UNKOMMON REVOLUTION

Case Study

UnKommon Revolution & Travel Booking Platform

UnKommon Revolution Rebuilds an Online Travel Portal

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Background

Our client is an International-based travel company that targets the GCC region. They provide a leading online travel platform that helps travelers find and book flights, hotels, and holidays all over the world. The company, which had an outdated platform, reached out to Unkommon Revolution to build a new system with extended functionality and high stability to provide their customers with faster and more convenient service. As a result of the cooperative effort, our team developed a completely new platform that embraces both the customer-facing application and the back office. Currently, the platform offers flight and hotel booking with a car rental feature on the way
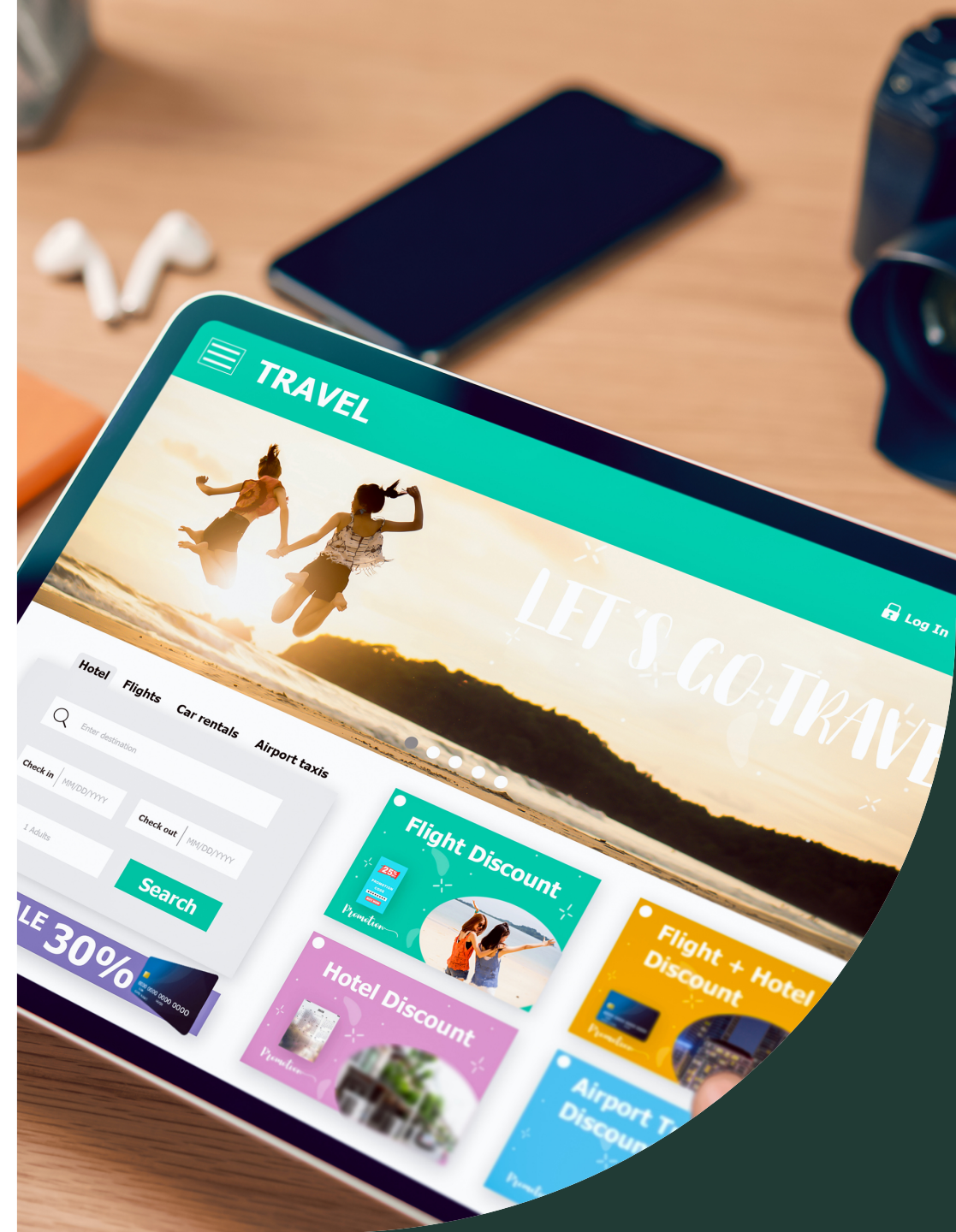
Challenges

Working on the product, the team solved the following challenges:

1.

Integrating a global distribution system (GDS) into a platform

2.

Improving booking and ticketing flow

3.

Creating an adjustable commission engine

4.

Achieving a high level of system performance

5.

Designing web and mobile UX/UI

Value Add

**1.** Integrating GDSs and third-party services As the platform's main focus is flight and hotel booking, our team connected it to Sabre GDS (with Amadeus planned) for flight booking, and Qtech API for hotels. To get listed in metasearch engines, the OTA is integrated with Skyscanner and Wego. Besides, the UR team has enabled the platform with a Checkout payment gateway.

3. To run a pricing strategy, any OTA needs a commission engine. We've built a flexible commission engine that allows for configuring how markup and discounts are applied to different travel products depending on various factors, e.g. city pair, traffic source, type of travel, carrier, etc. This helps company's revenue managers be as adjustable as possible and keep the OTA pricing both competitive and meeting revenue goals.

5. Designing product's UX/UI The team of designers created a minimalistic design for the platform and a localized version for the GCC region. The website has rich navigation to simplify travel product search and booking. Our team also designed an admin panel for back-office and the customer-facing design of the OTA. The design embraced the web and mobile versions (iOS and Android)

2. Developing a booking engine with customizable search rules Our team has created a booking engine with a search and ticketing capabilities running through Sabre GDS. On the back-office side, the engine allows the OTA's travel product managers to choose particular product suppliers depending on the type of a user search. This way, the OTA managers can search the deals from suppliers that they partner with.

4. Creating robust architecture Every day the platform deals with numerous search and booking requests and has to process data coming from GDSs. This can result in overloading and service unavailability. To ensure zero downtime, our team has chosen a microservice approach to the architecture, making all microservices stateless. Also, engineers have created an industry-standard logging solution, based on AWS and S3. As an orchestration gateway, the engineers employed Kong API. For communication between microservices, they used NATS system, AWS EKS, and Kubernetes as an environment.
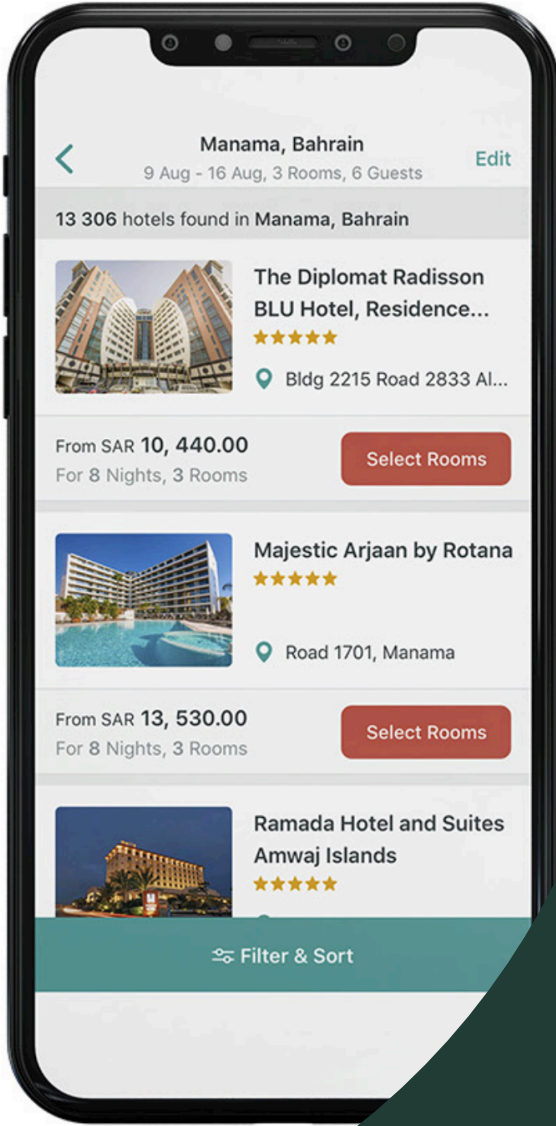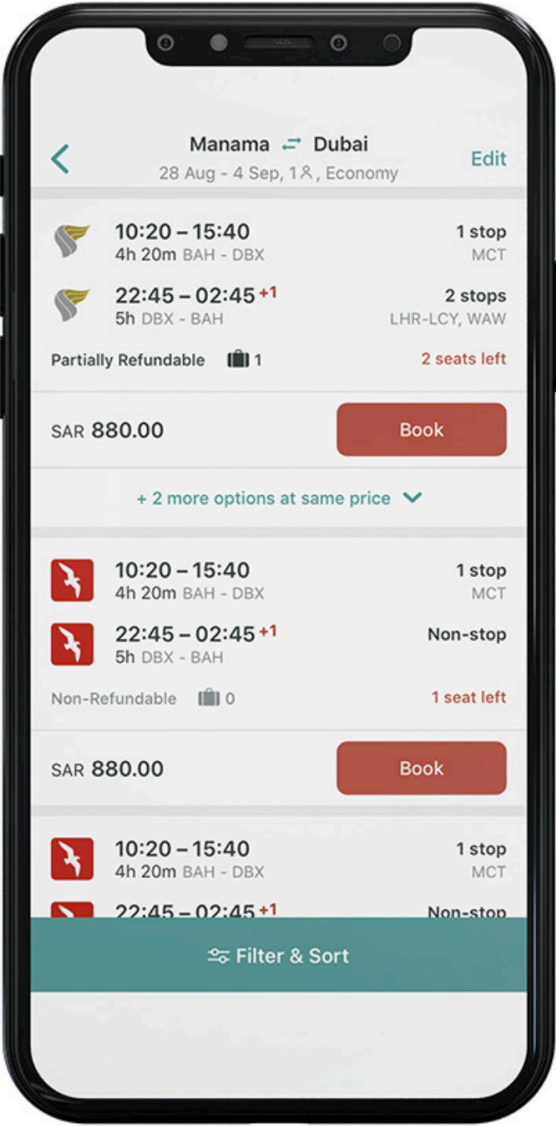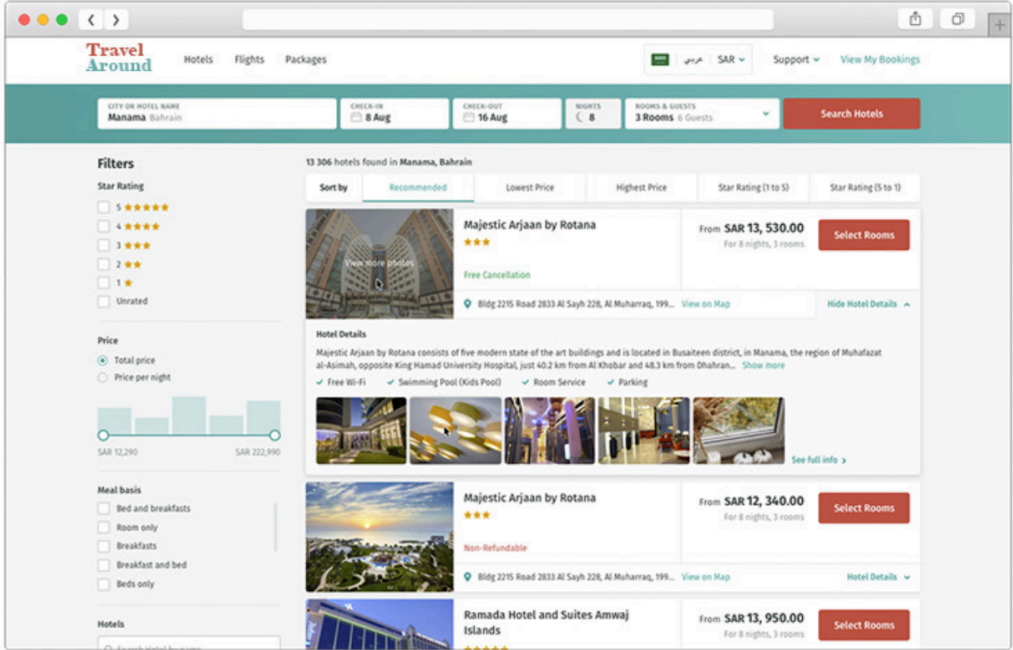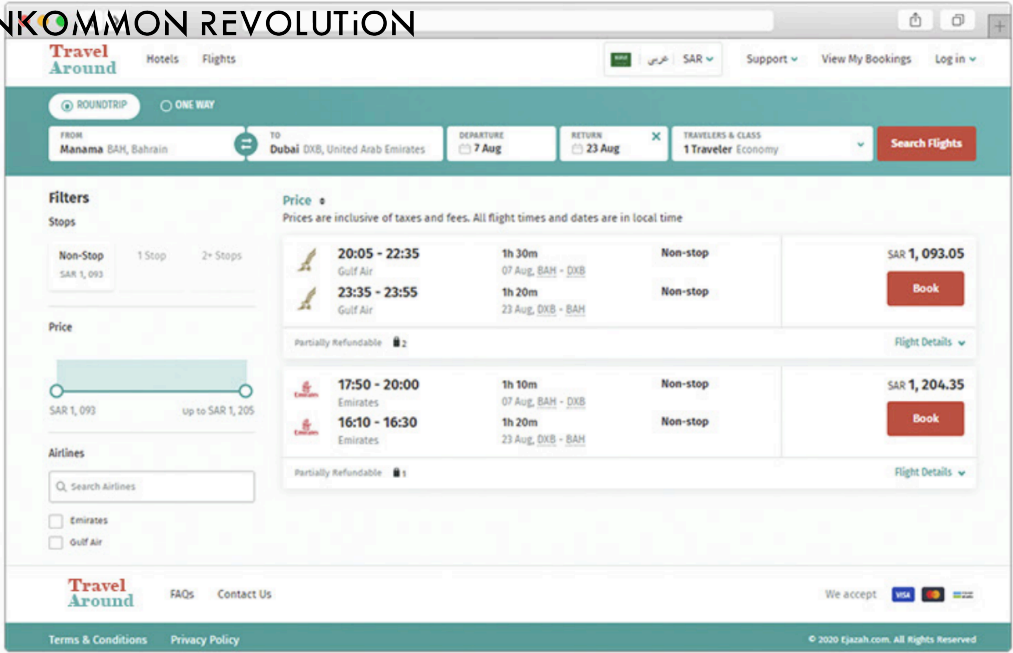
Approach and Technical Info

The project was completed over the course of 14 months by a team of twenty-eight professionals: **2 business analysts, 12 JS engineers, a solution architect, 4 QA engineers, 3 UX/UI designers, a project manager, a DevOps engineer,** and **4 mobile engineers.**

The team used the **Scrum framework** in the workflow. The technology stack included **JavaScript, React, Typescript** (for frontend), **Node.js** (for backend and microservices), **NATS, Kong API Gateway, Kubernetes** (for microservices), **S3, Prometheus, Grafana** (for logging and monitoring), **iOS, Android, and Amazon Web Services.**

Services provided within the project framework: Travel Technology Consulting.

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