

TASK 1: Plan Aerial Dissemination with sUAS

Action:

Design a comprehensive flight plan for sUAS-based leaflet dissemination that calculates release parameters, drift and dispersion patterns, and integrates real-time environmental data to ensure precise and interoperable mission execution.

Conditions:

- **Trigger:** Receipt of mission briefing and confirmation of sUAS availability.
- **Environment:**
 - Operational planning with digital flight data and environmental sensors.
 - Access to sUAS technical specifications and partner force interoperability requirements.
 - Contemporary operational factors (e.g., lessons learned from recent conflicts such as Ukraine).
- **End State:** A validated, data-driven flight plan with calculated release parameters approved for multinational sUAS operations.

Standards:

- All calculations must be within a 5% error margin relative to established benchmarks.
 - Parameters must accurately account for real-time environmental conditions and sUAS performance.
 - Documentation and analysis must support interoperability with Partners and receive approval from the chain of command.
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Performance Steps

Step 0: Determine and Select the Appropriate Aircraft Platform

- **Supporting Task 0.1: Identify Available Aircraft Options**
 - **Knowledge Required:** Capabilities of military and civilian fixed-wing, rotary-wing, and sUAS platforms.
 - **Skills Required:** Data extraction, comparison analysis, and platform capability assessment.
 - **Resources/Materials:** Technical manuals, performance data sheets, digital flight data systems.
- **Supporting Task 0.2: Evaluate Platform Suitability**
 - **Knowledge Required:** Payload capacity, flight duration, operational risks, and environmental adaptability.
 - **Skills Required:** Critical analysis and risk assessment.
 - **Resources/Materials:** Mission briefs, operational threat assessments, and platform comparison tools.
- **Supporting Task 0.3: Select the Optimal Platform**
 - **Knowledge Required:** Integration of mission requirements with platform performance data.
 - **Skills Required:** Decision-making and recommendation formulation.
 - **Resources/Materials:** Decision matrices, chain-of-command directives, and interoperability guidelines.

Step 1: Define Mission and Target Requirements

- **Supporting Task 1.1: Review Mission Briefing and Objectives**
 - **Knowledge Required:** PSYOP and MISO objectives, target area characteristics.
 - **Skills Required:** Critical analysis of mission documents and target intelligence.
 - **Resources/Materials:** Mission briefs, target intelligence reports, digital environmental assessments.
- **Supporting Task 1.2: Determine Target Area Parameters**
 - **Knowledge Required:** Geographic, demographic, and terrain characteristics.

- **Skills Required:** Data extraction and mapping.
- **Resources/Materials:** Digital mapping tools, aerial imagery, and terrain data.

Step 2: Gather sUAS Performance Data and Environmental Inputs

- **Supporting Task 2.1: Retrieve sUAS Technical Specifications**
 - **Knowledge Required:** Flight altitude, descent rate, payload capacity, and sensor capabilities.
 - **Skills Required:** Technical data extraction and compatibility analysis.
 - **Resources/Materials:** sUAS technical manuals, digital performance databases.
- **Supporting Task 2.2: Collect Real-Time Environmental Data**
 - **Knowledge Required:** Impact of wind speed, temperature, and weather on aerial dissemination.
 - **Skills Required:** Data retrieval from sensors and digital weather systems.
 - **Resources/Materials:** Weather monitoring systems, digital sensor networks, geospatial data.

Step 3: Calculate Release Parameters and Flight Profile

- **Supporting Task 3.1: Compute Descent Time and Drift**
 - **Knowledge Required:** Descent dynamics, drift and dispersion mechanics adapted to sUAS.
 - **Skills Required:** Mathematical modeling, vector calculations, and the application of standard formulas.
 - **Resources/Materials:** Calculation software, integrated digital planning tools.
- **Supporting Task 3.2: Determine Dispersion Pattern and Optimal Release Point**
 - **Knowledge Required:** Factors affecting dispersion ellipse (altitude, wind, spread factors).
 - **Skills Required:** Adapting traditional leaflet formulas to sUAS-specific profiles.
 - **Resources/Materials:** Digital simulation tools, drift calculation modules, plotting software.
- **Supporting Task 3.3: Validate and Refine Calculations**
 - **Knowledge Required:** Benchmark data and historical operational performance.
 - **Skills Required:** Simulation testing, error analysis, and quality control.
 - **Resources/Materials:** Digital simulation environments, reference data sets.

Step 4: Finalize, Document, and Approve the Flight Plan

- **Supporting Task 4.1: Integrate Calculations into a Comprehensive Flight Plan**
 - **Knowledge Required:** Digital mission planning protocols and sUAS operational procedures.
 - **Skills Required:** Flight path design and integration of multi-source data.
 - **Resources/Materials:** Digital mission planning systems, interoperability guidelines.
- **Supporting Task 4.2: Conduct Operational Review with the sUAS Operator and Relevant Stakeholders**
 - **Knowledge Required:** Interoperability standards, tactical coordination, and operational review protocols.
 - **Skills Required:** Coordinated briefing, cross-validation, and effective communication with the sUAS operator and other mission-critical personnel (including partner forces when applicable).
 - **Resources/Materials:** Joint review meetings, digital data-sharing platforms, and communication tools.
- **Supporting Task 4.3: Document, Version Control, and Secure Approvals**
 - **Knowledge Required:** Technical writing and documentation standards.
 - **Skills Required:** Record keeping, version management, and communication.
 - **Resources/Materials:** Documentation and version control software, approval templates.

Step 5: Develop Product Action Worksheet (PAW) for MISO Product Used in sUAS Dissemination

- **Supporting Task 5.1: Review Existing Doctrinal Guidelines**
 - **Knowledge Required:** Existing doctrinal guidelines on MISO product development; specific requirements for various delivery methods (e.g., money gun dispenser, box open drop, bag release) including modifications such as paper weight, corner rounding, and other physical attributes.
 - **Skills Required:** Adaptation of traditional product development doctrine to modern sUAS delivery contexts; collaborative product design; risk assessment and specification tailoring.
 - **Resources/Materials:** Doctrinal manuals, digital product templates, PAW templates, and field test data.
- **Supporting Task 5.2: Develop Product Action Worksheet (PAW)**
 - **Knowledge Required:** Existing doctrinal guidelines on MISO product development; specific requirements for various delivery methods (e.g., money gun dispenser, box open drop, bag release) including modifications such as paper weight, corner rounding, and other physical attributes.
 - **Skills Required:** Adaptation of traditional product development doctrine to modern sUAS delivery contexts; collaborative product design; risk assessment and specification tailoring.
 - **Resources/Materials:** Doctrinal manuals, digital product templates, PAW templates, and field test data.