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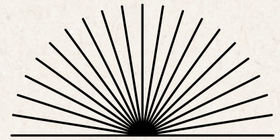
SERVANA

CASE STUDY

NAME OF PROJECT:
SERVNA

PRESENTED BY:
GROWTH LOOPS TECHNOLOGY



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Agenda

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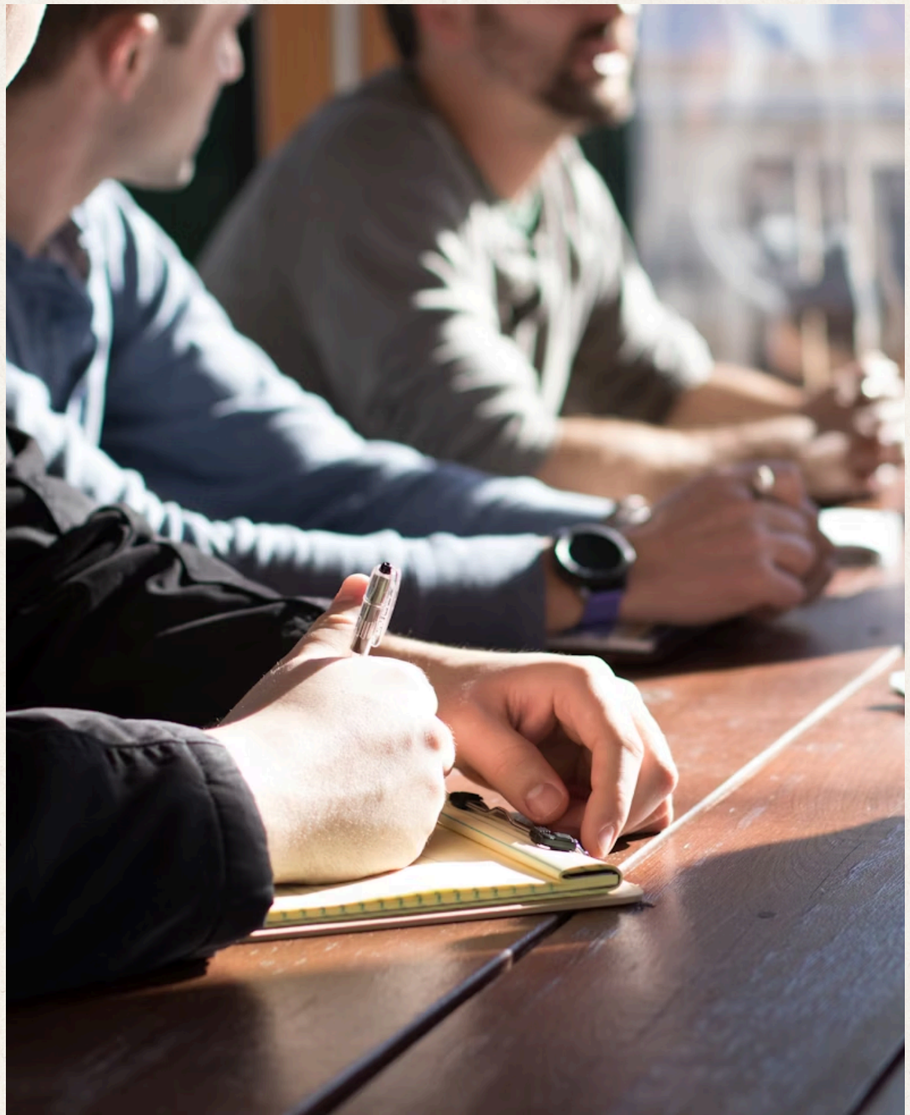


Introduction

Servana is an AI-powered industrial support platform designed to reduce equipment downtime and improve operational efficiency. This case study outlines the business problem, solution approach, execution strategy, and outcomes delivered during the MVP phase of the Servana platform.

Client & Industry Context

Servana operates in asset-heavy industrial environments where equipment failures directly impact productivity and cost.

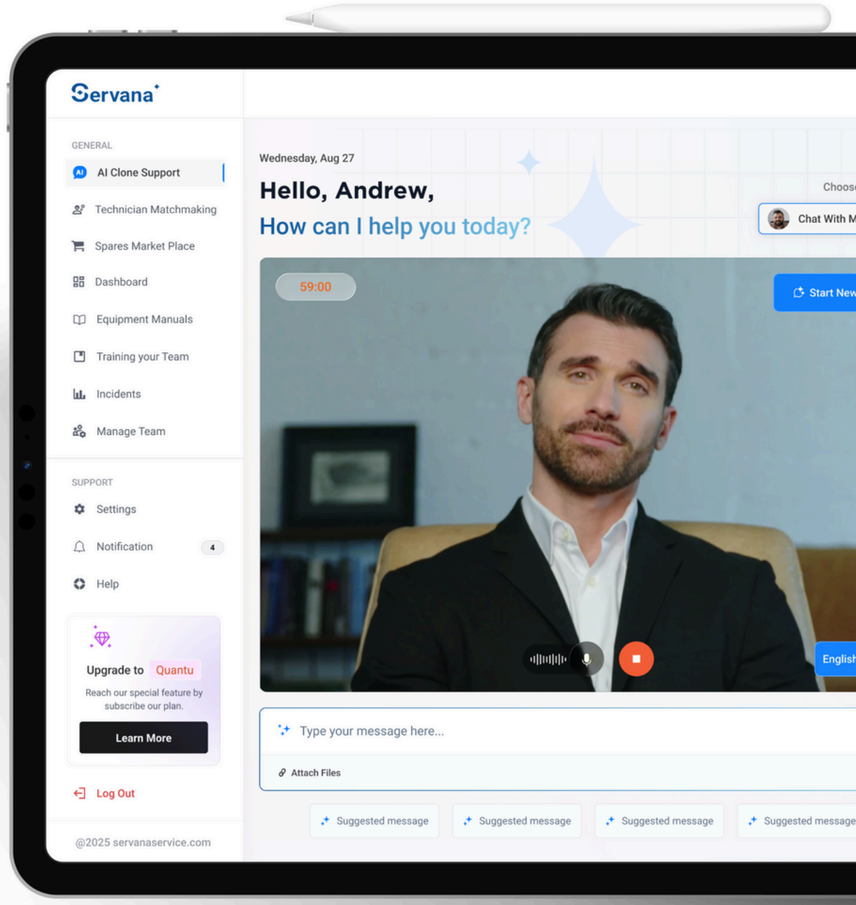
The platform targets ecosystems involving operators, technicians, spare-part sellers, and administrators who currently rely on fragmented and manual support processes.

Problem Statement

Industrial operators face repeated challenges:

- High downtime during equipment failure
- Delayed access to qualified technicians
- Manual troubleshooting and communication
- No centralized equipment knowledge
- Inefficient coordination between operators, technicians, and sellers

These challenges lead to increased operational costs and inconsistent service quality.



Objectives of the Engagement

The primary objectives of this engagement were:

- Build an AI-assisted support system for industrial troubleshooting
- Centralize equipment knowledge and manuals
- Enable structured technician workflows
- Introduce a unified ecosystem for operators, technicians, sellers, and admins
- Deliver a scalable MVP with strong security foundations

Scope of Work

The engagement focused on:

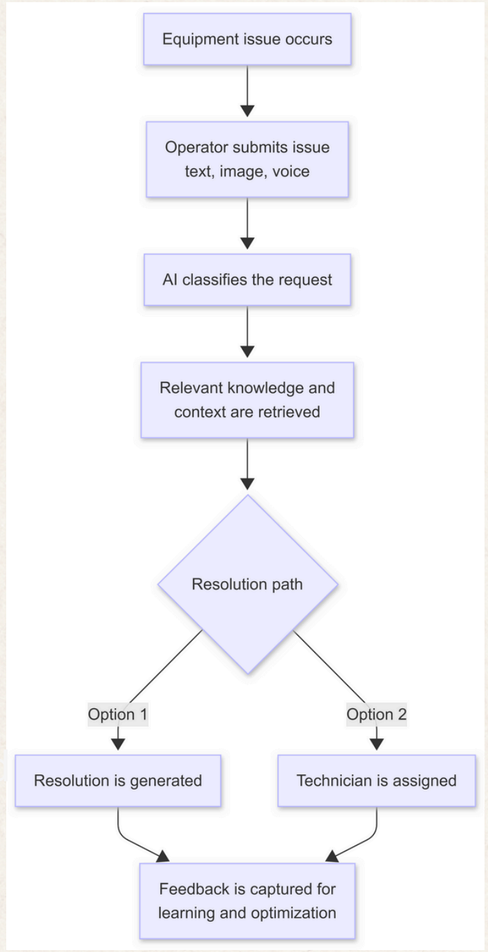
- Designing and developing the Servana MVP
- Implementing AI-based query handling and diagnostics
- Building role-based modules (Operator, Technician, Seller, Admin)
- Ensuring secure data handling and access control
- Delivering a production-ready platform foundation

Solution Overview

Servana provides a unified digital platform where:

- **Operators raise incidents using text, voice, or images**
- **AI analyzes and classifies issues**
- **Knowledge is retrieved from manuals and historical data**
- **Issues are resolved via AI guidance or technician escalation**
- **All interactions continuously improve system intelligence**

User Journey & System Flow



Sign-In Functionality File Upload Dashboard

Platform Architecture (High-Level)

The platform follows a modular architecture:

- Web-based frontend for all roles
- Secure backend services
- AI orchestration layer
- Centralized vector-based knowledge store
- Role-based access enforcement across modules

AI & Intelligence Layer

Servana uses an AI-driven retrieval and response mechanism:

- Query classification
- Context enrichment
- Retrieval from vectorized manuals and documents
- Response generation using LLMs
- Continuous learning from feedback loops

This ensures faster and more accurate resolutions over time.

Data Security and Protection

Security was a core design principle:

- JWT-based authentication
- Role-based access control (RBAC)
- Secure API routing
- HTTPS/TLS encryption
- Metadata-based isolation for knowledge access

Global and private knowledge are strictly separated to prevent data leakage.

MVP Features Delivered

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Operator Module

- Authentication
- AI Clone support
- Equipment manuals
- Incident management
- Technician matching
- Team management dashboard

Technician Module

- Sign-up and role selection
- Profile and availability management
- Job lifecycle handling
- File uploads and dashboards

Seller / OEM Module

- Product catalog management
- Sales and order workflows

Admin Module

- User management
- File uploads
- Role-based dashboards

Delivery Approach & Execution

The platform was delivered using an agile methodology:

- Sprint-based development
- Continuous QA and regression testing
- Staging and UAT validation
- Iterative AI quality improvements
- Regular stakeholder reviews

Challenges & Constraints

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Next Sprints Will Focus On:

- AI accuracy tuning during early iterations
- Dependency on external payment and LMS integrations (out of MVP scope)
- Coordinating multi-role workflows
- Ensuring strict data isolation within a shared knowledge base

Outcomes & Value Delivered

- Reduced dependency on manual troubleshooting
- Faster issue resolution for operators
- Centralized and searchable equipment knowledge
- Structured technician workflows
- Secure and scalable MVP foundation

Learnings & Key Takeaways

- AI-driven support significantly improves response times
- Knowledge centralization is critical for industrial operations
- Metadata-based security is effective for multi-tenant AI systems
- Early MVP focus helps validate core value before expansion

Conclusion

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Servana demonstrates how AI can transform industrial support by combining intelligent diagnostics, secure knowledge access, and structured workflows into a single unified platform.

The MVP establishes a strong foundation for scalable, enterprise-grade industrial support solutions.

Thank You So Much!

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