



## Abstract

Analysis on Norwegian Cruise Line. The company has a “Free and Reduced Air Offer” which guarantees passengers a flight itinerary to their destination. As the promotion grew rapidly, they found themselves making decisions about internal structures changes, new teams, transferring responsibilities, etc. that led to an inefficient process with several non-value-added activities and. For the project, the team analyzed all teams involved in the booking of the promotion in order to deliver solutions that promote automation, organization and an improved simplified process.

## Introduction

Norwegian Cruise Line decided to implement a groundbreaking feature: the “Free & Reduced Air Offer”. The promotion promised to sort out all the flight scheduling, transportation between airport and cruise port, and anything related to the flight itineraries for the guests. Today, a fleet of 17 ships carry the promotion.

At that beginning period of the promotion, the Air & Sea Department was responsible for handling its entire booking and ticketing process. However, as the demand grew exponentially, the assigned number of agents working on the promotion fell short. Thus, the company decided that it would be financially smart to form a Department strictly dedicated to finding the most cost-effective tickets and itineraries for the guests, this way increasing the company’s profits - ideally. This is how the new Department, Revenue Air, became responsible for the final ticketing process of the promotion. With so much movement, internal structure changes, and transfer of responsibilities within Departments, the promotion’s booking and ticketing process never got clearly defined between the two teams.

This project will provide a process improvement plan that will highlight any non-value-added activities within the process, bottlenecks, and automation opportunities. By helping to streamline the process and separating responsibilities it will become clear where the process is lacking efficiency and will provide an effective solution that will benefit both the customer and the company.

## Methods | Design | Analysis

For the analysis of this problem and to successfully meet all the deliverables, the team needed to have a thorough understanding of the entire ticketing process - from the moment the guest requests a cruise with the air promotion, until the ticket is confirmed and sent to the guest. To achieve this, first-hand observations of what both departments require to proceed with the ticket purchase was carried out. All observations of the processes were represented in process maps done on Visio, which helped identify non-value-added activities and illustrate overlaps within the departments. Also, data regarding workload was collected from the different teams in order to be able to calculate the number of workers needed for each task.

The scope of the project included automation of certain tasks. So once all data was gathered, the team carefully analyzed the multiple systems used by the company in order to build a new model that would automate an important percentage of the full process.

The simplified version of the observed process flow under scrutiny goes as follows:



## Results

The team organized the flowcharts and identified where the non-value-added activities and bottlenecks were located. After, the team was able to simplify the process eliminating the above mentioned, establishing the ideal responsibilities of a new improved department and providing a new process flow for such department. In addition, with data provided by the company regarding the workload of each department, the team was able to determine the current workload and the distribution of such work through the different teams; proving inefficiencies in many areas. With this information, and comparing it to the new improved proposed department, a new workload was calculated taking into consideration the automation of the new process and the new team recommended. These calculations provided considerable reduction of labor, which benefits the company cost wise.

While analyzing the systems, tools and applications used in the company, the team was also able to create relationships and new rules for these systems to follow in order to have a more automated process.

Overall, the team provided the most cost-efficient and automated solution, one that also considered the quality assurance of the process – since this becomes vital to the delivery of optimal services to the clients.

## Conclusion

After profound analysis, the team was able to deliver the solutions intended as the main scope of the project and also included further valuable recommendations to the company. Some of the improvements included:

- Automation of process
- Balanced workload and improved worker allocation
- Removal of non-value-added activities and inefficient communications
- Establishment of an operations manual
- Improved process flow

## Acknowledgments

Special thanks to Norwegian Cruise Line for allowing us to carry this project by giving us total access and trust and providing full support and engagement from all stakeholders involved.

We would also like to thank the professors at the Industrial Engineering Department at the University of Miami for giving us, through our time at the university, the tools to excel as engineers.

