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Infosys modernizes systems to integrate pricing and spot booking

A global multi-modal logistics enterprise sought to grow market share by simplifying pricing and booking.

The existing mechanism to generate quotes was cumbersome. The process required the pricing team to access multiple systems: system checks to confirm eligibility of a customer for a spot deal, schedule check to match service offerings with the customer's request, capacity availability check, cut-off check to ensure sufficient lead time for loading containers onto ships, and finally, margin evaluation check to ensure that the profit margin exceeds threshold guidelines.

Each spot contract had to comply with global, country and local tariff rates. The pricing team had to evaluate applicable tariff rules and incorporate appropriate tariffs in the quotation. Further, the team had to apply the group's pricing strategy to ensure compliance with corporate policies.

Speed bumps in quote generation

More than 70% of the quotes were generated manually. Human intervention at every step of the process to generate a quote and book an order caused inconsistencies, delays and errors. The average turnaround time for a simple spot quotation was 16 to 96 hours. Further, the legacy systems with distributed controls limited visibility into sales volume, revenue and margins.

The lack of a unified product for instant quote generation compelled pricers to use Microsoft Excel, which was not governed by a standardized process framework. Moreover, the head office was challenged by the absence of a baseline process and common process knowledge, which inhibited pricing administration and centralized control of sales agencies.

The rising workload encouraged pricers to focus on high-value orders, which excluded prospective customers leading to revenue leakage. In addition, the spot business was largely driven by local sales agencies, consolidators and freight forwarders.

Wanted: An integrated solution

The logistics enterprise sought an automated spot pricing solution to reduce the effort and time for generating quotes. A scalable pricing model integrating systems with the online booking portal would allow the enterprise to serve businesses across sizes, markets and regions. In addition, a global solution with standardized processes would reduce dependence on pricers, enabling the sales department to offer instant quotes. Significantly, a unified platform would allow the enterprise to boost customer service by

assuring shipment loading along with the quotation.

The logistics enterprise partnered with Infosys to develop the dynamic pricing solution. Given the business context, our team ruled out out-of-the-box features of standard ERP solutions or commercial off-the-shelf products. Customizing and integrating an ERP solution was cost prohibitive and time consuming. Hence, Infosys proposed a custom-built, cloud-native data analytics platform leveraging operational data in the data warehousing system to fine-tune the pricing system. Our solution focused on driving sales volume by calibrating prices based on real-time supply and demand.

A robust technology ecosystem

Infosys built a bespoke spot quotation platform capitalizing on the capabilities of hyperscaler cloud infrastructure: containers for immutable infrastructure, Kubernetes for container orchestration and autoscaling, managed services for cost rationalization and operational efficiency, and an existing cloud landing zone for security enforcement.

The Infosys team leveraged open source tools and reusable components to develop the advanced quotation solution. We incorporated diverse elements to enhance availability, scalability and performance of the pricing platform – modular design; loosely coupled, microservices-based framework; event-driven architecture; cloud data platform; and an Agile hyper-care process.

Our Scrum teams adopted the headless architecture approach to ensure flexibility, modularity and seamless integration, and enable future upgrades. The headless architecture supports new user interfaces without changes to the backend. Notably, intuitive interfaces drive user adoption of our digital solution.

Infosys used enterprise APIs for reference and master data management, and multi-threading / parallel processing (sync / async) to enhance responsiveness. Our team used advanced monitoring tools, including real-time application monitoring and cloud

monitoring, for full stack observability and accurate troubleshooting. Efficient tracking, tracing and troubleshooting enabled faster turnaround for analysis and resolution of issues. In addition, sprint demos with the extended team helped us incorporate feedback from pricing agents and other stakeholders.

Our team combined DevOps CI/CD pipelines with an automated testing suite to accelerate each release. We used Terraform, the open source Infrastructure-as-Code (IaC) tool, to manage distributed systems. Our approach enabled the roll out of a future-ready application on Day-1. Notably, the Infosys solution is the largest instance of cloud deployment at the global logistics enterprise.

Automated workflows streamline operations

Infosys integrated diverse systems and automated the business flow for an appropriate response from systems. The total response time of the automated application is substantially less than the sum of response times of each standalone system.

The digital application invokes 10+ processes across eight systems on diverse platforms to generate quotes in near real time. Significantly, integration of spot quotation with the capacity availability check system enables assurance of capacity availability for customers vis-à-vis competitors.

The dynamic freight pricing system helped the logistics enterprise to -

- Capture market share in the highly competitive logistics business by leveraging the fine-grained capacity availability assurance solution
- Serve tens of thousands of global users and process a huge volume of customer requests
- Reduce turnaround time for generating quotes from up to four days to less than five seconds
- Increase spot sales volume by 10x within 6 months
- Register a high volume of growth from new customers
- Accelerate conversion of new accounts into high-volume, medium- and long-term agreements
- Maximize capacity utilization, profitability and revenue
- Eliminate sales intermediaries and rationalize cost-to-serve.



For more information, contact askus@infosys.com

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