Number: #2

Problem Statement Title: Comprehensive Means of Dissemination Platform

Problem Statement: Information needed to understand how messaging and broader U.S. Government activities affect target audiences and behavior is distributed across separate efforts and data sources.

Effective Outcome: A single pane of glass collectively gathers and collates relevant data across U.S. Government efforts so users can connect activities to target audiences and behaviors and better drive measures of effectiveness.

Unique Conditions: Relevant inputs extend beyond message dissemination and measures of performance to include other activities, such as civil affairs and information forces activities, that may directly or indirectly affect a target audience and its behavior.

Standards/Desirements: The platform should integrate and correlate data from multiple U.S. Government efforts and allow users to connect messaging, measures of performance, other activities, target audiences, behaviors, and measures of effectiveness.

Technology Research Areas of Interest: Cross-system data integration and orchestration; common operational picture/single-pane-of-glass platforms; data correlation across messaging and operational activities; MOP/MOE analytics.



4th Psychological Operations Group (4 POG) CE Problem Statement Template

TEAM: TEAL Number: 3

Problem Statement Title: AI Model Validation

Problem Statement: Emerging technologies, including AI-enabled tools, lack a consistent framework to determine whether they are grounded, validated, useful, and appropriate for specific parts of the information operations workflow.

Effective Outcome: A fair test bed and evaluation framework enables users to compare technologies, validate performance for specific use cases, and determine when a task is best performed by a human, AI, or a human-AI team.

Unique Conditions: Technology maturity and availability vary across the workflow: some areas are crowded with tools, while others have few options. Certain applications, such as cognitive effect modeling, also require grounded and culturally aligned capabilities.

Standards/Desirements: Evaluation should be repeatable and comparable across technologies, measure performance at the relevant workflow stage and use case, and assess grounding, validation, and cultural alignment where applicable.

Technology Research Areas of Interest: AI test and evaluation frameworks; technology benchmarking and test beds; narrative analytics; cognitive effect modeling; culturally aligned agents; human-AI teaming and decision frameworks.



4th Psychological Operations Group (4 POG) CE

Problem Statement Template

TEAM: PURPLE Number: #1

Problem Statement Title: Data

Problem Statement: We lack the Standardization of how data is enriched against Structured and Unstructured for data normalization within the AI toolkit

Effective Outcome: A seamless process is put in place that the model understands on how to leverage data from different sources. This eliminates sole source data issues..

Unique Conditions: Proprietary Interfaces, Data Ownership, Data Accessibility

Standards/Desirements: Certification Process, MCP ready

Technology Research Areas of Interest: Mesh network of resources at the edge for processing of data



4th Psychological Operations Group (4 POG) CE

Problem Statement Template

TEAM: PURPLE Number: #2

Problem Statement Title: MOE(I)s and MOPs

Problem Statement: One framework needed for indicators associated with MOE(I)s and MOPs that are being developed and narratives that are being leveraged for assessment of campaigns.

Effective Outcomes: Ability to tailor effective assessment to account for the uniqueness between campaigns, and provides the ability for preemptive forecasting and simulations

Unique conditions: Denied areas, Access to the right intelligence data, Data Manipulation/poisoning, Data Provenance

Standards/Desirements: Standardized assessment criteria, and provenance strategy (fingerprinting, hashing, etc), A trusted way to maintain persistent access to the data

Technology Research Areas of Interest: Social Science, Operations Research, Data Science



4th Psychological Operations Group (4 POG) CE

Problem Statement Template

TEAM: PURPLE Number: 3

Problem Statement Title: Human Governance and Machine Pairing

Problem Statement: We lack identifying adaptable decision points mapped to levels of authority for the PSYOP lifecycle

Effective Outcome: Human gated authorities

Unique Conditions: Operationalize the operator to be more effective. Mission being performed against commanders intent

Standard/Desirements: Operator Training, Human Governance Process

Technology Research Areas of Interest: None noted

Problems:

- Data Structuring, and Data Provenance for querying the LLMs, and natural language processing ontology
- MOE(I)s and MOPs associated with cognitive responses to the narrative/campaign. What data is the appropriate data to use and do we have access to the right/relevant data
- Human Governance and machine pairing. The decision pairing and the right information, approval/authorities



4th Psychological Operations Group (4 POG) CE

Problem Statement Template

TEAM: WHITE Number: #1

Problem Statement Title: Developed Information Presentation

Problem Statement: Information must be presented with appropriate context to the user who is trying to accomplish a task

Effective Outcome: Commanders, analysts and operators each get the area and depth of information that they need. Context and intended result is appropriately maintained

Unique Conditions: Many disparate systems, formats, networks, and use cases. Existing solutions are largely not versatile

Standards/Desirements: Information must be presented appropriately with attribution and provenance for auditability and verification. Need to fully understand the classes of stakeholders and what they need

Technology Research Areas of Interest: Agentic information assembly orchestration solutions. Adaptable UI/UX design



4th Psychological Operations Group (4 POG) CE Problem Statement Template TEAM: WHITE Number: #2

Problem Statement Title: Institutional Change

Problem Statement: Processes, rules, tools, policies, and risk tolerances must be changed and adjusted to achieve desired outcomes in a timely manner, which is VERY difficult to do.

Effective Outcome: Stakeholders have the knowledge, access, capability, and autonomy to accomplish the missions that they are tasked with.

Unique Conditions: Disparate disconnected enclaves and environments, both physical and digital.

Standards/Desirements: The ability to adapt to new situations without a 2 year acquisition process.

Technology Research Areas of Interest: Improved acquisition processes



4th Psychological Operations Group (4 POG) CE Problem Statement Template TEAM: WHITE Number: 3

Problem Statement Title: Time to Live for Outputs

Problem Statement: Outputs (reports, decisions, feedback loops) take an inordinate amount of time to deliver due to technical constraints and access

Effective Outcome: The user can get the output they need in time to accomplish mission

Unique Conditions: Disparate systems slow access, compiling information from multiple places and networks

Standards/Desirements: Established KPIs based on mission

Technology Research Areas of Interest: Improved access controls to ease concerns with spillage, orchestration of information for consumption and decision-making, concentrating SMEs' time on their specialty rather than collecting and organizing information



4th Psychological Operations Group (4 POG) CE Problem Statement Template TEAM: BLUE Number: #1

Problem Statement Title: Psyop operations at the edge in a LSCO environment

Problem Statement: Psyops teams need to be able to analyze, target, and assess effects of their operations while disconnected from communication with higher echelon.

Effective Outcome: Sufficient data on friendly, enemy and geographical dispositions pushed forward to edge computing devices and the team is able to conduct their full mission cycle in a DDIL environment, with data making seamless return trip to higher repository upon restoration of communications.

Unique Conditions: Limited by number of and computing power of devices- enemy electronic warfare environment, as well as physical threats (ie, UxS) to communication uplinks

Standards/Desirements: Network and data fabric protocols for use in DDIL environments. Tools that can run partially and completely disconnected. Data standards that can support partitioning (per AOR), versioning and reconciliation.

Technology Research Areas of Interest: How build/acquire tools for the edge. How to preposition intelligence on the edge. How to collaborate across devices on the edge. How reconnect and reconcile data back to the enterprise when comms is reconnected. Collaboration between both software and hardware providers to create easily deployable fly-away kits

+ Planning assistant, multimodal content generation. MOE/analytics assistant (made easy for someone with minimal or no statistics training)



4th Psychological Operations Group (4 POG) CE

Problem Statement Template

TEAM: BLUE Number: #2

Problem Statement Title: Continual MOE to allow effectiveness and the return on investment (ROI) of populations

Problem Statement: The lack of a continual independent MOE hampers baselining to determine the impact of series.

Effective Outcome: Periodic (weekly or biweekly) monitoring of populations that is not tied to the MOP or distribution channels that serves as a baseline against which effectiveness is determined.

Unique Conditions: Please explain any unique, atypical applications, or limitations that may be difficult to overcome.

Standards/Desirements: What standards or minimum qualifications must the technology meet to be implemented successfully. You can use threshold and objective numbers, if available.

Technology Research Areas of Interest: Please list what you have seen, looked at, or tested and what were the outcomes. Please also note, any general areas of research that should be conducted as a starting point .



4th Psychological Operations Group (4 POG) CE

Problem Statement Template

TEAM: BLUE Number: 3

Problem Statement Title: Data standardization and interoperability

Problem Statement: Need for unified data repository with common data structure for common tools used (scrapes, TAA, GEO Int, reports, after action, etc.)

Effective Outcome: Central data repository that Psyops Command maintains that individual units pull from and push to – continually growing target data sets. Ability to access all historical context on any target environment, AOR etc. as a starting point.

Unique Conditions: Uniform platform, standard ontology, ubiquitous data types for different tool sets.

Standards/Desirements: Cloud-based but with on premises and mobile solutions for denied environments

Technology Research Areas of Interest: No new tech required but the decision to identify a singular platform and institute policy requiring its use.



4th Psychological Operations Group (4 POG) CE

Problem Statement Template

TEAM: YELLOW Number: #1

Problem Statement Title: Inability to quickly access and share data.

Problem Statement: In the shortest number of words, comprehensively describe the problem you're trying to solve. Not a lack of data, but access to verifiable and secure data, and the ability to share quickly.

Effective Outcome: Based on the problem statement, what does an effective outcome achieve? (What does success look like?) . Good data enables better context layers, which drives better ai-driven workflows and influencer outcomes.

Unique Conditions: Please explain any unique, atypical applications, or limitations that may be difficult to overcome. Have to solve unstructured data, enable common formats or access mechanisms and access control.

Standards/Desirements: What standards or minimum qualifications must the technology meet to be implemented successfully. You can use threshold and objective numbers, if available. Dynamic tasking for data acquisition – new data. Data inventory management. Interoperability and integration.

Technology Research Areas of Interest: Please list what you have seen, looked at, or tested and what were the outcomes. Please also note, any general areas of research that should be conducted as a starting point .

- Integration or inspiration from SOCOM HAVOC
- Automatic discovery and interrogation of data sets
- Data inventory management
- Customer subscriptions, standing request for information



4th Psychological Operations Group (4 POG) CE

Problem Statement Template

TEAM: YELLOW Number: #2

Problem Statement Title: Disparate Tools Set

Problem Statement: In the shortest number of words, comprehensively describe the problem you're trying to solve. Too many tools that don't integrate and interoperate. Past tools not designed to integrate, new tools have no standard to design to.

Effective Outcome: Based on the problem statement, what does an effective outcome achieve? (What does success look like?) integrated suite tools that support the entire 7 phase workflow. More easily use the tools they have and quickly acquire and deploy new tools.

Unique Conditions: Please explain any unique, atypical applications, or limitations that may be difficult to overcome. Current gov primes are not incentivized to integrate. Tools and data must interoperate. Platforms for tools need to be as open as tools and data

Standards/Desirements: What standards or minimum qualifications must the technology meet to be implemented successfully. You can use threshold and objective numbers, if available. Measures of effectiveness. Capability publishing and discovery. Open arch standards, common data standards and sharing.

Technology Research Areas of Interest: Please list what you have seen, looked at, or tested and what were the outcomes. Please also note, any general areas of research that should be conducted as a starting point .

- Ai driven tool discovery and optimal application, works with data discovery tool
- Common tools for measures of effectiveness.
- Open Platform development to enable rapid tool integration.



4th Psychological Operations Group (4 POG) CE

Problem Statement Template

TEAM: YELLOW Number: 3

Problem Statement Title: Rapid, Integrated, Efficient workflows

Problem Statement: In the shortest number of words, comprehensively describe the problem you're trying to solve. How do we improve the overall workflow to do more, faster and better. Biggest problem is activities occur in silos and disconnected.

Effective Outcome: Based on the problem statement, what does an effective outcome achieve? (What does success look like?)

Unique Conditions: Please explain any unique, atypical applications, or limitations that may be difficult to overcome. Approvals and Authority to operate are long and cumbersome

Standards/Desirements: What standards or minimum qualifications must the technology meet to be implemented successfully. You can use threshold and objective numbers, if available.

Technology Research Areas of Interest: Please list what you have seen, looked at, or tested and what were the outcomes. Please also note, any general areas of research that should be conducted as a starting point .

- Integrate training and operational workflows and tools.
- Improve measures of effectiveness
- Improve authorization and approval

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4th Psychological Operations Group (4 POG) CE

Problem Statement Template

TEAM: ORANGE Number: #1

Problem Statement Title: Authority, acquisition, and Governance Process

Effective Outcome: We have established processes and procedures that yield resolutions while the challenge is still addressable.

Unique Conditions: Established solution definition, acquisition process and how the challenge will be managed all take too long/.

Standards/Desirements: Perfection is the enemy of progress. Recognize that we don't know what we don't know at the beginning. Realize that an 80 percent definition is sufficient to start addressing the challenge. Iterate on the fly to new requirements within the model.

Technology Research Areas of Interest: Look to commercial processes that reduce cycle time and cost to deliver. AGILE Software Development, Rapid Prototyping, Leverage existing AI and LLM models and approaches.

This challenge is the result of established processes and procedures that no longer meet the needs of the current environment.

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4th Psychological Operations Group (4 POG) CE

Problem Statement Template

TEAM: ORANGE Number: #2

Problem Statement Title: Data integration & interoperability --> Given the goal is to bring solutions to automate/augment the 7-step process, can the tools communicate and work with each other

Problem Statement: Must have the ability to take different data sources, from different vendors, and pull, push, and map IOT integrate into a single effective platform.

Effective Outcome: Mission -relevant data can be discovered, accessed, correlated, understood, and shared across systems and orgs at operational speed w/out requiring all participants to use the same platform.

Unique Conditions: Operations span multiple orgs, echelons, security domains, networks, vendors, data models, and levels of connectivity.

Standards/Desirements: Define a common mission object and event model rather than forcing a common application. Every object should have persistent identity, time, provenance, metadata, and support open standards.

Technology Research Areas of Interest: Data fabric mesh, event-driven architecture, semantic interoperability, and federation between different servers, APIs, RAG retrieval, extraction, unstructured data extraction, etc.

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4th Psychological Operations Group (4 POG) CE

Problem Statement Template

TEAM: ORANGE Number: 3

Problem Statement Title: Trust, validation, measurement & risk --> Can operators trust the outputs of the tools they are using to augment established 7-step process? How are they measuring the outputs?

Problem Statement: Lack of experience with any toolset inherently drives a lack of trust, and how can operators learn to trust in tools they're provided?

Effective Outcome: Transparency in acquisition process so that trust is built before operators ever get their hands on tools. Familiarity with applications before being hands on leads to an early installation of trust.

Unique Conditions: The complexity of the problem set environment and lack of experts in everything.

Standards/Desirements: There can be academic probabilities and numbers set, but there needs to be transparency in the process. One company's 95% risk can be 50% risk elsewhere.

Technology Research Areas of Interest: MCP Servers, connectors coming from many different companies.

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4th Psychological Operations Group (4 POG) CE

Problem Statement Template

TEAM: RED Number: #1

Problem Statement Title: AI systems are inadequate to craft operations that reliably create desired impact, across target audiences with different social, cultural, and demographic features.

Problem Statement: AI systems must facilitate operations that are grounded in data and social science theory, and specify defined or intended effects as well as metrics for measuring them (MOEs). The system must provide justifications that are articulated in natural language and aligned with operators' intent. Domain-specific models and frameworks must organize and constrain AI-generated activities or messages. Predictions must differentiate correlation and causation, and must flow from data with a coherent object-based ontology. The AI system must contain appropriate regulated feedback mechanisms and over time.

Effective Outcome: Activity planning must specify concrete, measurable outcomes as predictions; results or effects of operations or activities must align with those predictions. In the case of divergence or misfire, mechanisms must iteratively refine outputs to improve accuracy of future operations.

Unique Conditions: Intended, forecast, or anticipated effects must be achieved across a range of distinct application contexts, with varying data volumes and access, and across multimodal data sources. Effects can sometimes be difficult to estimate. Measuring sentiment or attitudes may be easy, for example, while measuring concrete behaviors may be difficult if they are covert, unobserved, private, etc. Heterogeneous target audiences may decompose into numerous subgroups, each of which may respond differently; correctly forecasting impact or backfire effects across all groups is hard. Must cover the entire range of actors: coalition forces, enemy forces, partner nations, interagency partners, host nation, and civilians.

Standards/Desirements: Anticipated effects and tolerance of deviation of outcomes from anticipated effects must be stipulated at planning. Evaluation should be conducted with operators and with human subjects to ascertain system reliability in accurately forecasting effect, and to reveal limitations.

Technology Research Areas of Interest: The above technologies depend upon the ability to reliably measure orientation of target populations vis-à-vis candidate messages or attitudes at scale and with precision. Contemporary tools for sentiment and emotion analysis are often insufficiently precise for measuring specific attitude, behavioral intentions, and behaviors, much less forecasting them. Nuanced analysis of resilience and vulnerability to operations across groups, time, and social network must precede planning of influence activities. The technology solution must be malleable by a relatively inexperienced operator as threat and environment change.

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4th Psychological Operations Group (4 POG) CE

Problem Statement Template

TEAM: RED Number: #2

Problem Statement Title: Operations at the Edge

Problem Statement: Psyop units cannot rely on consistent cloud connectivity in DDIL environments, creating a gap between capabilities available in the cloud and those that can operate on edge equipment.

Effective Outcome: Psyop units can execute mission-critical workflows in DDIL environments using available edge compute, without depending on persistent cloud connectivity. Capabilities are designed to degrade gracefully based on available compute and connectivity, while allowing users to leverage more capable cloud-hosted models and services when connected. Information and work products can move between edge and cloud environments without forcing users to restart or reconstruct their work.

Unique Conditions:

- Intermittent or unavailable connectivity in DDIL environments
- Limited compute, storage, and model availability on edge equipment
- Operations may transition between connected and disconnect states
- Users may need to continue working without reliable reach back to cloud infrastructure

Standards/Desirements:

Technology Research Areas of Interest:

- Edge AI
- Model compression and optimization
- Adaptive model routing
- Offline-first application design
- Edge-to-cloud synchronization
- Resilient data replication
- Local RAG/knowledge stores
- Workload prioritization under limited compute
- Governed agentic AI for edge operations: evidence-grounded, policy-mediated, auditable, and human-confirmed where it matters

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4th Psychological Operations Group (4 POG) CE

Problem Statement Template

TEAM: RED Number: 3

Problem Statement Title: Autonomy, alignment, and LLM errors/confabulation. Classification issues with data pre and post analysis.

Problem Statement: Output of AI systems must be aligned with operators' intentions and objectives, and must function without degradation through hallucinations or confabulation. From ingestion and parsing of input, to modeling and analyzing target audiences, to generating influence activities, models must align with doctrine while extending beyond existing constructs to meet the demands of the 21st century operating environment. They must be dynamic, adaptable, and flexible, rather than constrained by legacy frameworks or assumptions. Furthermore, output needs to be aligned with intent while also identifying and elevating unanticipated challenges, risk, or emerging complexities for human review and oversight. There is also no agreement on data points and definitions making integration and compatibility between platforms extremely difficult and inefficient.

Effective Outcome: Analytic outputs must be audited through a programmatic processes that detects and mitigates errors and misalignment. Discrepant output should be automatically identified for mitigation or human revision.

Unique Conditions: Delegation of analytic and generative functions to systems employing AI agents is a continuum: frequent checkpoints with human input ensure fidelity to intent but decrease the cadence of operations. The appropriate balance may depend upon concrete factors that differ across deployment contexts, making a general solution difficult.

Standards/Desirements: AI-generated analysis and CoA must be associated with metadata that validates consistency with doctrine and operator content, and any

issues must be surfaced for human resolution.

Technology Research Areas of Interest: Model alignment in general is a large area of on-going development for AI systems; hallucination/bias detection is similarly large and fruitful. Methods from these empirical domains might potentially be utilized. However, verifiable alignment with doctrine and operator intent may need to go beyond generic model alignment and hallucination detection. Need to study the standardization of data providence. This must extend beyond the Army. It must include Joint, Interagency and civil data.