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Accelerating clinical supply chain success with Temperature Excursion Management

A health company delivered a comprehensive, cloud-based platform as part of its clinical supply chain management solution portfolio.

Overcoming the timeline and quality barriers for a celebrated healthcare company

The client is a company dedicated to delivering technology solutions and services tailored for the pharmaceutical, biotechnology, and clinical research industries. They provide a suite of software platforms and tools aimed at optimizing and improving diverse aspects of clinical trials and the management of patient data. Collaborating closely with hospitals, patients, and pharmaceutical firms, client's solutions are currently utilized by over 400,000 patients engaged in 700 distinct clinical trials spanning 80 countries across six continents.

The client had partnered with a vendor to create and implement a solution that aimed to enhance the customer experience and enable the distribution of pharmaceutical products, particularly in managing temperature excursions. However, the client had fallen six months behind schedule in delivering the product to the end customer, compared to the initially agreed-upon timeline. The development process encountered various quality issues in the development process like defects, application performance and calculation logic errors.

The project involved the intricate task of Temperature Excursion Management, which required complex algorithms and integration with multiple external systems. Temperature Excursion Management (TEM) is a SaaS based excursion monitoring solution that offers end-to-end excursion tracking for temperature-sensitive pharmaceutical products stored at warehouses, clinical sites, and when in-transit to warehouse/clinical sites, which required complex algorithms and integration with multiple external systems.

Brillio had already been collaborating with the client in other areas related to clinical trials, showcasing their expertise in the domain and their strong technical capabilities. Notably, Brillio was always able to uphold delivery timelines effectively throughout the delivery timelines with agile ways of working being the standout feature of the project.

Brillio's strategic approach significantly reduced dependency on the incumbent vendor by 2-3 months.

Accelerating delivery, scaling teams, and surpassing expectations in complex project execution

The client successfully delivered a comprehensive, cloud-based Temperature Excursion Management (TEM) platform as part of its clinical supply chain management solution portfolio. This achievement played a crucial role in assisting the customer in avoiding commercial penalties that would have been incurred in the event of a delay in release.

The project was completed on time, a vital accomplishment that mitigated the risk of significant customer and business loss for the client. The implemented TEM platform empowered end customers to track cumulative temperature excursions against a library of electronic stability profiles. This not only supported patient safety but also ensured full GxP compliance, enhancing the overall effectiveness and reliability of the clinical supply chain management solution.

Recognizing the need for acceleration, Brillio initiated work on independent modules to expedite program delivery. To ensure efficiency, Brillio worked as three separate team/PODs for three core modules, each working autonomously.

The team underwent training in the Scaled Agile mode of delivery, reinforced by in-person Planning Workshops. This strategic approach significantly reduced dependency on the incumbent vendor by 2-3 months. Transparent communication channels were established to relay team run rate and progress updates, with proactive involvement from the Center of Excellence (COE) in data concurrency, performance strategy, and design decisions. Risks and dependencies were systematically highlighted on a weekly basis, and ownership of compliance and necessary documentation for the release was firmly taken.

To meet the project's stringent deadlines, Brillio swiftly scaled up a team of over 50 individuals with the requisite skill set in just three weeks, adopting a war-footing approach. The critical path was meticulously identified, and all hurdles, including technical approach changes, were resolved. Collaborative co-locations were hosted with employees, customers, and external parties to enhance communication.

Investments in Center of Excellence (CoE) teams addressed non-functional requirements (NFRs), for security and performance. And a separate Delivery Excellence team focused on meeting Life Science Regulatory documentation standards. Test case Automations played a key role, ensuring a quick turnaround and supporting a 30% scope increase. Th For testing Automation, Brillio team used various technologies such as Java, Spring Micro Services, Robot with Python. The detailed end-to-end Sprint Planning visualization facilitated a comprehensive understanding of the project's scope.

Despite the initial scope covering 620 Story Points for shipment, clinical, and branch plant excursion modules, Brillio exceeded expectations by delivering 806 Story Points, a 30% increase. Notably, complex calculation algorithms in Java and functional automation testing using the Robot Framework, Java - AWS SDK for Java, Java library, Junit 5 for Unit Testing and Mockito framework and Aurora PostgreSQL Database were successfully implemented, contributing to the project's overall success.

Precision in Temperature Excursion Management for Seamless Clinical Supply Chains

Brillio successfully implemented the efficient excursion management which was crucial for the seamless handling of shipments to warehouses and clinical sites. This involved meticulous manual recording and management of excursions when materials were stored in either warehouse or clinical settings. To enhance precision, a system allowing item-specific temperature profile configuration was implemented, ensuring the preservation of materials under optimal conditions. The streamlined process was facilitated through a single interface, simplifying the management of excursions for all trials.

Moreover, the system enabled the tracking of cumulative excursions across shipments and storage locations, providing comprehensive oversight. Real-time integration ensured that material status notifications were promptly relayed, allowing for swift corrective actions and maintaining the integrity of clinical trials. This integrated approach not only enhanced the operational efficiency but also maintained the stringent standards required in the handling of sensitive materials within the pharmaceutical and clinical research domains.

Brillio's created a cloud-based platform for Temperature Excursion Management and completed the project on time, saving the risk of customer and business loss for the client.

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ABOUT BRILLIO

At Brillio, our customers are at the heart of everything we do. We were founded on the philosophy that to be great at something, you need to be unreasonably focused. That's why we are relentless about delivering the technology-enabled solutions our customers need to thrive in today's digital economy. Simply put, we help our customers accelerate what matters to their business by leveraging our expertise in agile engineering to bring human-centric products to market at warp speed. Born in the digital age, we embrace the four superpowers of technology, enabling our customers to not only improve their current performance but to rethink their business in entirely new ways. Headquartered in Silicon Valley, Brillio has exceptional employees worldwide and is trusted by hundreds of Fortune 2000 organizations across the globe.

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