Case Study: Caring For Frequent Flyers

Following is a problem-solving project carried out in a fictitious airline. Study the information provided in order to answer the multiple-choice questions on the test.

The airline had just recovered earlier in the year from a major public brouhaha over poor handling of a series of weather-related flight delays. The VP of Customer Care made sure all staff had gone through extensive training on the Customer Commitment initiative, which had included rules for communications with passengers about delays, and doubled the dollar amount for baggage liability.

Now there appeared to be another problem brewing with the frequent flyer program. The number of emails and phone calls received related to complaints about incorrect point counts had gone up five times in the past three months. Customer complaints indicated that the frequent flyer point count totals on the airline’s website was lower than it should be. The same point total was reported in monthly emails sent to members of the frequent flyer program.

The VP formed a team to investigate the problem. Team members included two representatives from IT (one who oversees the frequent flyer website and the other who was involved with the on-line flight reservation system), a person from the phone flight reservation call center, a person from the frequent flyer program management office, and a representative of the customer care staff, who was given the role of team leader.

First, the team flowcharted the process for tracking frequent flyer points. The process begins with an individual signing up as a frequent flyer (see Figure 1 and ends with recording and reporting frequent flyer award points. Points are awarded based on the number of miles flown, with a minimum of 500 points being awarded per flight leg. The points are accumulated in the frequent flyer database.

Figure 1 – Frequent Flyer Points Tracking Process

The team agreed that the most likely errors could include:

- Earned points were not accumulated to the right account
- The correct number of earned points were not credited
- Points used were deducted from the wrong account
- The wrong number of points used was deducted from the account
First, they decided to determine whether the problem was primarily due to the process of adding points to accounts or deleting points from accounts used for awards (such as flights, upgrades, merchandise). They did this by contacting approximately 30 customers who had complained, asking them whether or not they had used any points during the time period when they noticed the errors. The majority indicated they had not, so the team decided to focus on the adding points (accumulation) process.

The team went back and reviewed the flight records for 10 of the customer that complained, manually calculating the number of points that should have been accrued. They then reviewed the flyer’s point accumulation records in the frequent flyer database to compare actual versus calculated. The numbers checked out to be 100% accurate.

“Now how could that be?” asked one of the team members. “We’ve now proven that there’s no problem?”

“Let’s go back and do a logic tree on our initial cause list,” said another. Figure 2 was the result.

![Logic Tree for Major Cause Categories](image)

The team then realized that their initial data collection related to point usage would only have picked up problems with an incorrect deduction initiated by the flyer, but not deductions initiated by another flyer whose points were deducted from the complainants’ account. Their manual verification had confirmed that the addition process was working correctly.

“This leads us to one conclusion … points are being deducted from the wrong account,” said one team member. “This means that others’ accounts have more points than what they should, but folks aren’t complaining about that, so we weren’t getting information on all the symptoms of the problem.”
So how can points be deducted from the wrong account? The deduction process occurs when:

- Flyers make a flight award purchase, either on-line or through the phone reservation system
- Flyers use points with a partner organization (e.g., purchase a magazine subscription, make a charitable contribution)
- Flyers transfer points to other accounts (e.g., hotel partners) through online third-party point transfer organizations

The team then reviewed the accounts of the 30 customers who indicated they had not used points, and in fact found that points had been deducted from all their accounts. They used a Pareto diagram to determine deductions were typically in small amounts of 1000-5000 points, and all were transfers to one of five accounts outside the airline industry. And, the same transfer firm was involved in every one!

“We have some fraud here,” proclaimed one of the IT reps. “Let’s look at the mechanisms we have in place for these third-party transfers.”

The process involves an electronic request from a third-party organization. The request is checked to ensure that: 1) it is a valid account number, 2) the number of points requested is available in the account, and 3) the flyer’s name matches that of the electronic request.

“So if someone just finds out the names and frequent flyer numbers of folks who fly a lot, they can easily rip off their accounts through these third-party agents,” said the customer care rep. “And they can do this easily by just collecting boarding passes that people leave on the plane or throw away in the airport after the flight has ended. The boarding pass includes both their name and their frequent flyer number.”

“We need to either stop doing these transfers or increase the security controls on these third-party transfers,” said an IT rep. “Which do we want to do?”

“But wait,” said the call center rep. “All the problems are with one organization. Why don’t we contact them and have them do an investigation?”

“I agree we should contact them, but I believe we should add the requirement for the user to enter the frequent flyer’s account password. That would stop it dead,” said the IT rep.

“Let’s do both,” said the customer care rep. “We don’t have control over the external organization, but should let them know of what we’ve found, and what we plan to do to remedy if from our end. They’ll have to revise their user interface for it anyway. Then let’s add the requirement from our end for the password to be ported across with the other two pieces of data. And, since the problem was due to a lack of adequate security on our end, let’s scan the database for all transactions from this agency, and if looks like
a fraudulent one, credit our frequent flyers with the number of points they lost. I'll send out a notice to them for what we plan to do."

Subsequent to the change in security, the number of complaints about frequent flyer points management dropped like a rock! The VP was very pleased, and placed a note of recommendation on the personnel files for all who were involved in the project.