

Adaptive Supply Chains: Leading Quick-Service Restaurant Transforms Supply Chain with Artisan’s Custom Mobile App

EXECUTIVE SUMMARY

A leading quick-service restaurant chain that serves chicken engaged Artisan Studios to create a mobile app to strengthen the relationship between the restaurant managers and the distribution service.

THE CHALLENGE

The client determined the best approach for sustaining accelerated growth was to take complete ownership of its supply chain. Historically, the quick-service restaurant chain relied on 3rd party distributors to keep up with high inventory demands in restaurants, but the outsourced model posed several problems:

- Low-quality Distribution Experience – Third-party distributors have many clients competing for priority and quality service. As a result, the restaurant chain’s managers often experienced low-quality, inconsistent service. Frequently, products arrived damaged, and, in some instances, they were not delivered at all.
- Slow Response to Delivery Issues – When issues did arise, restaurant managers did not receive the personalized service and cooperation required to address delivery issues in a timely fashion.
- Inefficient Processes – The third party utilized antiquated and inefficient delivery processes, relying heavily on paper and email exchanges.

PLATFORM

AWS

SERVICES

IMPLEMENTED

- Aurora PostgreSQL
- Certificate Manager
- CloudWatch
- EKS
- ElastiCache
- Route53
- S3
- Secrets Manager

“You have no idea how much we appreciate the mobile app. You really went the extra mile.”

- Restaurant Operator



CASE STUDY

The restaurant chain knew it could solve many of the quality, efficiency, and scalability issues by creating its own controlled distribution operation. However, without correcting communication breakdowns and streamlining manual processes, restaurant managers would continue to spend unnecessary time managing the supply chain instead of actually serving its customers. The restaurant chain engaged Artisan to create a mobile app that would strengthen the relationship between restaurant managers and the new distribution service. The goal was to personalize the service to each location's needs, establish a communication bridge between the restaurant and distributor, and simplify everyday tasks using a modern, digital tool.

THE SOLUTION

Artisan began with an Understand phase, a process where the team learned from subject matter experts, hosted user focus groups, and physically worked in client restaurants to gain a deep understanding of the users' pain points. The Understand phase resulted in a conceptual design prototype that addressed the client's principal gaps in communication.

Using the conceptual design prototype as a long-term vision, Artisan worked with the client restaurant to define a minimally viable product (MVP) that could be launched quickly and become the basis for rapid incremental improvements driven by continuous user feedback. Artisan continued to refine the concept during the Build phase of the MVP, keeping users actively involved and at the center of the process. Ultimately, the MVP was launched ahead of an aggressive schedule, which included:

- Timely access to existing system data through cloud-native integrations
- The ability to communicate in real-time regarding issues related to deliveries
- Automation of key manual processes
- Android & iOS support for all smartphones in use by team members at all restaurants

As for the technical architecture, Artisan built the system using cloud native, microservices, and CI/CD best practices.

ARCHITECTURE DIAGRAM

Based on a growing skill set within the client around Kubernetes and containers, as well as the scalability and reliability of the Elastic Kubernetes Service, Amazon EKS was selected as the core compute service to host the backend for the application. Additionally, due to the transactional nature of the application, the PostgreSQL Aurora database was selected for the datastore. The client appreciated our selection of AWS's Aurora solution, as it has allowed us to take advantage of automated upgrades/patching, as well as native high availability with a multi-AZ configuration for redundancy.

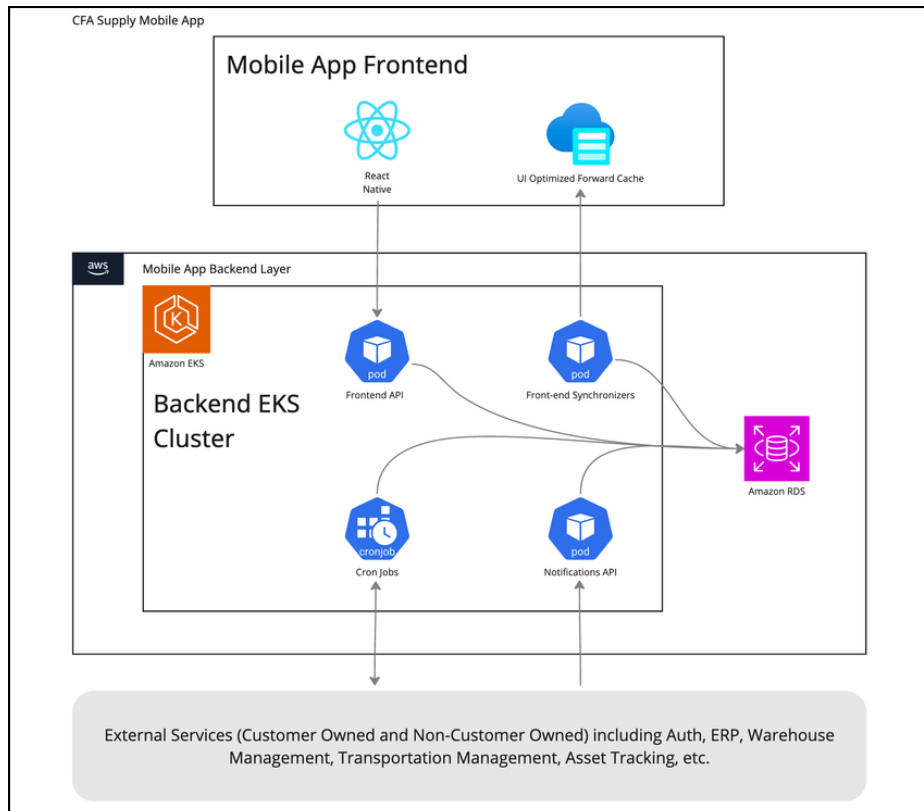
**Diagram on page 3*



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CASE STUDY



THE RESULTS

As a result of this initiative, the restaurant chain experienced the following:

- 100% Conversion Rate - Within one month of the initial launch, team members at all participating restaurants began using the mobile app as their primary means of reporting and resolving delivery issues.
- Reduced Time to Resolve Issues – The total average time to resolve issues dropped by over 90%, giving restaurant managers valuable time back to focus on the customer.
- Immediate Access to Timely Information – The total number of calls to the distribution center dropped substantially because restaurant managers now have access to the information they need.

Following the success of this initiative, the restaurant chain placed the mobile app at the center of its adaptive supply chain strategy, which has provided restaurant managers with a personalized, “demand-centric” view of their back-office operation.



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WHY ARTISAN STUDIOS

ar·ti·san – made in a traditional or non-mechanized way using high quality ingredients.

The supply chain modernization effort was a 3–5-year project from the outset with one of the largest QSRs in the world. It was important to the client to find a lead consultancy to not only provide great talent but be a trusted advisor that could provide expertise based on previous experience at this scale. It was also critical for the client to leverage a full service supply chain consultancy – across business strategy, technology, and design.

The client QSR treats its employees and restaurant operators with the same care and consideration it gives to each of its customers. The design of this modernized supply chain initiative is driving the user experience standard for all internal applications built across the client, so it was critical to select a vendor who could provide high end cloud architecture and engineering talent, as well as world-class user experience design processes.

Artisan provides more than just architects, engineers, and UI/UX designers. The company provides artisanal consultants, who take great pride in their work, are not afraid to step outside of their lane to get the job done and understand what it takes to become trusted advisors. Due to its reputation and track record for building large scale responsive user experiences, the client turned to Artisan to take on this project.



High-quality Solutions

Artisan has proven performance with the client for delivering beautiful, fully responsive, and highly available web and mobile applications at scale.



Comprehensive Supply Chain Knowledge

Artisan has a deep team of business strategists, technology consultants, and user experience designers who understand and have built technology solutions within the supply chain space.



Trusted Advisors

Artisan consistently provides high-caliber individuals who go beyond great engineering and design to also be great technology consultants and advisors. This was a critical consideration given the size and scale of this multi-year project.



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