

Internet of Things Big Data Implementation Mid-market Manufacturer

Sabel Systems worked with a mid-market manufacturer of world-class forklift and material handling equipment to implement an Internet of Things (IoT) Big Data solution. This manufacturer designs and manufactures the majority of its lift truck components, including key parts like motors, drive units, and electronic modules.

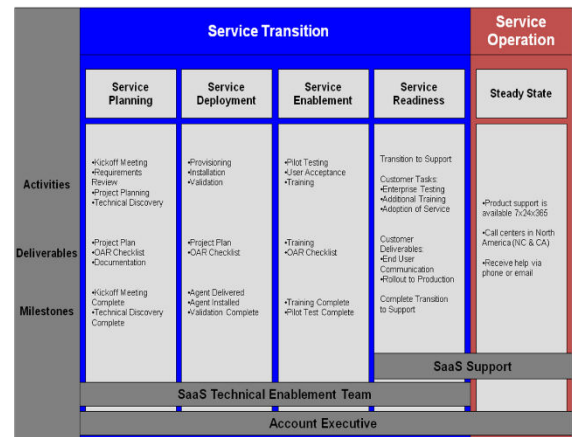
The client had a need to move from a customer-site hosted solution to a software-as-a-service (SaaS) solution, enabling flexibility and agility to their material handling equipment management operations. In order to perform this transition, the client needed expert, dedicated solution architects and IT consultants to design an implementation strategy and plan from start to finish in order to accomplish the transition to the SaaS solution. The effort also included expanding its scope from 5,000 connected assets to 75,000 connected assets. Sabel Systems provided the solution architecture expertise.

Sabel Systems developed a roadmap, solution architecture, and business plan for a fleet, operator, and service analytics solution. Sabel Systems consultants first initiated the solution by advising company leadership and identifying the following key solution activities: 1) establishing a common vision across Engineering, Services, Sales, Technical Publications, IT and Third-party Dealers and 2) performing a competitive assessment of other solutions in the marketplace (capabilities, pricing, sales model, customers, software OEMs).

Sabel Systems then defined an Integration Strategy which comprised of:

- On-board health monitoring and diagnostics solution
- Mobile Service Aids
- Internal Enterprise Resource Planning & PLM solutions
- Customer Business Systems
- Technical Publications Content Management and Distribution

Upon delivering the Integration Strategy, Sabel Systems established a product evolution strategy for the analytics and mapped it back to the data



requirements, sources, and SOA integration/ endpoints. Key features included:

- Gaming model to improve operator and service technician performance and safety. We developed a concept paper for visualization and analytics to optimize routing and inventory placement
- Forecasting the on-board wireless, internet firewall, data integration, database, and analytics throughput, storage, and capacity planning
- Creating a data archiving, continuity, and recovery strategy and supporting architecture for the end-to-end solution
- Identifying a security and identity management strategy for protecting the bi-directional communications between the assets and the solution as well as customer and corporate access

Sabel Systems also produced the following Product Development Activities:

- Assessment of as-is software and hardware and identified capability gaps (network, hardware, software, middleware)
- For the capability fits, engaged the current vendors and IT teams to assess if the products or environments would/ could scale
- Facilitated product evaluation criteria sessions with the groups mentioned above, based on initial recommendations
- Performed or directed market research and technical assessments on an extensive list of proprietary and open source vendors (big data and traditional) to fill the gaps

Sabel Systems also built a lifecycle cost estimate (LCCE) and designed implementation plan activities:

- Developed a staffing and Agile implementation forecast to establish a 2-year project budget
- Performed a hosting strategy analysis for commercial cloud, private cloud, or hybrid and facilitated a leadership decision
- Refinement of the business case, selling points, pricing model, and revenue projections with the Product Manager and Service Executive
- Facilitated Agile Scrum & Sprint Commitment sessions
- Created data management models for files and relational databases
- Master data, quality, and integration of data sources
- Development of the pilot architecture and solutions
- Identified training needs and strategic hires for client transition
- Facilitated the transition from a contractor supported solution to client supported

Sabel Systems consultants provided the roadmap, implementation plan and strategy enabling our client to begin transitioning IT operations from a customer-focused, site-hosted solution to a more agile and cost-effective SaaS solution.

Client:	Mid-market Manufacturer
Services:	Data Analytics & Reporting, Data Integration, Application Design & Development