Discovery phase for fleet management software rewrite creates long-term project success

A leading provider of fleet management software designed for bulk material supply companies, needed to completely rewrite its main Industrial Internet of Things (IIoT) applications. These IIoT offerings were a combination of Windows Desktop applications, web-delivered components and an Android application which pulled telemetry data from trucks in the field. They had reached a point where scalability was compromised, which in turn greatly hindered developer productivity and application efficacy.

To meet the client's business goals, Catalyte proposed rearchitecting and digitally transforming the existing IIoT system into a web-delivered, cloud-deployed mobile application. A full rewrite would allow the applications to scale and increase usability, stability, adoption and performance.

A total rewrite of the system would take two years or more. To create a path for success, Catalyte embarked on a 10-week preliminary discovery phase. During this phase, Catalyte worked closely with the client to holistically investigate all aspects of its development organization. This included:
· Business processes and customer workflows;
· Requirements gathering and writing;
· Software development methodologies and processes;
· User experience (UX) methodologies and processes;
· QA testing;
· Project management; and
· Architecture.

Catalyte identified areas of improvement that would modernize every aspect of the software delivery life cycle and product management. Among these improvements were:
· Development of UX workflows, from initial user interviews to wireframes and prototypes.
· More precise requirements writing to provide developers with specific and actionable user stories.
· Separation of development and QA manager to allow greater focus on both aspects of the application/project.
· Full DevOps AWS Cloud Native environment.
· Implementation of automated QA testing.
· Implementation of agile development practices, including helping the product owner write a product vision statement, instantiating two Scrum teams and one Kanban team and integrating development with UX design activities and deliverables.
· Introduce modern operations best practices and "Mode-2" IT practices.

Beyond the modernization of processes and the creation of a comprehensive project development roadmap, Catalyte delivered fully automated CI/CD during this phase. The discovery effort also aligned expectations, defined mutually agreed upon work processes and helped form a better, more trusted integration between TruckTrax and Catalyte teams.

By taking the time upfront to consult and implement best practices that either fit within its culture, or modernized its development capabilities, Catalyte solidified client trust and demonstrated it was a partner for long term success.

At a glance

Application type:

IIoT mobile fleet management software designed for bulk material supply companies

Challenge:

Conduct exhaustive discovery effort, create full organization modernization plan, implement multiple new best practices and train existing development organization in just 10 weeks.

Key technologies/skills:

Agile training, QA automation, UX integration into agile process, DevOps, Enterprise architecture

Catalyte value add:

- **Agile coaching & transformation:** Implementation of agile best practices into in-house development organization.
- **Modernization of QA practices:** Transition from manual to automated testing.
- **UX:** Introduced user-centric approach.
- Balanced user, business and technology needs in every phase of SDLC.

Results:

This discovery phase aligned expectations, defined mutually agreed upon work processes, modernized most aspects of client's IT organization and created a trusted integration between the client and Catalyte teams that prepared the full project for maximum success.