

Getting to Know Your Digital-Age Customers: An Airline Industry Case Study



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Abstract

Your unhappiest customers are your greatest source of learning, especially on social media. This article outlines a real-world case study of one of Europe's leading airlines, which was forced to improve customer service after a major incident impacting the brand.

Introduction

Executive management was shaken up by one customer's tweet. That unhappy customer began by simply writing "Don't fly [@thisairline] ... customer service is horrendous." However, he went on to spend \$1,000 to promote his tweet until it went viral in New York and the United Kingdom, two major markets for the airline. The reason? He was unhappy his father's luggage had been misplaced and that the airline's customer service did not respond immediately to his complaint on their Twitter page.

As head of customer service, I was familiar with customer complaints—from delayed flights to cleanliness issues in aircraft toilets. However, this incident was a game changer; its impact and visibility had not been seen before. In addition to the unprecedented negative publicity on social media, television stations and newspapers across the world reported it. In the aftermath, the assignment from the CEO was loud and clear—change the way we use social media.

The Business Problem

For all intents and purposes, the customer's effort succeeded. The airline had to publicly apologize for its delay in responding to the incident and ensured subsequently

that his bag was delivered. Unfortunately, the story had already been shared by dozens of media outlets, doing damage to the airline's brand.

I attended a workshop organized by the CIO that included the head of IT and business services, a leadership team from CRM and finance, an innovation evangelist and technology advisor from our IT partner, and a few of the brightest BI solution architects from our firm. In the context of the incident, the question was, "Is social media a problem for us now?" Did the customer service representative make an error? How could the customer service team reach out to various blogs, websites, and social media platforms to get the current pulse of the customer? Above all, as head of the customer service team, what would I propose to solve the problem?

Our IT partner took charge of the meeting and started a presentation with a holistic question: Do we know our digital-age customers?

They listed what we did know about these customers:

- They check their social media accounts more than their email accounts in a day
- They want an immediate response; if any website page takes more than a few seconds to load, they won't wait
- They expect the same response time from the customer service department
- They have no patience for promotions or offers that don't target them directly, especially when they've provided personal information
- They use smartphones to surf various online reviews and likely know as much as we do about our business's products and services, as well as our strengths and weaknesses
- When interaction moves between channels (chat, Facebook, call center, etc.), they expect the processes and policies to be consistent across these channels and for each one to pick up where the other left off

The unhappy customer began by simply writing "Don't fly [@thisairline] ... customer service is horrendous."

Rudimentary analysis of popular sites such as Twitter and Facebook confirmed our understanding. It was evident that there was now a need to understand customer feedback and comments on various social platforms to ascertain customer sentiment toward our services.

This information, if analyzed correctly and delivered on time, would have made a considerable difference in avoiding damage to the airline's brand. However, the mechanism to scan, filter, understand, and analyze this vast store of data on the Internet was beyond our understanding and definitely required a stronger technology backbone to decode this mammoth data into tangible, comprehensive, and consumable data sets.

The Solution

It was clear in the first few minutes of the workshop that there should be a technology solution to the problem. After brainstorming with a team from a diverse technical and functional background, along with the airline industry knowledge and experience our IT partner brought, we had answers to a few important questions by the end of the workshop.

How Does the Airline Industry Use Social Media?

Airlines across the globe leverage social media to create buzz around products and services, respond to a crisis or complaint, generate revenue, and foster loyalty among customers.

Buzz: Adopting Facebook, Twitter, YouTube, and other social media platforms allows the business to reach out to a large number of current and potential customers.

Crisis and complaints: Crisis response on social media can include updating customers about situations that may directly or indirectly affect their flight, responding to

their inquiries in real time, or assuring compensation if they are negatively affected by issues that arise.

Revenue: Companies can generate faster and greater revenues by promoting special deals via social media platforms.

Loyalty: Loyalty among customers can be fostered by participation in discussions and constant interactions to allow customers to feel personally connected to the brand and relate positively to it.

Social media has quickly become the medium of choice for registering complaints and grievances.

These use cases illustrate how analytics contributed to each of the four business goals.

Use Case One: Brand monitoring and near-real-time alerts
Social media has quickly become the medium of choice for registering complaints and grievances, as consumers vent their frustrations via means inherently designed to give them a voice.

Customers know that social media networks can generate more attention and faster responses than contacting a call center. Therefore, it is essential for airlines to act swiftly and perform any necessary damage control before negative campaigns are detected on social media.

For this use case, the business drivers were to measure brand performance, identify brand advocates, and improve customer service on social media, as well as plan swift and timely damage control activities in case of negative campaigns.

The proposed solution used automated monitoring of blogs, media websites, and social media platforms at specified intervals. The results were then compared with historical brand sentiment statistics. Triggers were created to alert senior management in near real time if there was

significant change in brand perception within a short period so that corrective actions could be taken.

In addition, regular trend reports about brand perception were generated and would be used for service improvements as well as for targeted advertisements on social media platforms.

Use Case Two: Social media dashboard

Once the system for monitoring and alerts was established, the team set about creating a dashboard to relay the information.

There are millions of fans following social media sites and providing their responses to flight, products and services, marketing campaigns, and brand perceptions. A social media dashboard uses this information to provide quick and valuable input to various marketing, advertisement, and operations teams to improve, enhance, and optimize their respective areas.

Analytics from social media can also help identify customer perceptions of a competitor's offerings, their propensity to switch, and general trends and thoughts about other popular requests.

Use Case Three: Campaign designs and targeted marketing

Airlines have large customer bases following them on Facebook where they conduct campaign marketing. Each campaign receives likes and comments from existing and potential customers. Customer's public profiles and preferences can be used in campaign designs and for targeted marketing.

The key business drivers for this use case were to reach beyond existing customers and traditional technology audiences and target customers by providing relevant offers by connecting CRM with social data from social collaboration channels.

In addition, it would help the marketing department to design and enhance effective marketing campaigns based on the quantitative and qualitative feedback received about the campaign.

Solution Components

As part of our solution, we decided to:

- Collect users' public profile information
- Collect users' "likes" and comments about specific marketing campaigns on the airline's Facebook page
- Identify existing and potential customers by running the information through our current CRM system
- Send targeted emails or reach out on customers' social profiles with customized offers based on customers comments, likes, and preferences
- Pass the results of our sentiment analysis on comments to our campaign design team

In addition, our campaign design team would modify existing campaigns or design new campaigns based on our sentiment analysis.

The Project

There were three main components to our project: determining our measures of success, selecting the most appropriate architecture, and examining the challenges and opportunities this project would present.

Measures of Success

In order to measure the success of our project, we had to develop key performance indicators. We focused first on KPIs for social media that would spur innovation, measure dialogue with our customers, measure advocacy, and measure our customer support.

The team collaborated with the finance, customer support, sales, and marketing departments and developed KPIs (including detailed definitions) to help us analyze social media and get meaningful insights to various departments within our organization.

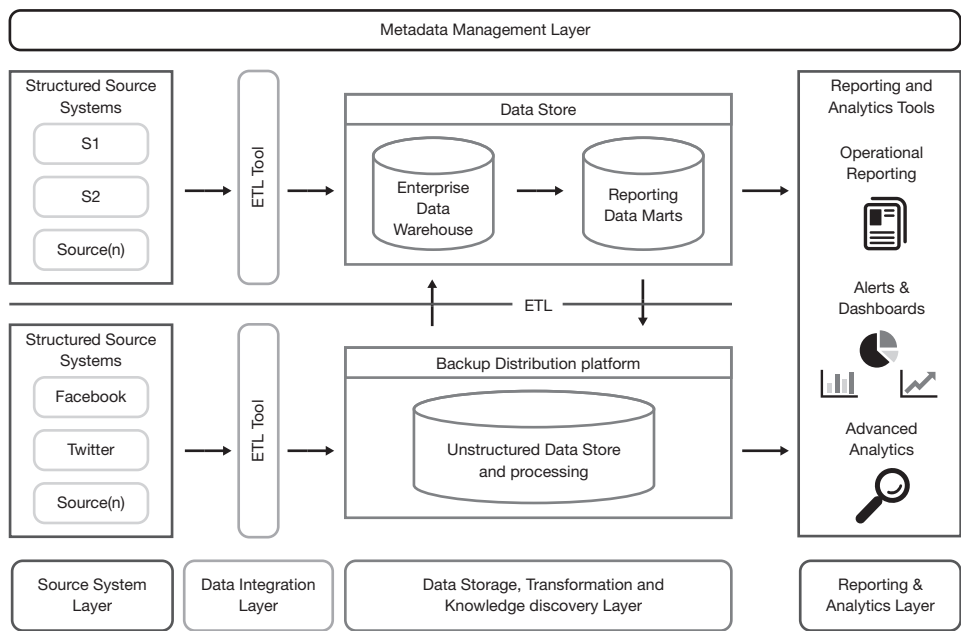
Architecture Options

The team addressed the challenging task of understanding the latest technology trends in the market, analyzing the available technologies, and suggesting architecture options tailored to our requirements.

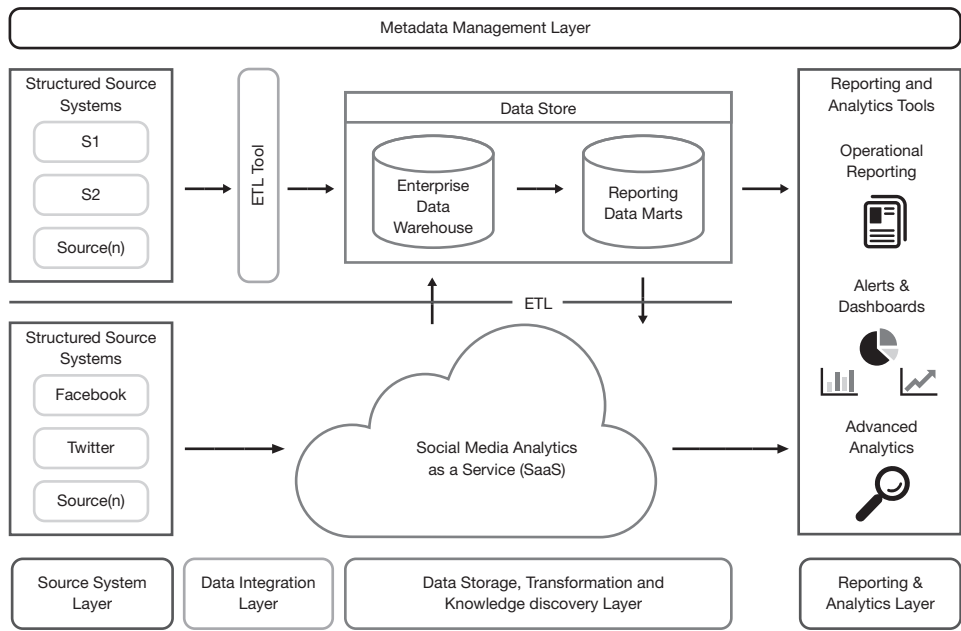
We considered the best architectural practices to evaluate our options based on how they were used in our enterprise and to learn from similar assignments. At a high level, two architecture options were proposed and we used comparative analysis of the various architecture principles to help us make a decision.

KPIS TO MEASURE HOW WE SPURRED INNOVATION	KPIS FOR MEASURING DIALOGUE	KPIS FOR MEASURING ADVOCACY	KPIS FOR MEASURING CUSTOMER SUPPORT
Topic trends measure key brand/product/service topics identified by monitoring social media conversations	Share of voice indicates how a brand stacks up compared to its competitors in the airline industry	Active advocates measures the number of individuals generating positive sentiment over a given time frame	Resolution rate is the percentage of customer service inquiries resolved satisfactorily using social media channels
Sentiment ratio measures the positive, neutral, and negative brand mentions about specific products or services over a given time period	Audience engagement shows the amount of the audience engaged with the airline in comparison to its total viewership	Advocate influence indicates a unique advocate's influence across one or more social media channels	Satisfaction score indicates the relative satisfaction of customers by dividing positive customer feedback by all customer feedback collected using airline's social media channels
Idea impact measures the rate of interaction, engagement, and positive sentiment generated from a new product or service idea	Conversation reach reveals the number of unique visitors who participate in a specific brand/issue/topic conversation across one or more social media channels	Advocacy impact measures the direct or indirect contributions of advocacy on conversions	

Table 1: Initial metrics for project success.



Option 1: In-house architecture



Option 2: Cloud-based architecture.

Figure 1: Two proposed solutions

Option 1: An in-house solution using an on-premises Hadoop cluster. The first architecture option we considered was to set up an on-premise Hadoop distribution platform that included integration, processing, and transformation of social media data with the help of an ETL tool using a social media connector. The architecture diagram in Figure 1 depicts how a Hadoop platform would complement our organization's existing data warehouse.

Option 2: A cloud-based solution focusing on out-of-the-box integration and analytics. The second architecture option we considered was to use some of the free third-party social media analytics services and commercially available social media analytics offerings out-of-the-box and in the cloud. The team decided to explore free third-party software offerings from service providers and experiment with trials of commercially available social media analytics solutions.

The Best-Fit Architecture

The team evaluated and compared platform options against architecture principles such as availability, reliability, maintainability, scalability, ease of integration, time to market, and total cost of ownership. We also explored some future trends about how a Hadoop-based analytics platform could be reused to complement the data warehouse and positively change the way we gain insight and the way we make decisions.

However, when the team carried out its detailed evaluation, we soon realized that time-to-market and development cost to build such an analytics platform would exceed time and budget available, so we chose a commercially available social media analytics service on a cloud platform.

Project Challenges

We were into the last hour of our workshop and most of us were thinking that social media analysis was a new paradigm for our organization. What were the typical challenges that we were likely to face? The team was quick to respond:

Know your customer (KYC): Postal addresses and telephone numbers have been traditional attributes of a typical KYC form. Getting the social handle of customers when they sign up with airlines is challenging given privacy concerns.

Unstructured data analysis: Social media monitoring and analysis has gone beyond counting to evaluating the content of social messages. This lets an enterprise identify topics and report on positive or negative attitudes. Automated content analysis relies on semantic techniques to make sense of natural language. These systems already do a good job with some tasks, such as extracting keywords to identify topics and products mentioned. More subtle interpretations, such as understanding positive or negative sentiments, are still problematic.

Case management: Complaint resolution and customer service on airline's social media pages such as Twitter and Facebook has become a trend. These interactions could also be managed through a conventional customer service system, but the public nature of social interactions means additional supervision is needed to protect the airline's image. Social media cases also extend beyond service interactions to include sales conversations and conversations with influencers, such as the press, bloggers, and expert users.

Multiple identities: Most passengers maintain separate identities for different social media systems as well as other channels (such as email, telephone, and postal address). Even though major vendors (including Facebook and Google) offer unified sign-in services, substantial fragmentation is likely to continue. To capture and cross-reference individual identities across platforms and integrate them with CRM remains a daunting task.

Acceptance of social media analytics in decision making: Most airlines use real-time social media analytics to tackle operational challenges. However, senior management was unable to integrate data gathering into tactical and strategic decision making. Incorporating real-time analytics just isn't likely or even possible with their existing bureaucracy. Trust and a comfort level in social media

data (compared to traditional in-house data sources) remains a problem area.

Conclusion

A good plan today is always better than a perfect plan tomorrow. This could not have been more accurate for social media analytics adoption for this organization. Our team comprehensively laid out airline industry trends, KPIs, use cases, architecture options, and challenges. We were convinced that the application of social media analysis in our organization and its corresponding technological options would make a positive difference. Customer service would definitely be different with better insights into customer sentiment, market promotion response, product development, and targeted marketing, thus improving the decision-making process based on business analytics. Above all, our project's actions would elevate customer trust, confidence, and satisfaction with our airline. ■