CASE STUDY

Collaborative SaaS Transformation
of a Global Travel Technology Platform

Initiation: *December 2019*
Ongoing development and enhancement: *2020 – Present*

PROJECT OVERVIEW

Global hotel solutions provider, ranking among the top three hotel portals in Europe and as a market leader in the global business travel sector, faced challenges with escalating AWS costs and had to define and implement a comprehensive cost optimization strategy.

CLIENT CHALLENGES

The client faced several key challenges that Brightgrove needed to address:

- Inflexible IT infrastructure struggling with fluctuating market demands
- Slow time-to-market for new products and features
- Limited scalability slowing business growth
- High operational costs and reliance on CAPEX model
- Inadequate data-driven decision-making capabilities

- Adapting to post-COVID-19 travel industry dynamics
- Managing a complex ecosystem of suppliers and corporate clients
- Ensuring compliance with diverse international regulations
- Differentiating in a crowded market
- Balancing service quality with process automation

BRIGHTGROVE'S APPROACH

Brightgrove worked closely with the client's existing multilayered organizational structure, integrating its expertise within the client's complex ecosystem. The collaboration spanned across various organizational layers:

Innovation Hubs

Brightgrove integrated its teams with the client's existing hubs in Germany, and Poland, along with new development hubs in in Vietnam and India.

User Experience Design

Brightgrove UX specialists collaborated with the client's design team to ensure consistent user experiences across platforms.

Platform, Operations, QA Automation & App Support

Brightgrove experts collaborated with the client's central teams to establish standardized tools, processes, and frameworks.

Core Platforms

Brightgrove developers contributed to the client's procurement, travel, finance, and business process automation platforms.

Central Data Insights & Analytics

Brightgrove data engineers and scientists worked alongside the client's teams to develop shared data products and services.

Agile Teams

Brightgrove members integrated into cross-functional agile teams, working directly with the client's product owners and stakeholders.

Value Streams

Brightgrove helped implement and optimize value streams aligned with specific business outcomes.

BRIGHTGROVE'S SAAS SOLUTION

Brightgrove implemented a cloud-native, microservices-based architecture with the following key components:

- API Gateway for managed access to microservices
- Microservices for booking, content management, procurement, and analytics
- Message Queue using Apache Kafka for asynchronous communication

- Redis caching layer for high-speed data access
- Hybrid database cluster (PostgreSQL and MongoDB)
- Elasticsearch for fast, scalable search capabilities
- Global Content Delivery Network (CDN)

SPECIFIC CHALLENGES AND BRIGHTGROVE'S SOLUTIONS

Legacy System Integration

Challenge: Multiple critical legacy systems were difficult to integrate with modern technologies.

Solution: Implemented a microservices architecture with custom adapters for legacy systems, allowing gradual modernization without disrupting operations.

Data Silos and Integration

Challenge: Disconnected software engineering and data teams hindered the development of data-driven products.

Solution: Created a Central Data Insights & Analytics layer, integrating data roles into agile teams and developing shared data products.

Multi-tenancy and Security

Challenge: Need for a secure multi-tenant system to serve multiple corporate clients on a single platform.

Solution: Implemented a shared database model with tenant isolation at the row level, using JSON Web Tokens (JWT) for secure, stateless authentication across services.

Scalability and Performance

Challenge: System struggled with variable loads during peak travel seasons.

Solution: Utilized AWS Auto Scaling groups, implemented horizontal scaling for stateless services, and used read replicas and sharding for database scaling.

Content Management and Distribution

Challenge: Difficulty in managing and distributing hotel content across various platforms and channels.

Solution: Developed a centralized content management system with automated quality assurance processes and multi-sourcing capabilities.

Procurement Process Automation

Challenge: Highly manual procurement processes leading to operational inefficiencies.

Solution: Automated key processes, including RFP setup, chain allocations, and bid submissions, reducing manual workload and improving efficiency.

Sustainability Integration

Challenge: Need to incorporate sustainability metrics into procurement and booking processes.

Solution: Integrated Green Stay Initiative into the procurement platform, developed emissions compensation capabilities, and created sustainability reporting tools.

Global Team Coordination

Challenge: Ensuring effective collaboration across teams in different countries and time zones.

Solution: Supported Implementation and best practices sharing related to standardized development practices, communication protocols, and agile ceremonies across all innovation hubs.

Continuous Integration/Deployment (CI/CD)

Challenge: Lack of streamlined process for software updates and deployments.

Solution: Implemented GitLab CI/CD pipelines for automated testing and deployment, using Blue/Green deployment strategy for zero-downtime updates.

Cloud Cost Optimization

Challenge: Escalating cloud infrastructure costs due to inefficient resource utilization.

Solution: Optimized cloud usage by implementing containerization (Docker) and orchestration (Kubernetes) and used Infrastructure as Code (IaC) with Terraform for consistent environment provisioning.

QUANTITATIVE RESULTS AND KPIs

Brightgrove's SaaS implementation led to significant improvements:

Platform Performance

- 99.99% uptime for critical services
- 60% reduction in average response time
- 10x increase in system capacity

Financial Metrics

- 40% reduction in infrastructure costs
- 30% reduction in cloud costs
- Shift from CAPEX to OPEX model
- Projected profit margin increases from -4% to +10%

Sustainability Metrics

- Increased participation in green initiatives
- Expanded emissions compensation program

Business Impact

- 25% improvement in conversion rates
- Achieved GDPR compliance
- €50+ million potential additional revenue from reduced customer leakage

Operational Efficiency

- 3x faster deployment cycles
- 50% faster new product launches
- Significant staff cost reduction through automated procurement operations

KEY FEATURES DEVELOPED BY BRIGHTGROVE

Procurement Platform

- Advanced Data Upload and Management
- AI-Driven Destination Analysis
- Demand Forecasting Tools
- Comprehensive Supplier Evaluation including Sustainability Metrics
- Scenario Builder for Procurement Strategies
- Automated Solicitation and Negotiation Processes
- Efficient Rate Loading and Management
- Comprehensive Audit Tools
- AI-Powered Personalization (HPO)
- Streamlined Decision-Making Interface

Content Management System

- Supplier-Facing Extranet Portal
- Multi-Source Integration System
- Automated Quality Assurance Processes
- Full OTA Content Integration
- Multi-Sourcing Capabilities for Improved Availability and Pricing
- Centralized Single Sign-On (SSO) for Partner Applications

Sustainability Features

- ISO-Certified Sustainability Assessment
- Integrated Emissions Compensation Program
- Science-Based Targets for Net-Zero Planning
- Advanced Greenhouse Gas Reporting
- Recognition System for Sustainable Properties

CONCLUSION

Brightgrove's deep collaboration within the client's complex, multilayered organization was key to the success of this SaaS transformation. By integrating closely with the client's teams across various organizational layers, Brightgrove was able to address specific, challenging problems while driving overall technological advancement.

Our ability to navigate and enhance complex organizational structures, coupled with our technical expertise in developing integrated platforms across procurement, travel technology, finance, and business process automation, positions Brightgrove as an ideal partner for companies undertaking major digital transformations.

This project demonstrates Brightgrove's capacity to not just provide technical solutions, but to work as a true partner in driving comprehensive organizational and technological change in complex, global enterprises.

Our success in this project showcases our ability to deliver significant improvements in efficiency, scalability, and market competitiveness, making us a valuable partner for companies seeking to transform their technology stack and business processes.

Ready to take the next step?
Reach us today at info@brightgrove.com