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Analysis

To Improve Business Performance, Put the Decision First

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Biography

With more than 20 years of diverse management experience, Dr Stuart Wells is a software industry veteran with a proven ability to catalyze and commercialize innovative technologies. At FICO (www.fico.com), he is responsible for leading the global product and technology organization.

Prior to his appointment as chief product and technology officer, he spent two years at FICO consulting on a range of projects, including leading cross-functional planning for the launch of enterprise solutions in the areas of fraud management, debt management and originations. He has also held senior leadership roles at Sun Microsystems and Avaya.

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Paper type Research, Case studies

Abstract

Data analytics is a quintessential business matter. That means the CEO and other top executives must be able to clearly articulate its purpose and then translate it into action. But many organizations are overwhelmed by the volume of data available to them. When it comes to transforming raw data and analytics into meaningful competitive advantage, more than 70% of enterprises say they struggle to achieve consistently positive results, despite investing more and more to build, maintain, and analyze ever larger data repositories. So, how can organizations harness the full power and potential of data to make better decisions and boost their market position? The answer is by starting with a focus on the decisions, not the data. Your goal, after all, is not to amass data – it's to make smarter decisions.

Introduction

It has been estimated that the average adult makes around 35,000 decisions every day[1]. For business leaders, many of these decisions will help to shape the future of their organizations. Hunches may be good enough, sometimes, but for businesses, which need to innovate to survive in today's economy, decisions must be based on quality data.

Unfortunately, many organizations are overwhelmed by the volume of data available to them. When it comes to transforming raw data and analytics into

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meaningful competitive advantage, more than 70% of enterprises say they struggle to achieve consistently positive results, despite investing more and more to build, maintain, and analyze ever larger data repositories[2].

So, how can organizations harness the full power and potential of data to make better decisions and boost their market position? The answer is by starting with a focus on the decisions, not the data. Your goal, after all, is not to amass data – it's to make smarter decisions.

In a data-first approach, the focus is primarily on collecting, managing and analyzing data, and then trying to figure out how it can bring value to the business. A decision-first approach defines the business objective first, builds the decision model to achieve it, and identifies the most relevant and predictive data to inform the model. This is a quicker path to value, because it's based on the results you're trying to achieve.

A best practice for deciding

FICO has developed a best practice for helping businesses becoming decision first. FICO's methodology works in a range of business contexts and, importantly, includes adequate time for stakeholders to take stock – to truly think about their critical decisions first – before moving forward with data-driven actions or strategies.

The methodology can be boiled down to six key steps:

1. **Codify** the decision process and domain expertise, so both can be easily examined, repeated and shared.

2. **Record** the decision, and the factors and data that led to it.

3. **Model** the data available to create predictive analytics that can be applied to decisions in real time.

4. **Optimize** the decision strategy, using prescriptive analytics aimed at delivering specific business results.

5. **Adapt** models so they can be applied to multiple decision scenarios.

6. **Improve** decisions by measuring results, evaluating successes (including the use of champion/challenger testing to compare accepted processes against alternatives), and optimizing further.

With a clear framework in place it also becomes easier for leaders to gather input from stakeholders at each stage. Considering every perspective in this way is not only good management practice, it minimizes the risk of important factors being missed or overlooked.

Analytics in action

Analytics are a vital part of the decision-first approach, but many firms struggle to get from analytic insights to better results. While 73% of enterprise architects

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aspire to make their firms data-driven, only 29% say they are good at translating analytics into business or customer action[3]. Considering it is the action and not the analysis that creates competitive advantage, this is clearly not good enough.

Some FICO customers have proven that a decision-first strategy leads to great results. The most advanced firms are using optimization analytics to improve results, and the companies in the following examples have all been honoured with FICO Decisions Awards for their optimization initiatives. They illustrate the business improvement you can achieve when you put analytics into action.

Case study – Toyota Financial Services: Improving customer outcomes

Through its Collections Treatment Optimization (CTO) program, Toyota Financial Services has demonstrated how enhanced analytics can save a substantial sum of money, while also helping more than 6,000 customers avoid car repossession and stay on the roads. A further 50,000 customers have been prevented from reaching a stage of delinquency that would affect their credit.

Jim Bander, National Manager for Decision Science at Toyota Financial Services, explained how the strategy has created a win-win scenario: “Working with delinquent customers to keep them in their cars while working out payment options has helped Toyota avoid millions of dollars in losses. It’s a win for our customers, and a win for Toyota. Furthermore, it reduced our operating expense ratio by allowing Toyota to grow our portfolio by roughly nine percent, without adding collections headcount. This has also enabled us to tie future lending decisions to our collections abilities – putting more customers behind the wheel of a Toyota.”

Using FICO® Xpress Optimioration Suite[4] and FICO® Model Builder[5], Toyota Financial Services was able to bring statistical modelling, forecasting, predictive modelling, and optimization into a single framework that allows the rapid simulation of multiple scenarios. From these different scenarios, the optimal collection strategy is then deployed into production. Customers are divided into micro-segments based on risk to ensure that collection treatments are delivered in a personal manner, ensuring each customer feels they are being treated as an individual.

Case study – Markedslabben: Renewable energy innovators

One of the biggest challenges related to wind farms is arranging the layout of wind turbines to maximize wind energy output. This is a complex problem that the industry has been struggling to get to grips with for years; no software has previously managed to factor load constraints into the optimization process. The potential rewards of getting this right, however, are significant: improving turbine layouts can increase energy yields by up to 5%, an important incentive for manufacturers pitching for contracts.

A new wind farm layout optimization algorithm called WindFarmDesigns was recently developed by the Norwegian firm, Markedslabben, using FICO® Xpress Optimization Suite. The site is able to optimize the balance between energy yields and load constraints by positioning turbines on a site using FICO technology. API availability facilitates integration with customers’ tools and workflows and allows easy integration with third party software. This technology is used by Markedslabben to target multiple customer segments, giving the company greater flexibility while boosting profitability. Furthermore, if all new wind farm projects were optimized using this algorithm, CO_2 emissions would be reduced by 2-5 million metric tons per year, assuming wind power replaces coal.

Klaus Vogstad, owner of Markedslabben, said: “We are proud to offer a solution that optimizes wind power projects and makes them more profitable, which over time should support increased investments in wind power parks, thus making the world a greener place. The FICO Xpress Optimization Suite gave us the tools needed to solve this problem.”

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Case study – Southwest: Building a sustainable business

In the highly competitive airline industry (where there have been several recent, high-profile bankruptcies), Southwest Airlines has sustained 41 straight years of profitability. The company now has a fleet of over 600 planes that make more than 3,500 daily flights to 93 destinations, carrying over 100 million passengers a year. Over 45,000 employees working around the clock make all this happen, but they rely on technology to optimize their decisions and help them to streamline processes.

To manage the demands of their growing infrastructure in an intelligent way, Southwest moved away from manual processes wherever it could with the creation of an optimization team. Its role is to explore ways to keep expenses down, maximize customer satisfaction, and provide employees with opportunities to be engaged and feel valued. For Southwest and its market position, it was a win-win scenario, aligning with the company's financial plan, while simultaneously improving the company's brand image.

Rusty Burlingame, Senior Operations Research Developer at Southwest Airlines, said: "The FICO Xpress Optimization Suite underlies some of the biggest, most expensive problems that we solve at the airline. There are so many opportunities for optimization. We have been able to break into crew planning and flight planning, fuel purchasing, gate assignment, ground ops assignment and provisioning the aircraft."

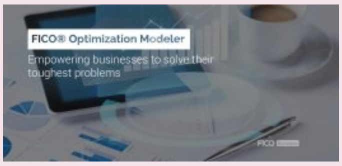
Case study – Česká Spořitelna Bank: Improving business outcomes

Česká Spořitelna, the largest Czech retail bank and a subsidiary of Austria's Erste Bank Group, is using FICO optimization tools and methodologies to combat aggressive pricing from competitors and protect the bank's market share.

"We wanted to be more competitive without destroying our loans' profitability. When the strategy went live, it outperformed our expectations." said Zuzana Sloukova, who leads the optimization, reporting and analysis team for Retail Risk at the bank.

Česká's own analysis showed that it could increase the absolute portfolio profit (APP) of pre-approved cash loans by identifying the optimal offer price and initial credit limit for each individual borrower, based on their risk profile, loan appetite, price sensitivity and personal wealth. The bank also developed a new approach using an iteration algorithm that considered all possible loan limits to maximise profit, and a sophisticated amount take-up model that could predict how much loan clients would take.

Based on the successful results of a similar project, the bank expected a 5-10% increase in APP, and a 7-12% increase in new volume. When Česká analysts tested optimised scenarios in FICO® Decision Optimizer[6], they showed even better results, with an estimated 22% increase in APP and a 25% increase in new sales compared with their previous strategy.



This inspired use of FICO technology has helped to strengthen the bank's market position, as Michael Versace, global research director for digital strategy at IDC explains, "Analytic excellence is the core of the financial services industry. In the digital era, firms can further differentiate their products and services by using data and analytics to improve customer engagement and risk management, and support relationships with regulators. Česká Spořitelna has shown great innovation in their use of the FICO analytics technology."

These companies demonstrate the potential that comes with optimising data analytics within a clear framework. Across a whole host of business sectors, it really can impact the bottom line.

Better decisions, now

As individuals, we learn from the choices we make and, hopefully, use our experiences to adapt future decisions to improve our lives. In the same way, how a

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business makes decisions, and what it learns from those it gets wrong, is the single most important factor in determining a company's prospects.

On the one hand, exploring and analysing too much data can be a substantial waste of resources if it doesn't improve a business decision and make a genuine impact. If, however, businesses adopt a decision-first approach that starts by defining the business objective and building a decision model to achieve this, they can have a dramatic impact on their ability to compete, drive revenue, increase profit and create more loyal customers. Our customers have shown it can create real competitive advantage.

Analytics-powered decisions are not just the future, they are already here. They are the best way to help make technology make businesses smarter, more successful, and more profitable. The solutions are out there – ambitious CEOs, CIOs and CFOs need to step up to implement these solutions, and lead the way.

Reference

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