

KFC

KFC's Secret Recipe for Digital Transformation:

**See How Edge Computing Powered
the Move from Kitchen to Cloud**

GAP CASE STUDY

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Service: [UI/UX Design & UI Development](#), [Mobile App Development](#), [Technology Application Assessment](#), [Technology Advisory Services](#), [Architectural Technology Assessment](#), [Front-End Development](#), [Back-End API Development](#), [DevSecOps](#), [Managed Services](#)

Industry: [Food/Beverage](#)

Tech Stack: [Native Android \(Java, Kotlin, etc.\)](#), [.NET Core](#), [C#](#), [MongoDB](#), [RabbitMQ](#), [Kubernetes](#), [Helm](#), [GitLab](#), [Fleet](#), [Docker](#), [Azure](#), [Terraform](#)



The benefits of digital transformation promise increased efficiency and business agility, as well as unlocking new value and opportunities. Those much needed benefits in today's reality!

However, successful digital transformations are difficult, often having success rates of only 35%, according to [BCG research](#). Common pitfalls include a lack of planning, poor technology selection, legacy system integration challenges, and a lack of digital skills for new technology. Success depends on having experienced internal capabilities or partnering with experienced digital partners who excel in areas of innovation and transformation.

At KFC, the mission was clear: fast food needed faster tech. As one of the world's largest quick-service restaurant chains, the company relies heavily on technology to optimize kitchen workflows, manage orders, and streamline drive-thru and delivery operations. To move from legacy to leading edge, KFC needed technical help. Their leaders chose to work with a consulting and technology services company known for using solutions to innovate and align with their business goals.

Learn how Growth Acceleration Partners (GAP) transformed KFC's in-restaurant operations with edge technology.

THE NEED FOR SPEED AND NEXT-GEN OPERATIONAL EXCELLENCE

KFC's vision was to transform in-restaurant back-of-house infrastructure to one that was modern. The solution needed to optimize key operational processes, improve reliability, provide new value, integrate with their legacy stack and be adaptable for future innovative use cases.

While they had typical Quick Service Restaurant (QSR) in-restaurant technology components, their legacy stack was costly and limited its expandability and functionality. It was also at risk for internet outages and hardware failures.

With their parent company, Yum! Brands, planning to deliver their next-gen Point of Sale software in a short timeframe, a timely solution to accommodate the up-coming major change was needed.





AN EDGE STRATEGY FOR SCALE AND GROWTH

With more than 4,000 restaurants in the U.S. and plans for incremental rollouts, a resilient and flexible approach that was straightforward to support and evolve was needed. GAP worked to understand KFC's needs, and developed a technology modernization roadmap and architecture to support those needs.

1. GAP recommended a MACH (microservices, API-first, composable, headless) architecture approach, with containerization for application modernization and flexibility.
2. Highly-available local data storage and caching was recommended for offline support to ensure restaurants continue to operate during internet or cloud outages, and to ensure operational reporting could be synced when cloud connections were restored.
3. GAP leveraged real-time messaging to communicate with legacy in-restaurant applications, until their retirement, and as a means to expose data feeds for third-party applications.
4. Application resiliency and availability, with the ability to grow, were key requirements. GAP provided expertise and advisory services on implementing a 3-node Kubernetes cluster, using Mini PCs, to ensure a highly available system KFC infrastructure could manage.
5. GAP leveraged incremental integration paths to support legacy integrations to facilitate expedited delivery timelines, and planned for future paths to minimize cost and effort.
6. Deploying applications to several thousands of restaurants and getting a handle of centralized logs and metrics for observability can be a headache. GAP was instrumental in planning and implementing a GitOps-based deployment strategy to manage deployments, as well as in evaluating and advising on an observability solution to fit their needs.

This strategy enabled KFC to not only meet their core business requirements, but also enabled additional value for digital menu boards, order ready boards, real-time order confirmation boards in drive-thrus and experimenting with AI inventory predictions.



GAP'S VALUE PROPOSITION

GAP brings business acumen, user experience expertise, and technical chops to deliver outstanding and timely solutions that delight our clients. With decades of experience in Cloud and Edge Computing, and in both the retail and QSR industries, our teams understood KFC's business needs. This important combination of agile insight and talent allowed us to offer guidance while delivering a very successful solution.

GAP provided the following services:

- Project planning and management
- Platform and solution architecture
- Technology advisory and assessment
- User Experience and design
- Application development



KFC OUTCOMES

While KFC's Edge Platform is still being rolled out to additional markets, GAP successfully delivered the first phase in record time. The delivery was so successful, the client declared that it was the quickest integration project in the history of KFC!

The flexibility of the platform allowed KFC to quickly deploy and support both KFC-branded and KFC multi-brand restaurants, as well as their new Saucy concept restaurant in Florida.

