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Supply Chain Management

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Luggage Handling in Airport Logistics

Introduction

Every year, more than 20 million passenger bags are mishandled, frustrating both passengers and airlines. In 2015, the airline industry spent over 2.3 billion dollars on mishandled bags alone. Luggage handling is an extremely complex process, making it important for airlines and airports to continuously work to improve the system. With over two billion bags carried through airports each year, it is vital to focus research to technological advancements to promote a more seamless, efficient, and reliable process for travelers, airports, and airlines.

Objectives

- Analyze the baggage handling systems currently used by airports to identify areas to improve their efficiency and accuracy
- Explore existing technologies being tested and implemented into the airline industry and their effects on the system

Methods

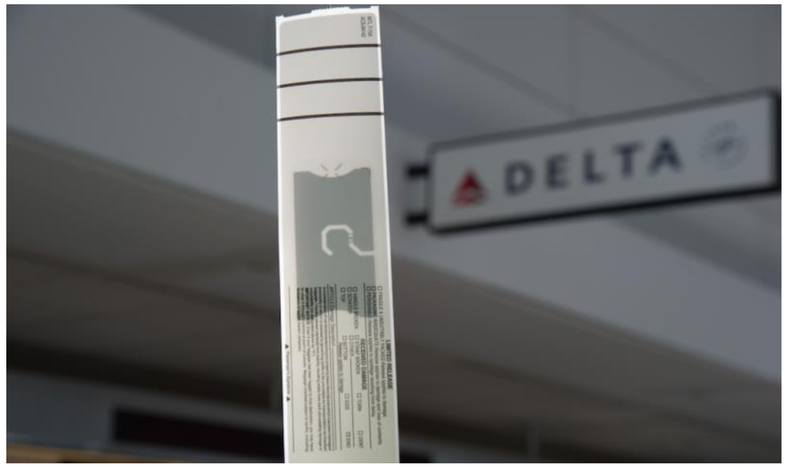
Journal articles and online news articles were examined to gain an understanding of the way luggage travels through airports and research technological advancements in the industry. Airline press releases were used to research innovations in the airline industry and when they would be implemented.

Analysis of Current System

To reach its final destination, luggage travels through a complex series of conveyors within an airport. Baggage handling systems read barcode tags created in 1989 by IATA. These tags are the source of many mishandling issues, as they fall off or cannot be read by scanners if they are dirty or facing the wrong direction. This slows down the entire baggage handling system. Many airlines are improving this specific part of the process to improve the overall system.

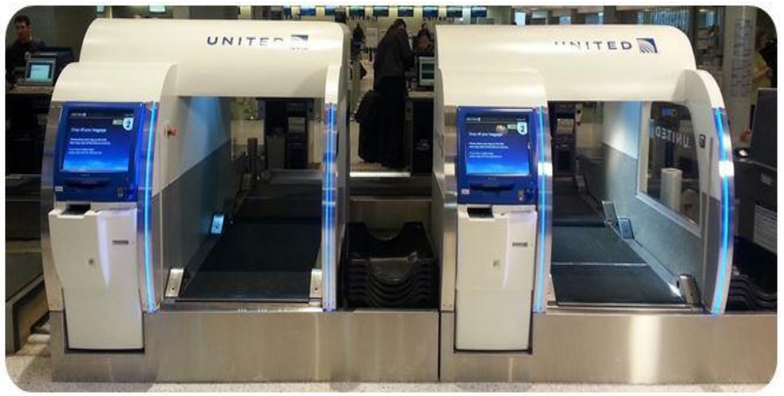
Future in RFID Technology

Airlines are starting to print tags containing RFID chips. New sensors along the baggage handling system conveyor belts can read the tags faster and more accurately.



Future Passenger Experience

Self check-in kiosks are being used allowing passengers to print their own bag tags and load their bags onto the conveyor system themselves.



Permanent bag tags display a new tag using e-ink for each flight. Passengers can use their smartphones to sync flight information to their tags each time they fly.

Conclusions

The technologies researched are currently being tested and implemented by airports and airlines. Many airlines have already reported a reduced number of mishandled bags with these improvements.