FlashTag: Reimagine the Smart Airport Experience

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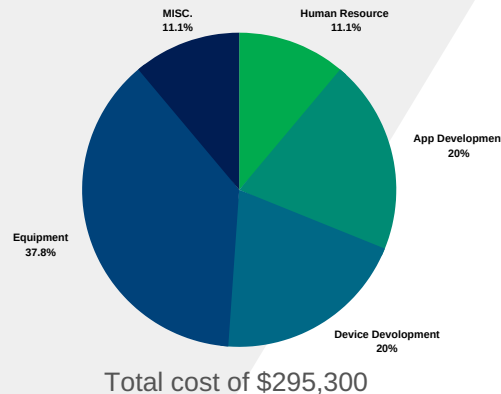
Introduction

Airports in the United States served almost one billion travelers in 2019, however, some of the most substantial problems airlines with their airport partners face are not new (Bureau of Transportation Statistics, 2020): baggage misplacements, security line delays, and missed flights. The University of North Dakota (UND) FlashTag team researched various daily occurrences at the airport, finding that human error is very likely one of the main factors causing delays for passengers.
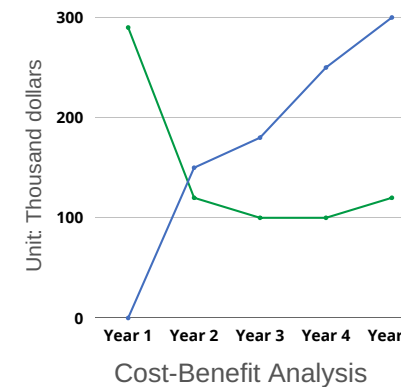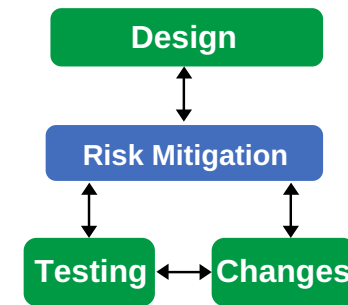
Objectives

- **Lower Baggage Misplacement**
- **Increase Airport Effciency**
- **Generate More Reveue**
- **Ensure Safety and Privacy**

The first wave of customers would be airlines, and who would sell the device to their passengers. During this time, the team would focus on upgrading the airport's infrastructure to facilitate the use of FlashTag. The team would gather user feedback during years 1 to 3 would be utilized to improving user-friendliness. In years 2.5 to 3, FlashTag will penetrate the mass-market and gain international support. Once the device is introduced into the global market, the FlashTag and its software will be updated based on the learnings from customers and system needs. This includes expanding the brand and creating accessories for the product to enhance the passenger experience.

MISC. 11.1%
Human Resource 11.1%
App Development 20%
Equipment 37.8%
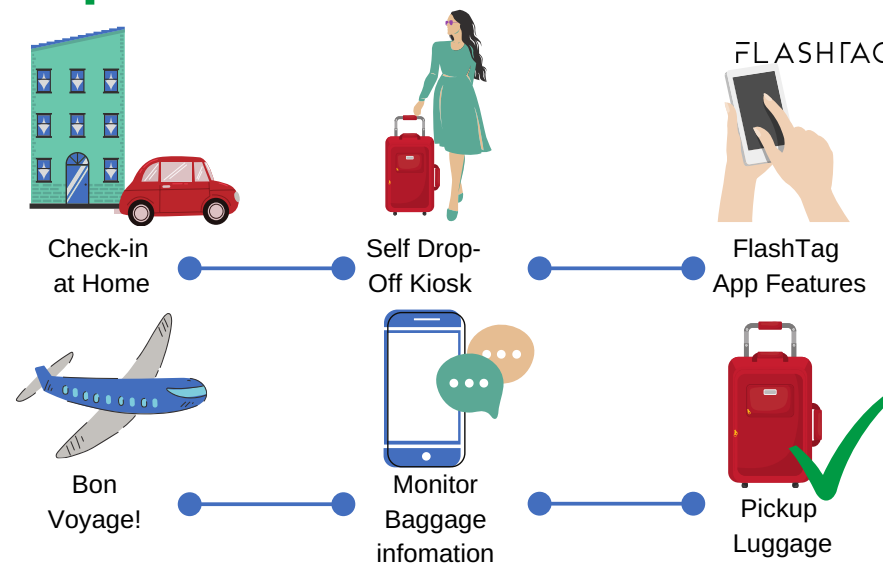Device Devolopment 20%

Total cost of $295,300

Methods

- **Design Assumptions**
  Laying out the blueprint of the project and assume possible technology would be used.

- **Risk Mitigation**
  Using a risk management matrix to evaluate the three core attributes.

- **Testing and Design Changes**
  Conducting various testing and made adequate adjustments to the FlashTag.
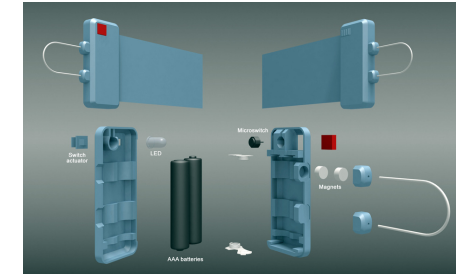

Design
Risk Mitigation
Testing — Changes

Unit: Thousand dollars

Year 1 Year 2 Year 3 Year 4 Year 5

Cost-Benefit Analysis

Experience

Check-in at Home — Self Drop-Off Kiosk — FlashTag App Features

Bon Voyage! — Monitor Baggage infomation — Pickup Luggage

Technology

- **BT Low-Energy**
- **NFC Chip**
- **OLED Screen**
- **FlashTag App**
- **Cloud Service**

The FlashTag team will partner with Cisco® Systems and utilize their DNA Spaces technology. "Through Cisco® wireless infrastructure, organizations can gain insights into how people and things move throughout their physical spaces.

Conclusion

FlashTag, as a new technology, can deliver many benefits for the aviation industry. Passengers will enjoy a better airport experience, airlines will enjoy increased efficiency, and airports will enjoy increased revenue streams. The FlashTag will be the future of air transportation: for the airlines, for the airport, and most of all, for the passengers. With the implementation of the FlashTag technology, airports within the next decade will be more efficient in the ever-crowded airport system.

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