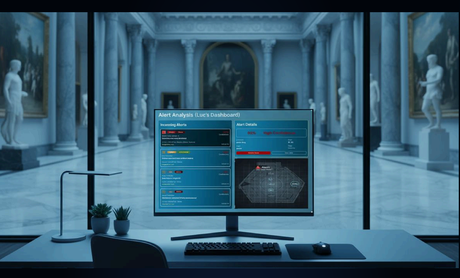
The Art of Drone Security — 2-Day UX Sprint Project

Challenge : Designing a Unified Drone Security Dashboard for Smarter Threat Response
Deliverables : Interactive Prototype · Wireframes · Storyboards · Process Documentation
Role : UI/UX Designer



I designed a unified command dashboard for a drone-powered museum security system. The goal was to simplify complex workflows for the security team while leveraging AI-assisted decision-making for faster and more reliable threat responses.

Timeline
2 Days

Tools
Figma

Role
UI/UX Designer

Design Methodology

AI-First Design Sprint Process

A condensed 2-day sprint helped structure my approach for quick yet meaningful output.

Day 1
Understand & Define

Day 2
Ideate & Prototype

Day 1 – Understand & Define

- Context research: Drone autonomy and museum security operations
- Secondary research on cognitive overload in multi-drone monitoring
- User and workflow mapping for 4 personas (Luc, Isabelle, Sophie, Marc)
- Problem framing & opportunity mapping
- Key insight: Pilots need assistance, not more data

Day 2 – Ideate & Prototype

- Concept exploration using Miro (AI + Human collaboration)
- Low-fidelity wireframes to establish information hierarchy
- High-fidelity UI screens designed in Figma
- Interactive prototype creation
- Storyboarding to visualize user scenarios and decision flow

Problem Exploration

Understanding the Challenge

Securing Le Musée d'Art Précieux is about balancing art preservation, human coordination, and autonomous intelligence.
The challenge wasn't the absence of technology—it was fragmented interfaces, information overload, and slow human-AI decision loops.

Key Pain Points

Information Overload: Multiple disconnected dashboards create confusion.
Alert Uncertainty: Lack of clarity on alert confidence or source reliability.
Coordination Gaps: Guards, drones, and operators work in silos.
Slow Response Time: Prioritization of alerts is unclear.
Limited Autonomy Control: Manual override and delegation are not seamless.

Understanding the Users

Luc
26 / Male

Role : Junior Security Analyst

Pain Points : Overloaded by raw data

Needs :Needs AI-assisted alert verification

Isabelle
34 / Female

Role : Lead Drone Operator
Pain Points : Manages multiple drones manually

Needs :Needs smart recommendations & map-based control

Sophie
42 / Female

Role : Night Shift Supervisor
Pain Points : Struggles to coordinate guards

Needs : Needs unified guard + drone dashboard

Marc
58 / Female

Role : Security Director
Pain Points : Wants real-time visibility

Needs : Needs overview and emergency intervention tools

Problem Storyboard

To visualize the human side of the problem, I mapped the night-shift sequence — from alert detection to field response — highlighting confusion points and time delays.

Solution Storyboard

A storyboard showing how an alert travels from detection → AI verification → drone deployment → guard response → resolution.

Solution Overview

Goal

Design a connected command system where every security team member can monitor, verify, and respond to threats efficiently — supported by AI-driven insights.

Solution Summary

A Unified Drone Security Dashboard that tailors the interface to the user's role, streamlines communication, and integrates AI to reduce cognitive load and response time.

Solution Concept

Login & Role Selection

- Contextual dashboards based on the user's role (Luc, Isabelle, Sophie, or Marc).
- Personalized access ensures role-based clarity and efficiency.

Luc – Smart Alert Verification

- AI-Powered Confidence Levels to verify threats using cross-sensor analysis.
- Alert Categorization (High / Medium / Low).
- One-Click Escalation to Isabelle and Sophie for confirmed threats.

Isabelle – Drone Deployment Control

- Live Map View with real-time drone positions and routes.
- AI Recommendations for selecting the most suitable drone.
- Action Panel: Deploy drone · View feed · Track status.

Sophie – Field Coordination

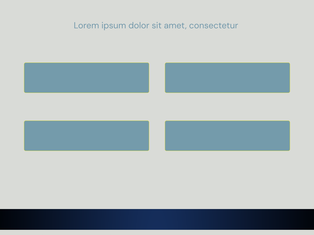
- Unified view of alerts, guards, and drone activity.
- Live Video Overlay for immediate threat context.
- Proximity Indicators for faster on-ground team assignment.

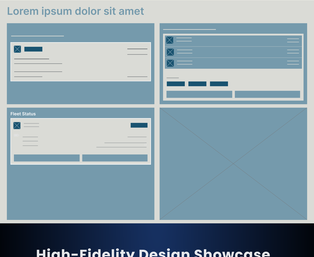
Marc – Mission Control Overview

- Bird's-Eye Dashboard for full operational visibility.
- "Take Command" Option for manual override.
- Summary Section to review completed and ongoing operations.

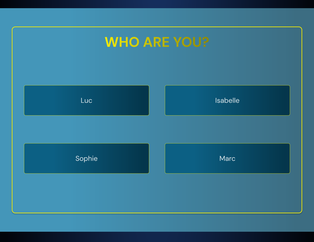
Wireframes

The wireframes established the visual hierarchy and user flow before moving into final UI.





High-Fidelity Design Showcase



Interactive Prototype

Video View

Figma Prototype

Design Rationale

Why This Design Works

- **Connected Flow**: Keeps all roles synchronized while filtering relevant data.
- **AI Assistance**: Reduces manual work and improves accuracy.
- **Simplified Interface**: Minimizes cognitive overload with clear hierarchy.
- **Faster Decisions**: A linear but fluid escalation pipeline from analyst to director.

Trade-offs & Decisions

- Prioritized functional realism over high aesthetic polish (2-day sprint).
- Focused on clarity, AI integration, and decision hierarchy.
- Balanced innovation with immediate usability for practical testing.

Outcome & Learnings

- Delivered a working prototype within 48 hours showcasing human-AI collaboration in a real-time security context.
- Learned the importance of designing for multi-role systems and AI explainability.
- Reinforced how AI-driven UX can assist decision-making without overwhelming users.