Platform Reengineering for a Healthcare Management Software Company

techwave

Techwave established in 2004, is a global end-to-end IT services & solutions company, which develops long-term relationship with clients by leveraging unique delivery models and expert frameworks.

About Client

The client is a leading healthcare management software company serving Home and Community-Based Services (HCBS) nationwide. Founded in 2008, it has established itself as the premier Medicaid Long-Term Services and Supports (LTSS) platform, connecting state agencies, managed care organizations, home care providers, and caregivers. The company currently employs 700+ team members and processes over 1 billion Electronic Visit Verification (EVV) confirmations.

Executive Overview

The client aimed to expand their operations; however, their legacy systems demonstrated limited growth potential. To address this constraint, they partnered with Techwave to efficiently manage their data and deliver a highly secure, scalable platform that supports future growth and operational excellence.

Vertical:
HealthTech

Region:
US

Revenue:
$150 Million

Key Challenges:
Limited Platform Scalability, Complex Data Management, Limited Multi-User Functionality, Expansion Constraints

Featured Tech:
AWS

Business Challenges

The client encountered significant hurdles in their foreign exchange operations:

Limited Platform Scalability: The legacy MS Access platform exhibited limited expansion potential, constraining the organization's ability to grow and serve additional clients.

Complex Data Management Processes: Inefficient and intricate data management processes hindered effective data consolidation, creating operational bottlenecks and increasing administrative overhead.

Limited Multi-User Functionality: The existing system lacked robust multi-user capabilities, limiting concurrent access and collaboration among team members across different locations.

Geographic and Operational Expansion Constraints: The absence of comprehensive platform support prevented the client from expanding its operations beyond the Midwestern region and from scaling to meet broader market demands.

Techwave's Strategy & Solutions

Techwave executed a comprehensive platform modernization initiative to transform the legacy system into a cloud-native, scalable, and secure solution. The engagement followed a structured approach to ensure successful implementation and seamless transition.

Platform Assessment and Cloud Architecture Design

Techwave conducted a thorough assessment of the agency management platform and designed a cloud-native architecture on AWS to support scalability, reliability, and security requirements.

Cloud-Native Platform Reengineering

The client's legacy agency management platform was reengineered into a cloud-native, highly scalable, and secure platform leveraging AWS cloud infrastructure and modern architectural principles.

Multi-Tenant Microservice Architecture Implementation

A multi-tenant microservice architecture was implemented to provide a responsive web-based interface that adhered to HIPAA compliance requirements and optimized task efficiency across the platform.

Core Healthcare Functionality Integration

Individual tasks were optimized to seamlessly integrate into the ecosystem, with an emphasis on accelerated time-to-market. Comprehensive platform support was provided for vital functionalities, including Medicare billing, 30- and 60-day assessments, and Prospective Payment System (PPS) functionality.

Techwave's Strategy & Solutions

Legacy and Mobile Support Integration

Support was extended to legacy agencies and individual agencies utilizing the Electronic Visit Verification (EVV) system, which was made accessible via both web and mobile platforms to enhance accessibility and user adoption.

Electronic Visit Verification System Optimization

The EVV system was enhanced to improve usability and provide clear usage details, enabling agencies to efficiently track and manage field worker activities in real-time.

AI-Powered Development Acceleration

The development cycle was accelerated by leveraging artificial intelligence across the Software Development Lifecycle (SDLC). Specialized AI agents were built to provide intelligent automation to the development team by combining machine learning, deep learning, and constraint programming techniques.

Business Outcomes

Modernized Platform's Impact on the Client's Ecosystem

Home & Community-Based Services
(HCBS) Agency Providers

- ✓ Electronic Visit Verification (EVV) Compliance
- ✓ One-click billing - 99% payment on first submission
- ✓ Digital documentation with custom forms
- ✓ Employee payroll
- ✓ Automated eligibility

Caregivers

- ✓ Advanced mobile app designed for caregivers
- ✓ App supports 10 different languages
- ✓ Manage hours worked and overtime
- ✓ Real-time communication with agency
- ✓ Track non-billable time

Individuals & Families

- ✓ Mobile app to review and approve visits
- ✓ Portal to review care history
- ✓ Easy access to service auth and hours available
- ✓ Single login for multiple roles

State & Local Government

- ✓ Streamline MCO payments
- ✓ Out-of-the box integration
- ✓ Resident mobile app for government services
- ✓ Data portability between government agencies

Business Outcomes

$2.65 Billion in Claims Processed

The platform has successfully processed $2.65 billion worth of healthcare claims through 2025, demonstrating its capacity to handle large-scale financial transactions securely and efficiently.

750+ Agencies and Organizations Served

The revamped platform now serves 750+ home and community-based service agencies and organizations, significantly expanding the client's market reach and customer base.

60+ Services Delivered

The platform delivers 60+ comprehensive services to clients, including continuous billing, streamlined onboarding, powerful scheduling capabilities, workforce management tools, built-in analytics, and intelligent field management features.

~150,000 Users Supported and Growing

The platform currently supports approximately 150,000 users across served agencies and organizations, with user growth continuing as new customers adopt the system.

<1% Denial Rate—Outperforming Industry Standards

The platform achieved a denial rate of less than 1%, significantly outperforming both the state government benchmark of 18% and the client's legacy platform denial rate of 7%, demonstrating superior claim accuracy and compliance.

Techwave is your gateway to transformative IT and engineering expertise since 2004. With roots in Houston, Texas, we lead global businesses on digital journeys. Our services include Enterprise Solutions, Product Engineering, RPA, Advanced Analytics, AI/ML, and IoT. With 3,000+ experts across 11 countries, we're committed to innovation.

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