

## About the Client

A U.S.-based public research and analytics firm working with federal and nonprofit organizations across education, health, and community sectors. Their mission-driven initiatives depend on field data collection, survey accuracy, and timely analytics from teams operating in low-connectivity environments.

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## Industry

HealthTech | EdTech | Non-Profit Tech | Research & Analytics | SaaS

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## Project Title

Web & Mobile Platform for Centralized Data Management and Field Collection

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## Scope of Work

- Develop a secure, cloud-hosted **admin web application** for role-based access, form builders, project tracking, and real-time analytics
- Design and build a **React Native mobile application** (iOS + Android) with **offline data collection**, GPS tagging, image upload, and auto-sync
- Implement a **Django + PostgreSQL** backend with REST APIs and JWT-auth
- Ensure complete **data privacy compliance** (GDPR, HIPAA, U.S. nonprofit standards)
- Provide ongoing **DevOps, QA automation, and product enhancements** post-launch

## Key Challenges

🔒 **Offline Functionality:** Field agents often worked in areas with no internet; data needed to sync securely once connectivity resumed

👤 **Granular Access Control:** Multiple roles required with tightly scoped access, ensuring data separation across teams and projects

📄 **Complex Form Management:** Dynamic form builder with skip logic, branching, and multi-lingual support

📊 **Secure Analytics:** Admin needed visual dashboards, exportable reports, and data filters while ensuring no PII leakage

📅 **Tight Delivery Timeline:** 90-day MVP timeline, full rollout across 50+ field users in <6 months

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## Solutions Delivered

✅ **Rapid Offshore Team Setup:**

Assembled a cross-functional team of **8 experts in <2 weeks**, including Django architects, React Native developers, QA automation engineers, and UI/UX designers

✅ **Dynamic Admin Web Portal:**

Developed a scalable portal with features like:

- Custom role-based access control (RBAC)
- Real-time project dashboards
- Drag-and-drop form builder
- Bulk CSV import/export for data
- Export to PDF/Excel and multi-filter views

✅ **Cross-Platform Mobile App:**

Offline-first React Native app supporting:

- Secure login (JWT/OAuth2)
- GPS/location tagging

- Audio/image uploads
- Conditional forms with autosave
- Seamless sync with conflict resolution

✓ **Backend & API Infrastructure:**

- Django REST framework with PostgreSQL
- Fully containerized via Docker
- AWS EC2 + VPC with TLS, IAM, and encrypted backups
- JWT and OAuth2 authentication flow
- RESTful APIs enabling data ingestion from external sources

✓ **CI/CD and DevOps Automation:**

- Automated testing via Appium, Jest, and Selenium
- GitHub Actions-based CI/CD pipeline
- Integrated Slack notifications for deployment logs
- Weekly backups & monitoring via AWS CloudWatch

✓ **Agile Delivery:**

- 2-week sprint cycles, product demos, retrospectives
- Jira-based roadmap with ~95% on-time sprint delivery
- 5 live usability sessions conducted pre-rollout

## Tech Stack Used

Category	Technologies Used
Frontend (Web)	React.js, Bootstrap
Mobile	React Native (iOS & Android), Expo
Backend	Python Django, Django REST Framework
Database	PostgreSQL
Authentication	JWT, OAuth2
Hosting	AWS EC2, S3, VPC, IAM, CloudWatch
Security	TLS/HTTPS, AES encryption, Role-Based Access
DevOps	Docker, GitHub Actions, Postman, Jira, Slack
QA & Testing	Appium, Jest, Selenium, Manual Regression Suites

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## Suventure's Role as Strategic Partner

- ◆ Delivered a **fully operational offshore team in <14 days**, with smooth onboarding
- ◆ Led the **architecture design, UI/UX workflow**, and code standardization
- ◆ Implemented **QA automation and security hardening** from Day 1
- ◆ Provided **continuous delivery and post-launch support**, including multilingual roadmap (Phase 2) and AI-based analytics (planned Phase 3)
- ◆ Helped client **reduce legal and compliance risk** via HIPAA, GDPR, and nonprofit data governance adherence

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## Results Achieved

Impact Area	Results Delivered
🕒 <b>Faster Data Turnaround</b>	⬇️ <b>Reduced field data latency from 24 hours to just 6 hours</b>

-  **Lower Dev Costs**  Achieved **35% cost savings** through Suventure's offshore model
-  **Rapid Delivery**  MVP launched in **12 weeks**, full rollout to 50+ users in **5.5 months**
-  **High App Adoption**  **98% user adoption rate** among field workers due to user-friendly UX/UI
-  **Compliance Met**  GDPR, HIPAA, and U.S. nonprofit data compliance ensured across all modules
-  **Better Decision-Making**  Real-time dashboards powered insights for **10+ research project teams**
-  **Reduced Bugs**  <2.1% defect leakage during QA; 92% test case automation achieved post-release

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## Client Testimonial

**“Suventure has been a critical partner in our technology journey. From assembling a strong offshore team to delivering a secure, scalable platform, they brought in the right expertise, communication, and flexibility. We’ve seen increased productivity in our field data operations and plan to continue the partnership for upcoming modules.”**

*— Director of Technology, U.S.-Based Analytics & Research SaaS Firm*