

J. Knipper & Company

Industry

- Pharmaceuticals
- Marketing

Project

- Custom Order Management System

Project Requirements

- Modernization of development practices and technology stack
- Microsoft Azure architecture and development
- Custom integration and data governance

Project Outcomes

- More proactive customer management practices
- Improved internal operational efficiency, order throughput, tracking and validation

About J. Knipper & Company

J. Knipper and Company is the largest pharmaceutical marketing firm in the US. The company facilitates the ordering and fulfillment of pharmaceutical samples to medical facilities and professionals across the country. In addition to offering comprehensive services in the arena of pharmaceutical distribution sampling they also provide prescriber validation services, sample accountability and web-ordering solutions.

Challenge

J. Knipper and Company is a fully integrated direct marketing and drug sampling firm dedicated to the pharmaceutical and healthcare industry. Their focus is on supporting comprehensive services in the arena of pharmaceutical sampling distribution, prescriber validation, sample accountability and web-ordering solutions.

J. Knipper began to encounter efficiency and customer experience challenges following a number of competitor acquisitions. They inherited a series of legacy systems and lacked technological consolidation – especially with respect to order management processing – which proved to present several business challenges.

First, client programs were being configured in a variety of different systems, and as the needs of their customers continued to evolve, making changes across different platforms became increasingly costly and time-consuming. Similarly, because different systems offered different capabilities, a disconnect began to arise between J. Knipper’s sales and professional services teams, resulting in slower, less effective customer onboarding. Further, because orders were being handled differently in each solution, monitoring order progress, including order validation, confirmation and reporting adverse interactions, became increasingly difficult to manage. As well, creating consolidated reports for customer programs was no simple task, as critical data was often siloed within different systems and was not easily retrievable. Overall, the lack of consolidation negatively affected order throughput and forced J. Knipper into a "reactive" customer service mode.

Approach & Solution

Recognizing the need to develop a more sophisticated order management system, J. Knipper engaged AppCentrica to help them undertake a multi-year, large-scale digital transformation initiative aimed at replacing their aging legacy technologies with a modernized, hyper scalable solution.

Throughout the engagement the AppCentrica team served as the lead designer and developer, defining business process architecture, introducing DevOps and Agile development methodologies, designing UI/UX components, building critical integrations with ancillary order fulfilment systems as well as with Salesforce and Veeva, and continuously gathering user input and feedback to employ an iterative approach to development and ensure an optimal final product.

The solution itself is a multi-tenant, Azure based portal built using microservice architecture on Microsoft Azure, Microsoft .NET Core, Angular 5, Angular Materials Library, Bootstrap 3, Gulp NPM, and Entity Framework technologies.

The portal and underlying services are deployed using Azure App Services and Azure Functions, and leverages auto-scaling to ensure availability and maintain performance during intense workloads. Azure SQL, Azure Storage and Azure Cache for Redis are used for data persistence and caching. Azure Service Bus is used to facilitate asynchronous messaging and used for communication between microservices. Application Insights were enabled throughout to better monitor and collect telemetry data to improve performance and gain visibility on potential issues. To achieve connectivity and integration with on-premise systems, a variety of Azure networking resources were used, including Azure Virtual Networks, VPN Gateways and Hybrid Connections.

Solution Features

- Azure based multi-tenant client portal
- Integrations with back-end order fulfillment and warehouse management systems via MuleSoft
- Reports and dashboards
- Email notification functionality
- Image processing and upload functionality
- Select-day shipping functionality



About AppCentrica

We're an elite team of developers, designers, analysts, and architects, focused on delivering best-in-class solutions and building long-term partnerships with our customers. Our core capabilities include:

- Design & Architecture
- Enterprise Application Development
- Salesforce
- Integration
- AI, Data & Analytics

For more information visit:
www.appcentrica.com

The final product has empowered J.Knipper with an intelligent supply chain that is easily maintainable, scalable, flexible and operates in strict accordance with the FDA (Food and Drug Administration), PDMA (Prescription Drug Marketing Act), DEA (Drug Enforcement Agency) and HIPAA (Health Insurance Portability and Accountability Act) compliance requirements.

"The market has been pushing us to lower costs despite an understanding that we deliver a premium service over our competition. So, a key objective of our program has been to lower both setup and run costs. With AppCentrica's help, we have achieved both goals. Our setups on the new platform are 38% lower in terms of hours and we have realized savings as high as 55%."

Business Outcomes

The finalized solution developed by AppCentrica has greatly improved J. Knipper's internal operational efficiency, customer onboarding practices and has provided a far better customer experience for end users.

Customer program configuration is now entirely handled within the new order management platform, meaning J. Knipper's sales and professional services teams can collaborate more effectively and onboard new clients faster and with far less manual effort.

The portal provides health care professionals and institutions with an easy-to-use method of ordering pharmaceutical samples and offers full visibility with respect to order placement, validation, tracking and scheduling. The system also offers end-to-end traceability for both J. Knipper and their customers and incorporates relevant documentation into the overall order lifecycle. In this way, the physical flow of products along with all traceability documents are systematically linked to the original order and any adverse effects related to samples are logged, tracked and the relevant parties are notified via automated alerts.

From a scheduling and allocations perspective, because data is no longer siloed within distinctly separate systems, J. Knipper can more easily manage and distribute inventory, therein ensuring that customers receive their samples in a timely manner and that no drugs are left to expire. Similarly, in placing orders end users are able to select the optimal shipping date and method, which is imperative for the delivery of cold-chain and temperature sensitive products.

Finally, from a customer management perspective the new system offers a comprehensive set of dashboards which allows J. Knipper to easily monitor order volume trends and specific customer program metrics. As well, the system has a suite of different reports which are fully customizable and have a wide array of different filter criteria available.

Overall, the new order management system serves as a fully integrated, end-to-end, hyper flexible, hyper scalable solution. The complexity of automating orders in the extremely regulated pharmaceutical environment ensures the portal is a competitive differentiator for J. Knipper, as it offers a significant service innovation for their customers and internal staff alike. The system has resulted in improved order growth, throughput and customer engagement. Operational and new client setup costs have been lowered by as much as 80% and thanks to the system's flexible design, modifications and enhancements require far less time and resources.

AppCentrica continues to work closely with J. Knipper as their dedicated IT transformation partner.