# Data trials and triumphs

**This reading focuses on why accurate interpretation of data is key to data-driven decisions. You have been learning why data is such a powerful business tool and how data analysts help their companies make data-driven decisions for great results. As a quick reminder, the goal of all data analysts is to use data to draw accurate conclusions and make good recommendations. That all starts with having complete, correct, and relevant data.**

**But keep in mind, it is possible to have solid data and still make the wrong choices. It is up to data analysts to interpret the data accurately.**

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**When data is interpreted incorrectly, it can lead to huge losses. Consider the examples below.**

## Coke launch failure

**In 1985, New Coke was launched, replacing the classic Coke formula. The company had done taste tests with 200,000 people and found that test subjects preferred the taste of New Coke over Pepsi, which had become a tough competitor. Based on this data alone, classic Coke was taken off the market and replaced with New Coke. This was seen as the solution to take back the market share that had been lost to Pepsi.**

**But as it turns out, New Coke was a massive flop and the company ended up losing tens of millions of dollars. How could this have happened with data that seemed correct? It is because the data wasn’t complete, which made it inaccurate. The quantitative data wasn’t paired with qualitative data that would show the company how customers would feel about New Coke replacing classic Coke. The company’s decision to retire classic Coke was a data-driven decision based on incomplete data.**

## Mars orbiter loss

**In 1999, NASA lost the $125 million Mars Climate Orbiter, even though it had good data. The spacecraft burned to pieces because of poor collaboration and communication. The Orbiter’s navigation team was using the SI or metric system (newtons) for their force calculations, but the engineers who built the spacecraft were using the British Imperial system (pounds) for their force calculations.**

**No one realized a problem even existed until the Orbiter burst into flames in the Martian atmosphere. Later, a NASA review board investigating the root cause of the problem figured out that the issue was isolated to the software that controlled the thrusters. One program calculated the thrusters’ force in pounds; another program looking at the data assumed it was in newtons. The software controllers were making data-driven decisions to adjust the thrust based on 100% accurate data, but these decisions were wrong because of inaccurate assumptions when interpreting it.**

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## When accurate data and success meet

**Now, let’s hear some good news. The following are two real-life examples of businesses using data to do some really impressive things.**

### Video streaming success

**Video-streaming services sometimes collect data on customer preferences. They use this data to create recommendations for what kinds of movies and TV shows people will most enjoy. More and more, these methods turn out to be highly successful at predicting what customers want to watch. Taking that a step further, a lot of streaming services even use customer data to decide what content to create. This is a win-win because people get content they like, and the streaming services profit from a boost in viewership and subscription revenues.**

### Fast food on the go

**Some fast-food companies are combining the power of a mobile app with consumer data. After downloading the fast-food chain’s app, customers are able to order food and pay right on their phones. Then, for an even better experience, a fast-food chain can use data they have collected from previous orders to send those customers on-the-spot recommendations for items to add to their order, prompt them to repeat a previous order, or encourage loyalty with exclusive deals for future orders. The data collected is ongoing information about their customers; companies can develop more effective and personalized promotions to keep customers coming back.**

## K​ey skills for triumphant results

**As a data analyst, your own skills and knowledge will be the most important part of any analysis project. It is important for you to keep a data-driven mindset, ask lots of questions, experiment with many different possibilities, and use both logic and creativity along the way. You will then be prepared to interpret your data with the highest levels of care and accuracy.**