



How To Make Better Business Decisions Using Data

(without the high cost and
slow implementation)

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If you are not growing, you are dying.

- Tony Robbins

Data analytics is one of the most rapidly growing fields across all industries thanks to advances in technology and the increased availability of data. According to the International Institute for Analytics, by 2020 businesses using data will see \$430 billion in productivity benefits over competitors who are not using data and it continues to gain strength as a differentiator. Not every business, however, has the resources to hire a full-time data analytics team.

So how can small businesses get a quality data analytics solution without breaking the bank?

Part 1 – Data Analytics: Human vs. Machine

How big data, data science, business intelligence, and artificial intelligence all fit together

BIG DATA

A large chunk of raw data/information collected from inside and outside of one's company (consumer buying habits, feedback, digital usage, etc.).

ARTIFICIAL INTELLIGENCE (A.I.)

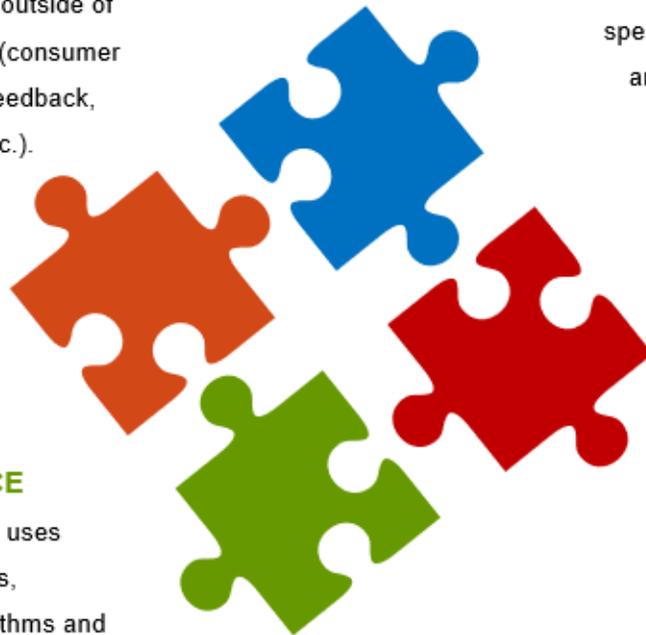
A computer system able to perform tasks that normally require human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages (Siri, Alexa, Google AI, Machine Learning, etc.).

DATA SCIENCE

A broad field that uses scientific methods, processes, algorithms and systems to extract meaningful information from data.

BUSINESS INTELLIGENCE (B.I.)

A variety of software applications used to analyze an organization's raw data and deliver business information to support decision making process (dashboards, reporting, etc.).



Data allows companies to look at performance through a subjective, fact-driven lens rather than an objective, emotionally-driven one. With analytics, we can uncover trends and insights that allow businesses to make decisions that will impact future performance. Data and analytics allow companies to work more effectively, make smarter business decisions, reduce costs, increase profits, and create happier customers.

Business Intelligence (BI) technologies include data mining, online analytical processing, and business reporting. Most businesses use BI platforms for real-time reporting, visualization dashboards, business performance tracking, and identifying insights through quantitative analysis.

Artificial intelligence (AI) is becoming increasingly popular as companies are gathering more data today than ever before, while more powerful and affordable computing and data storage options due to technological advances have made AI an increasingly accessible option for companies to use in analyzing their data. AI can process mass quantities of data that would take a human a much longer time to process.

Machine learning is a branch of artificial intelligence that automates analytical model building, based on the idea that machines can learn from data, identify patterns, and make decisions with limited human interaction. For businesses, this can mean faster, more accurate data analysis results and increased identification of profitable opportunities as well as limit exposure to underperforming activities or losses that are otherwise difficult or impossible to see.

Most industries with large amounts of data have recognized the value of machine learning and are introducing it into their businesses. For example, financial services businesses use machine learning technology to prevent fraud and identify investment opportunities. Health care businesses use this technology to identify red flags that could lead to improved diagnoses and treatment in patients. Retail websites use machine learning to analyze a customer's buying history and recommend items they might like.

81% of Marketers Expect the Majority of Their Decisions Will Be Data-Driven by 2020; 76% Say That's Already the Case*.

*According to Gartner Research, July 2018

Part 2 – What Big Companies Are Doing With Data

Why data-driven companies have outperformed their competition

The number of companies that are embracing data, analytics, and artificial intelligence is increasing significantly each year, and it is estimated that companies who actively use data to make decisions have 50% higher growth rates compared to those who do not. There is no argument that companies who utilize data analytics and artificial intelligence have an advantage over their competitors. So what are large companies doing with data?

1

Improve Customer Experience. By analyzing historical trends and predicting future patterns, companies can staff appropriately to reduce wait times, offer new products that customers want, measure satisfaction, and offer incentives to improve customer loyalty. Companies such as Starbucks allow customers to pre-order drinks with their app. They collect customers' habits and buying preferences to offer relevant discounts to influence their purchasing decisions. Chatbots and other forms of AI-based communication allow companies to provide 24/7 customer service.

2

Grow Revenue and Profits. Companies use data analytics to segment their customers and create key personas based on customer demographics and psychographics. These insights would allow companies to deliver to targeted customer segments with customized display pop-up ads, emails, and other relevant marketing messages at the right time using the most effective media. These techniques streamline marketing efforts and significantly increase return-on-investment. Companies also use data to measure profitability by product lines, markets, strategic customers, optimize inventory, and identify new opportunities.

3

Increase in Efficiency. Data can help companies understand where processes can be streamlined, where productivity can be increased, and how best to market efficiently. Real-time reporting through visual dashboards allows companies to see how the business is performing at any moment so they can adjust directions as needed. Forecasting tools and predictive models can aid in understanding what is likely to happen in the future. Besides using machine learning algorithms to improve revenue and profits, it can also help companies hire smarter by recruiting the most qualified candidates who are more likely to stay with the company long-term.

Real-Life Examples



Amazon is a great example of a company that has embraced cutting edge technology to analyze and make use of the massive amounts of customer data they have. By using machine learning, Amazon has mastered supply chain optimization, price optimization, and fraud detection. The company also uses predictive analytics for targeted marketing to increase customer satisfaction and build company loyalty. This has allowed them to build an empire that results in providing goods faster and cheaper than their competitors while also providing exceptional customer service.



Google is another company that has emerged as a big data expert. In fact, big data innovation is the core of their business. For instance, by using many different big data techniques, they can sift through millions of websites and petabytes of data to return correct answers within milliseconds. Google's data mining strategy and targeted advertising have also been pivotal to their success.



Another company leading the way in big data analytics and artificial intelligence is Netflix. Netflix has a user base of approximately 99 million people, providing the company with enormous amounts of behavioral data that data scientists analyze to predict the kind of content that specific users might like. The recommendation system that Netflix built from these algorithms not only sets them apart from competitors like Amazon Prime Video, but it has also allowed them to predict the success of their original production shows and movies.

Data-driven companies continually outperform their competitors because they are able to predict consumer behavior and identify problems in real-time. By anticipating how much customers will spend, when they will spend it, and being able to influence what they purchase, companies can increase efficiency, save money, and increase revenue significantly. In addition, by detecting problems such as fraud the instant it happens, companies are able to prevent loss of revenue.

Part 3 – How Can Small Businesses Become Data-Driven?

What aren't all companies incorporating data and analytics into their business?



*2019 Big Data and AI Executive Survey (Harvard Business Review)

Main reasons why big companies failed to become data-driven decision organizations:

- ✓ The pursuit of short-term financial goals pushes longer-term objectives like data to the back burner.
- ✓ Moving to a data-driven culture requires a shift in mindset across the entire company.
- ✓ Lack of clarity and money to implement a data-driven culture.

What can small businesses do to gain a competitive edge using data analytics?

In the past, only companies with a big budget, a full staff of data scientists, and IT developers can implement a data-driven decision-making strategy. In recent years, technology has advanced significantly and today small businesses can leverage the same tools and expertise as the big companies to gain insights from data at a fraction of the cost.

- ✚ Before getting started in the data journey, the first step is to **obtain clarity on the future direction** of the business. The organization needs to be crystal clear on what they want to achieve in one year, three years, and longer term. This is the most important step in building a data foundation that can accommodate future growth.
- ✚ Second, **assess the current state** of the organization by conducting a strengths, weaknesses, opportunities, and threats (SWOT) analysis. The analysis should evaluate how your company gets known (brand messaging), how you get found (marketing), how you get paid (sales), how you build your business (operations), and how you perform (talent optimization).



- ✚ Third, **develop a strategic plan and a road map** to close the gap from where your company is today and where you want to be in the future. Determine which insights that you will need to have in order to make informed business decisions. Rank the importance of these insights and estimate the completion dates that align with the strategy's timeline.
- ✚ Fourth, **create a data strategy** to acquire the needed insights to support the strategic plan. It is important to start small to avoid wasted resource and implementation failure. Begin with analyzing the data that you already have from clients, end users, partners, and free public data using available tools such as Excel, Access, and Power BI. Then determine which other data that you may need to purchase from external sources and whether a new business intelligence tool is needed to accelerate the process.

A Return-on-Investment (ROI) analysis should be completed before any investment is made.

About Us

Our team at Optimal Impact LLC is comprised of business strategists, data scientists, and business intelligence experts who are skilled in helping businesses accelerate growth and profits. We utilize data science, business intelligence solutions, and industry best practices to help companies achieve their goals as quickly as possible and at a fraction of a full-time executive and team's cost.

Through data and analytics, we provide decision makers with accurate and actionable insights to make better business decisions. With business intelligence solutions, we visualize and translate key business information in real time to increase productivity. Our financial modeling helps companies determine the best strategy to achieve their business goals. And our performance management expertise assists the leadership team with the transformation of their people, technology, and process to increase speed, quality, flexibility, and dependability across the organizations.

To discuss how Optimal Impact LLC can help you take your business to the next level, contact us today!



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