



TITANDATA

Case Study

How a Leading Retailer Used NLP and Text Mining to Improve Fulfillment and Customer Satisfaction



Background

The client is a Fortune 500 company and one of the biggest retailers of consumer electronics in the United States.

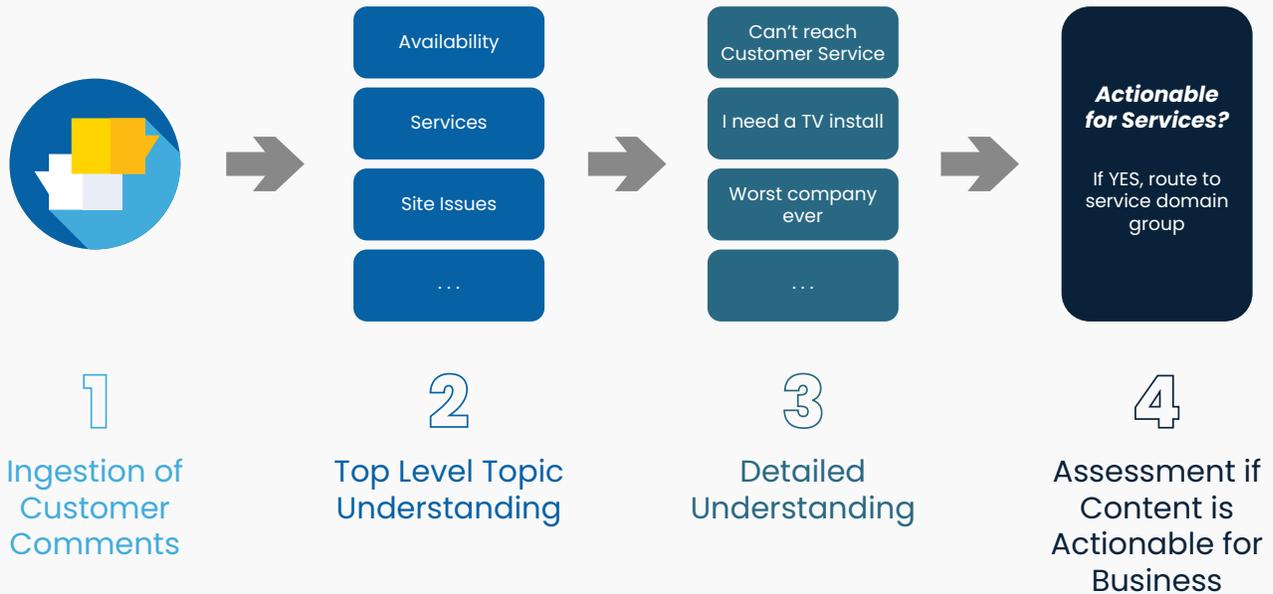
The client regularly receives customer feedback via survey forms, its web site, and various social media channels. Recognizing the untapped value behind this customer feedback, the client wanted to see if there was a way to parse their sentiments at scale in order to take action by proactively addressing the issues they bring up.



The Solution

Titan Data leveraged its expertise in Text Mining, Machine Learning (ML) and Natural Language Processing (NLP) to systematically analyze and monitor customer comments to automatically detect:

- Opportunities to improve customer service
- Opportunities to detect potential web site issues
- Opportunities to detect shipping and fulfillment issues



In order to do so, the Titan Data team performed the following tasks:

1. Leveraged the client's data to build models for detecting and tagging business-relevant entities and relationships in customer comments.
2. Worked with business domain groups to isolate and define what insights are helpful and actionable (e.g. assortment issue in a region).
3. Used Machine Learning and NLP to isolate data and train models to detect issues that are of interest to the business.
4. Leveraged additional customer information to provide added context in interpreting comments (e.g. what did they do on the web site).
5. Leveraged the resulting capabilities to provide ongoing insights about what customers are discussing.



Business Benefits

By leveraging NLP, ML, and Text Mining to analyze and monitor customer sentiments coming from multiple sources — website, surveys, and social media — the client was able to identify and resolve issues that are actionable and relevant to the business. This capability allowed them to:

- Save time and costs by focusing efforts on relevant and distilled feedback
- Improve customer satisfaction by responding and acting on their comments and suggestions
- Improve fulfillment via “anticipatory shipping” where they ship products to warehouses in advance based on customer behavior