



CASE STUDY

Solving Integration Problems in Travel Tech

EXECUTIVE SUMMARY

Brightgrove, a leading IT solutions provider, partnered with a global travel technology company to overhaul their fragmented systems through advanced integration services.

This case study showcases Brightgrove's expertise in solving complex integration challenges resulting in a unified, efficient, and scalable platform.

CLIENT OVERVIEW

Our client is a major player in travel technology, offering a comprehensive ProcureTech platform including Multisource booking, Rate Protector, and Content Quality Management systems.

INTEGRATION CHALLENGES

The client faced critical integration challenges that were hindering their operations:

- Disparate data from 17+ content providers (GDS, OTAs, direct hotel connections)
- Inconsistent APIs and data formats across multiple systems
- Lack of real-time data synchronization between booking and financial systems
- Inefficient connections between customer-facing applications and back-end services
- Isolated loyalty programs and user profiles across different platforms
- Compliance issues due to inconsistent data handling across systems

BRIGHTGROVE'S INTEGRATION SOLUTIONS

Brightgrove implemented a comprehensive integration strategy to address these challenges:

API Integration and Management

- Developed a centralized API gateway using Kong API Gateway to manage connections with 17+ content providers
- Implemented protocol adapters to normalize data from SOAP, REST, and proprietary APIs
- Created a unified API layer using GraphQL to provide consistent access to all travel data

Data Integration and Synchronization

- Implemented an Enterprise Service Bus (ESB) using Apache Camel for routing and transforming data between systems
- Utilized Apache Kafka for real-time data streaming, ensuring up-to-date inventory and pricing across all channels
- Developed a master data management system to maintain consistency of hotel and user data across all platforms

System Integrations

- Connected the Multisource booking engine with the Rate Protector system using a microservices architecture
- Integrated the Content Quality Management system with hotel extranets and channel manager APIs
- Linked the customer-facing web and mobile applications with the core booking and inventory management systems

Financial Systems Integration

- Implemented real-time integration between the booking system and SAP financials using SAP PI/PO
- Developed custom connectors for reconciling payments from multiple OTAs and payment gateways

Customer Profile and Loyalty Integration

- Created a unified customer profile system, integrating data from multiple CRM systems and loyalty programs
- Implemented OAuth 2.0 and OpenID Connect for single sign-on across all customer-facing applications

Regulatory Compliance Integration

- Developed a centralized compliance engine that integrates with all data processing systems
- Implemented data masking and encryption services that integrate with all customer data touchpoints

Monitoring and Analytics Integration

- Integrated ELK stack (Elasticsearch, Logstash, Kibana) with all systems for centralized logging and monitoring
- Developed custom connectors to feed data from all systems into a central data lake for advanced analytics

TECHNICAL IMPLEMENTATION HIGHLIGHTS

Integration Patterns: Utilized various Enterprise Integration Patterns (EIPs) such as Content-Based Router, Splitter, and Aggregator to manage complex data flows.

Event-Driven Architecture: Implemented an event-driven system using RabbitMQ to decouple services and enable real-time updates across integrated systems.

Data Transformation: Utilized Apache Nifi for complex ETL processes, handling diverse data formats from multiple providers.

Integration Testing: Implemented comprehensive integration testing using Postman and Newman, ensuring reliability across all integrated systems.

API Versioning and Documentation: Used Swagger for API documentation and implemented a custom versioning strategy to manage API evolution without breaking existing integrations.

BUSINESS IMPACT OF INTEGRATIONS

Brightgrove's integration solutions delivered significant improvements:

Increased Booking Efficiency: Reduced booking processing time by 75% through seamless integration of multiple content sources.

Improved Data Accuracy: Achieved 96.4% data consistency across all integrated systems, eliminating discrepancies in pricing and availability.

Enhanced Customer Experience: Unified customer profiles and seamless cross-platform experience led to a 37% increase in customer retention.

Operational Efficiency: Automated data flow between systems reduced manual interventions by 70%, significantly cutting operational costs.

Faster Time-to-Market: Reduced integration time for new partners from months to weeks, accelerating business growth.

Compliance Assurance: Centralized compliance engine ensured 100% adherence to data protection regulations across all integrated systems.

Real-time Business Intelligence: Integrated analytics provided actionable insights, leading to a 15% increase in revenue through optimized pricing and inventory management.

BUSINESS IMPACT OF INTEGRATIONS

This case study demonstrates Brightgrove's exceptional ability to solve complex integration challenges by seamlessly connecting diverse systems, unifying data sources, and creating efficient workflows. Brightgrove not only resolved the client's immediate integration issues but also laid the foundation for future scalability and innovation. Our expertise in API management, data integration, system interconnectivity, and compliance integration makes Brightgrove the ideal partner for travel technology companies looking to create a cohesive, efficient, and future-proof technology ecosystem.

Explore how we can help you achieve your goals.
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