



CUSTOMER STORY

Transforming Bacardi's Digital  
Marketing Platform  
with DevOps Automation

## CASE STUDY

# Transforming Bacardi's Digital Marketing Platform with DevOps Automation

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*Established in 1862, Bacardi is the world's largest privately held spirits company, operating in over 270 markets with more than 200 brands and labels, as well as several sustainability programs under their Good Spirited initiative. Bacardi puts the consumer at the heart of everything they do, striving to understand customer needs to build exciting and inspiring experiences.*

Bacardi's digital portfolio consists of over 150 websites and 2,500 web domains, making it essential to offer a consistent and engaging digital presence for their customers.

Bacardi's challenge was to expand their digital footprint and deliver innovative connected experiences to consumers while keeping costs under control.

In 2017, Bacardi turned to EPAM as a trusted partner to help realize the full potential of their platform, ensuring the company could quickly adapt to future consumer needs and continue to provide exceptional brand experiences. Bacardi and EPAM worked to improve brand consistency and perception, accelerate time to market and deliver significant operational cost savings. By collaborating together, EPAM helped Bacardi transform their environment and implement a DevOps automation platform, resulting in 16 times greater website deployment capacity and a 42% reduction in infrastructure costs.

**16x**

**GREATER WEBSITE  
DEPLOYMENT CAPACITY**

**42%**

**REDUCTION IN  
INFRASTRUCTURE COST**

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## ADDRESSING MANUAL DEPLOYMENT PROCESSES & CHALLENGES

Bacardi made significant investments in its Digital Marketing Platform (DMP), which was built to deliver all of Bacardi's website functionality and was hosted on Amazon Web Services (AWS). While the purpose of Bacardi's DMP was to produce a set of services that could be reused across brands to lower costs and reduce time to market for individual brands, the solution was not being used to its full potential.

The platform had many manual deployment processes that were prone to errors, resulting in significant overhead, critical availability issues and bottlenecks. Because each website had its own separate component and set-up, deployments were executed in silos, making automation challenging at scale. This resulted in engineers spending a significant amount of time on operational requests rather than optimization and innovation.

Bacardi turned to EPAM as an experienced AWS Advanced Consulting Partner to revolutionize their platform and meet the following objectives:

### GREATER AVAILABILITY

Develop and maintain a scalable and reliable hosting environment capable of supporting 99.9% availability and achieving zero-downtime deployments

### FASTER TIME TO MARKET

Increase deployment capacity from 12 releases to 50 releases per week

### IMPROVED WEBSITE PERFORMANCE

Reduce time-to-first byte (TTFB) from an average of 7 seconds to 0.2 seconds

### OPTIMIZED INFRASTRUCTURE COSTS

Reduce costs by 25% while still supporting Bacardi's growing infrastructure landscape

### REDUCED OPERATIONAL COSTS

Decrease operational activities from 90% to 50% by improving infrastructure and operational process automation

### PORTFOLIO RATIONALIZATION

Update digital assets inventory to enable Bacardi's portfolio rationalization project

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## IMPLEMENTING AN END-TO-END, AUTOMATED DEVOPS PLATFORM BUILT ON AWS

Bacardi's digital marketing team was bogged down with too many manual processes and effort spent on simple tasks, which were a distraction from focusing on customer success. EPAM replaced Bacardi's manual, complex and lengthy deployment processes with an end-to-end, scalable DevOps platform consisting of a fully automated CI/CD pipeline with a self-service (infrastructure as code) platform and infrastructure orchestration components. Security and performance checks were integrated into the SDLC, ensuring quality and resilience was delivered at speed.

Third-party components used on each siloed website differed in quality, which posed a constant risk to availability. To address this concern, EPAM migrated all sites to AWS under the DevOps platform. A key challenge was migrating legacy websites that didn't comply with new technical standards and needed to be changed. The teams successfully transferred all sites using an automated migration tool, which was developed specifically for this purpose.

Additionally, EPAM implemented:

- Blue-green deployments, automated smoke testing and pre-production environments to ensure zero downtime
- Amazon CloudFront as the standardized CDN for all websites, enforced website integration with Amazon S3 and a caching strategy to allow websites to run incredibly fast
- An optimized cloud architecture and processes to decrease infrastructure costs
- A custom-built digital asset inventory that automatically pulls all digital assets into a single view for increased portfolio visibility

### Adapting to a DevOps Culture

To effectively leverage the new platform, EPAM knew that Bacardi needed to embrace a DevOps culture, so the company collaborated with Bacardi's development team to establish a set of standards. A strong emphasis was put on improving communication and collaboration between stakeholders, including regular face-to-face meetings and a shared Slack channel between Bacardi, EPAM and third-party teams. EPAM followed agile methodology to accommodate the rapid speed of delivery and ensure a flexible, fast, lean and responsive service to support Bacardi's changing business needs. Site Reliability Engineering (SRE) best practices were used to increase the stability and resilience of the websites and applications and achieve accelerated time to market.

## TECH STACK AT A GLANCE

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**AWS • AMAZON CLOUDFRONT • AMAZON S3 • ANSIBLE • PYTHON  
GROOVY • JENKINS • HASHICORP VAULT • AWS SDK  
PHYTON-BASED CUSTOM INVENTORY • DOCKER • HELM • KUBERNETES**

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## REVOLUTIONIZING THE DIGITAL MARKETING PLATFORM TO ENHANCE PERFORMANCE

By optimizing its DMP and adapting a DevOps culture, EPAM helped Bacardi transform their technology ecosystem, so the company could continue putting their customers at the heart of every decision. EPAM helped support Bacardi's digital evolution in a cost-effective way, ultimately exceeding their initial goals:

- **99.5% Availability & 128x Faster Onboarding of New Websites from 8 Days to 30 Minutes** – the initial objective was met, and automated deployments achieved zero downtime with only one incident per quarter
- **16x Higher Deployment Capacity from 12 to 200 deployments per week**
  - With automation, deployment capacity is now 25 applications per week with the option to be scaled even further if needed
  - Security testing accelerated from 3 days to 3-12 hours
  - Performance testing and production deployment are now provided self-service and increased from 3 days to 40 minutes and 3 hours to 1 hour, respectively
  - To support 24/7 deployments and operations, EPAM built a service desk team with a follow-the-sun approach
- **35x Faster Website Performance** – website time-to-first byte (TTFB) in the 97th percentile was 0.2 seconds, down from an average of 7 seconds. Faster website performance has helped improve brand value, increase website traffic, decrease the bounce rate by 6% and triple the number of user sessions
- **42% Reduction in Hosting Infrastructure Costs** – an annual cost reduction was realized due to optimized cloud architecture and a portfolio rationalization exercise aided by the custom inventory tool
- **Decreased Time Spent on Operational Requests & Manual Operations from 90% to 10%** – with the help of automation, Bacardi now spends 10% of effort on requests and 90% on continuous improvement and innovation initiatives
- **Inventory of Digital Assets are Automatically Updated** – using the unique, custom-built inventory solution, Bacardi now has a single view of all digital assets, increasing visibility and control over their digital portfolio





In October 2019, Bacardi and EPAM were awarded the Best Overall DevOps Project in Retail at the DevOps Industry Awards in London.

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*Bacardi's Digital Marketing Platform is efficient, effective and perfectly executed. EPAM enthusiastically transformed the environment, allowing the digital marketing team to focus on what really matters – the needs of the consumer. I thoroughly enjoyed the journey and am tremendously proud of the accomplishment.*

**SHERYL RICHARDSON**

Digital Marketing Operations  
Manager at Bacardi

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## ABOUT BACARDI

The Bacardi Limited brand portfolio comprises more than 200 brands and labels, including BACARDÍ® rum, GREY GOOSE® vodka, PATRÓN® tequila, DEWAR'S® Blended Scotch whisky, BOMBAY SAPPHIRE® gin, MARTINI® vermouth and sparkling wines, CAZADORES® 100% blue agave tequila, and other leading and emerging brands including WILLIAM LAWSON'S® Scotch whisky, ST-GERMAIN® elderflower liqueur, and ERISTOFF® vodka. Founded more than 158 years ago in Santiago de Cuba, family-owned Bacardi Limited currently employs more than 7,000, operates production facilities in 11 countries, and sells its brands in more than 170 countries. Bacardi Limited refers to the Bacardi group of companies, including Bacardi International Limited. Visit [www.bacardilimited.com](http://www.bacardilimited.com) or follow us on [Twitter](#), [LinkedIn](#) or [Instagram](#).

## ABOUT EPAM

As an AWS Advanced Consulting Partner, EPAM works with its global customers to design, migrate, build and support sophisticated cloud applications on AWS with increased flexibility, scalability and reliability. As of 2020, EPAM has over 2,000 AWS engineers, 90 AWS business and technical accreditations, and has delivered over 300 projects running on AWS. EPAM has developed several DevOps accelerators with multi-tiered capabilities that can scale to meet its global customers' specific needs.

### QUESTIONS?

Contact us at [Sales@EPAM.com](mailto:Sales@EPAM.com)  
or visit us at [EPAM.com](http://EPAM.com)

