# Customer Segmentation for Sun Country Airlines

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**Overview:** Despite the ownership changes, bankruptcies, and intense competition, Sun Country Airlines have managed to survive and become profitable from 2009 onwards. The addition of *Michael Warnken* in leadership marked the start of a new era wherein SCA introduced many new strategies and improved the airline's situation. To take the airlines to the next level, we want to use data and analytics to understand their customers and build a business strategy.

**Analysis Framework:**

1. Understand transaction-level data provided by Sun Country Airlines for 1.52 million customers between January 2013 and December 2014.
2. Clean the data, and bring it to the customer level to create meaningful customer groups based on their characteristics like demographics, travel history, etc.
3. Recommend business strategies targeting identified groups to enhance SCA's position in the market and meet their expansion goals.

**Analysis Technique:**

Their key characteristics were derived from data to understand the customer base of Sun Country Airlines. These key features included demographics like gender and age group, spending patterns through the number of trips and total money spent, their preferred travel class, source of booking and behavior towards Ufly membership, rewards, and benefits. After studying and applying various clustering methods, the K-medoids clustering technique was finalized to segregate customers into 5 meaningful categories. The simplicity, low sensitivity towards outliers, and ability to incorporate continuous and categorical data and object-based results led to our decision to use this technique. Let's have a look at the 5 groups.

| Cluster | Gender | Age Group | Ufly Membership | Card Holder | Travel Frequency | Discount | Amount/ Trip ($) | % Class Upgrade | Booking Source |
|---------|--------|-----------|-----------------|-------------|------------------|----------|------------------|-----------------|----------------|
| 1 | Female | Senior (>55 years) | Standard | Yes | High (~5Trips) | High (2.6 trip) | $406.8 | 21% Trips | SCA website |
| 2 | Female | Adult (26-40 years) | Not Member | No | Low (~2 Trips) | Low (0.9 trip) | $283.0 | 6% Trips | Outside |
| 3 | Male | Senior (>55 years) | Standard | No | High (~5Trips) | High (2.4 trip) | $408.7 | 23% Trips | SCA website |
| 4 | Female | Child (<18 years) | Not member | No | Low (~2 Trips) | Medium (1.2 trip) | $335.0 | 6% Trips | SCA website |
| 5 | Male | Adult (26-40 years) | Not member | No | Low (~2 Trips) | Low (0.9 trip) | $324.9 | 7% Trips | Outside |

**Cluster Descriptions:**

**Cluster 1:** This cluster consists of senior (> 55 years) female travelers with standard Ufly membership and SCA cardholders. They are frequent (~ 5trips) and high spending travelers (~ $405/trip) that book tickets from other SCA websites. They have been offered discount coupons on more than half their trips and class upgrades on 21% trips. We have named this category as **"Loyal Senior Female Travelers"**. Below are suggestions to capitalize most from these customers and increase similar customers.
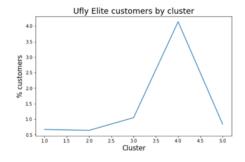
1. Customers in this cluster are loyal, SCA needs to promote the benefits of Ufly elite membership status so that these customers get excited about it. They can give 1-month free elite membership around winters to increase their number of trips.

2. For senior citizens, comfort of journey is the top priority. SCA should continue giving them class upgrades. They should also promote vacation packages because these customers will pay higher for a good experience.

**Cluster 2:** This group consists of adult females (26-40 years old) who are neither members of the Ufly Rewards program nor card holders. This group has the least amount spent per trip and are also least likely to book tickets in the first class (less than 5% probability). They are **"Budget Travelers''** who seek out a lot of discounts. On average, 40% of their trips were discounted. They also receive a low number of upgrades on their trips. They mostly book tickets not using the SCA website and rely on outside sources. This group is highly price conscious and doesn't seem to be attracted towards high class services, they are only focused towards prices and use outside sources to find the cheapest tickets and book them.

1. Sun Country can offer more discounts on their website to attract these budget travelers as they actively seek out discounts. By converting these travelers to book using their website, Sun Country will not only be able to capture more data about these customers to provide better targeted services to them in the future but also save on the commission they might be paying to outside distributors for these bookings.

2. Sun Country can also promote the Standard Ufly Rewards Membership to them in exchange for discount coupons. It will allow them to gain more loyalty from this group of customers, and the customers will be more inclined to purchase their tickets due to discounts and upgrade benefits.

**Cluster 3**: This group consists of senior males customers (more than 55 years old) with a standard membership, but no SCA cards. Generally, this category travels by coach class, and then gets upgraded as they have many trips with SCA. These customers get a decent number of discounts and they book through the SCA website. We have named this category **"Loyal Senior Male Travelers"** who travel a lot and have the most spendings. They are also familiar with SCA as they book directly through the company's website.

**1.** This category does not have an SCA card. It would be a good idea to promote it by offering card holders specific services such as priority check-in, comfort seats, complementary food and beverages and personal assistance for Senior customers.

2. Senior men going on vacation to warmer destinations can also be given special vouchers for experiences at their travel destinations, such as surfboarding, island-hopping tours, golf parks, etc. When they upgrade to an elite membership to incentivize them for upgrades. As this category uses SCA main website to book its flights, it would be great to display those deals on SCA website.



* Despite the loyalty of cluster 2 and 3, they aren't elite!

**Cluster 4:** This cluster consists of young (age below 17) female customers, not Ufly members nor cardholders. They usually travel in coach class with a low number of trips (2.29 times) and medium spend ($335.06/trip). These customers are getting great discounts of 53.28% and mainly belong to coach-class (90.15%), and book through the SCA website. We have named this category **"young, potential future customers".**

1. Children mostly fly with their parents, and thus, Sun Country Airline could provide the family seating on their website to motivate family customers.

2. Sun Country could enhance the loyalty of young customers by discounting school groups of becoming a membership, and also coach class tickets.

**Cluster 5:** This cluster consists of 5033 passengers, who are all Male. 26% of them are young adults (18-24 years old) and 96% of them are not UflyMember and cardholders. On average, they travel 2.36 times and each trip costs $767. These passengers don't often use discounts (only 0.97 times), and prefer to book the ticket via an outside website. They were not given discount coupons or first-class upgrades. We have named this category **"Students fresh users."**

1. SCA should maintain a good relationship with them, because they travel from home to school each semester. To be more specific, offer back-to-school packages (September and March traveling discounts) or vacation coupons (Winterbreak and Summerbreak promotion codes) for more Ufly Rewards miles earned.
2. SCA should propose referral coupons or single-time discounts on the outside websites, so passengers are likely to invite their peers (more first-time users) and book SCA from their website and increase brand awareness.

## General Recommendations:

1. **Focusing on the periods after the Christmas holidays:**

The ticket price is often skyrocketing for many people traveling during that time. Therefore, people like students who have flexibility would like to book the ticket at a relatively low price in the following month. Sun Country could target these potential customers by either providing a promotion code to motivate them or less strict conditions to become a cardholder of Sun Country Airline. For example, giving a 1-month free elite Ufly membership around winter will be a good strategy.

2. **Boosting the customers' booking rate on Sun Country Airlines:**

We observe from the data and clusters that many of their (potential) customers book tickets outside Sun Country's website. Sun Country Airlines could provide discounts on the first few rides or free bags on the trip booked from their website for better customer data management in the future.

3. **Seniors Travel Assistance programs:**

For seniors, comfort experience is more essential. Sun Country can offer priority check-in, complimentary food and beverages, and personal assistance, for them. Those going on vacation to warmer destinations can also be given special vouchers for experiences at their travel destinations, such as surfboarding, island-hopping tours, golf parks, etc., when they upgrade to an elite membership to incentivize them for upgrades.

4. **Social Media Promotion:**

To boost the purchasing rate of a certain location, Sun Country Airlines could have promotions on places with fewer booking rates on their social media by writing an article to exchange for the ticket, which could also become a marketing strategy to raise their popularity among the young generation.