Baggage Management

Overview

Smart Airline Baggage Management, part of a broader aviation ecosystem vision, is aimed at reducing the instances of delayed, damaged and lost bags leading to lower economic risk exposure to the airlines; increasing the ability to track and report on baggage including location and weight changes to prevent theft and loss; and improve customer satisfaction through better communication including offering new value-added services to frequent flyers.

Applicable Industries

- Aerospace
- Shipping

Applicable Functions

- Logistics
- Maintenance

Market Size

Estimate A

The smart airports market is predicted to grow from USD 11.3 billion in 2016 to

USD 14.9 billion in 2021.

Source: Marketsandmarkets

Estimate B

Another source puts the global smart airports market at USD 19.3 billion in 2024.

Source: PR Newswire

User Viewpoint

Business Value

How does this use case impact an organization’s performance?

The focus of Smart Airline Baggage Management is to bring together fragmented applications and systems to drive solutions to make the airlines and airports more efficient during check-in and subsequent baggage handling across the aviation ecosystem for the benefit of passengers. The solution includes cloud-based airline applications and databases, cloud based analytics, and an M2M and IoT platform to connect, manage and secure realtime data and events from smart luggage. The use case starts at remote check-in by the passenger and ends when the passenger retrieves their baggage at the destination and includes complete tracking and event reporting between those two points.

Ensuring luggage is not tampered with, ensuring all bags end up in the correct place at the correct time, reduction of OT CAPEX and OPEX, improved customer service, litigation safeguard.

Key Performance Indicators

How is the success of the system measured for users and for the business?

Lost baggage count, customer satisfaction rate.

System Capabilities & Requirements

What are the typical capabilities in this use case?

Continuous location and information tracking possibility of smart baggage throughout the journey from home to end destination.

System Capabilities: Correct setup and constant monitoring of the baggage.

Deployment Environment

Where is the ’edge’ of the solution deployed?

Luggage transportation solutions established by airlines.

Technology Viewpoint

Sensors	**What sensors are typically used to provide data into the IoT system, and which factors define their deployment?** Tracking devices using GPS and other solutions to be able to locate baggage at any given time during ist journey.
Analytics	**What types of analysis are typically used to transform data into actionable information?** Collection of location data and enabling acces to real-time data for airline and customers.
Cybersecurity	**What factors define the trustworthiness of the solution?** Baggage location is sensible data and requires appropriate security measures.
Cloud & Edge Platforms	**What factors define the cloud and edge platforms used to integrate the solution?** The solution includes cloud-based airline applications and databases, cloud based analytics, and an M2M and IoT platform to connect, manage and secure realtime data and events from smart luggage.
Connectivity	**What factors define the connectivity solutions used to provide both device-to-device and device-to-cloud communication?** Tracking devices need to be able to constantly be located, requiring a reliable energy source and connectivity solution.
User Interface	**What factors define the interfaces available to the system users?** User interface for passengers different from airline operation staff.

Data Viewpoint

Data Sources	**How is data obtained by the system?** Tracking devices attached or embedded to the baggage.

Data Types

What data points are typically collected by the system?

Location coordinates, motion patterns, route information, time estimations.

Data Requirements

What other requirements define data behavior?

High accuracy for location data. Real-time access to be able to deliver good service to the customer.

IoT ONE Use Case

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