

## Executive Summary

The ticketing process is the first step in airline travel. In order to gain a competitive advantage, many airlines aim to improve operational efficiency. Improving the ticketing process will increase airline revenue and improve customer access to travel. The objective of this project is to assess the impact of technology in airline ticketing and to provide insight into potential innovative improvements in the airline ticketing process.

In creating a technology solution for the airline ticketing process, it is necessary to understand the benefits and drawbacks of the current ticketing process, as well as the evaluation of current airline customer satisfaction. Airline customer satisfaction is achieved by ensuring high quality of service, punctuality, and optimized price value. To grasp market demand for a potential solution, the current ticket delivery methods were analyzed. The current airline ticket delivery methods include tickets bought directly from airlines, travel agencies, and flight meta search engines. Identifying bottlenecks, regulatory constraints and risk tolerances that limit full technology utilization and innovation were done to understand any potential threats and implementation resistance. Prior to creating a solution, the team recognized that performance indicators would be needed to support an objective post-implementation comparison to current ticketing methods. Performance indicators such as amount of total sales, passenger trips, and the rate of sales growth were chosen due to their commonality across the various ticket delivery methods. Airline business models were investigated to determine which model provided the optimum environment for innovation. The models identified include full-service network carriers, charters, low cost carriers, and regional carriers. The need for a secure data storage system in order to ensure data security and customer privacy was addressed. Systems thinking was needed to ensure the need for any suggested improvements could be sustained over time, so the team deemed it necessary to discuss the forecast of air travel demand.

It was mainly concluded that leisure travelers prefer cheaper options regardless of wait time, revenue can be increased by recommending potential customers the right flights at the right time via the right channels, and a secure data system is needed to ensure data security and customer privacy concerns are adequately addressed. This project emphasizes in three innovative solutions that can be implemented to optimize the airline ticketing process providing business value for airline companies. The first solution is the reduction of travel agent commissions through the utilization of AI-enabled platforms, optimizing the service value by eliminating internet and phone searches as the app would do the work then send customers notifications when the best fare price is found. The second solution is the implementation of automated and personalized marketing material to maximize sales with the use of algorithms that can accurately recommend what type of flights a customer needs based on customer demographic, engagement, and search history. The last recommendation is the utilization of blockchains to enhance data security and customer privacy. Together these innovations have the potential to improve the customer ticketing experience, increase airline revenue, and improve operational efficiency.