Project Case Study

Caribbean Airline Solutions

Delivering Communication Solutions without compromise.

Project Overview

The project aims to create an integrated system for managing airline operations, booking flights, checking in, checking out, baggage selection and other operations including pesonal and training records, aircraft and destination data, and maintenance activities. It willfeature real-time flight tracking, weather updates, internal messaging, and ground handling management. The system will offer a responsive design for mobile access, ensuring seamless workflows and efficient communication across all operational aspects.

Core Problem

The airline operations had challenges with its existing system. Booking flights was difficult for travelers due to a complicated process and poor user experience. Administrators had trouble managing schedules, fares, and bookings, as there was no simple way to handle these tasks leading to inefficiencies for passengers and staff.

Solution

We built a new flight booking and management system for travelers and airline staff. Our team made the airline managing processes simpler. Travelers can now easily find and book flights with clear pricing, while staff can easily manage schedules and bookings using an easy-to-use platform.

Process Implementation

Our collaboration with Caribbean Airlines was to understand the issues and provide the right solution. We had a detailed discussion with their team to identify the specific challenges and requirements. After collaboration, we created a customized solution. We worked closely with their team throughout the development process, ensuring every feature, from check-ins to baggage management, was optimized for transparency and efficiency. We also took special care to integrate real-time flight tracking, weather updates, and a messaging system to facilitate communication between internal teams. We used different technologies, including Angular for the front end, ASP.NET Core for the back end, and various third-party integrations, to ensure the system's scalability and reliability.

Key Features

Airline Operations Management

- **Flight Booking:** Allow users to search and book flights.
- **Check-in & Check-out:** Simplify the check-in and check-out processes.
- **Baggage Selection:** Manage baggage options for passengers.

Personal & Training Records

- **User Profile Management:** Store and manage personal records for passengers and staff
- **Training History:** Track and manage users' training records for compliance and development.

Aircraft & Destination Data

- **Aircraft Management:** Track and update aircraft details.
- **Destination Information:** Display relevant information for each destination, including flight vailability.

Maintenance Activities

- **Maintenance Tracking:** Log and manage maintenance activities for aircraft.

Real-Time Flight Tracking

- **Flight Status Updates:** Provide real-time tracking of flights, including delays and changes.

Weather Updates

- **Weather Information:** Display current weather updates for destinations and flight routes.

Internal Messaging

- **Messaging System:** Facilitate communication between internal teams for better coordination.

Ground Handling Management

- **Ground Operations:** Manage ground handling tasks, ensuring smooth operations at airports.

Mobile Access

- **Responsive Design:** Ensure the system is mobile-friendly for easy access and updates on the go.

Technology Stack

Front-End
Angular

Back-End
ASP.NET Core

Third-party Integrations

- Airline Operations Management
- SMTP Integration for Email
- Syncfusion Treeview
- Pdf417Generator
- Google Maps
- Chart.js
- ZXing
- Stripe

Implementation Process

Discover → Design → Develop → Test → Deliver

Ready To Achieve Similar Results?

Let’s Make It Happen!

www.sumatosolutions.com

info@sumatosolutions.com

Thank You