

Improving Financial Performance with Predictive Analytics

Use Data Science to Gain Competitive Advantage

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Predictive Analytics Arrives

Many organizations today are applying predictive analytics. More than four-fifths **(83%)** of participants in our benchmark research said that predictive analytics is important to their organization, and nearly all executives **(97%)** said they consider predictive analytics important.

There are good reasons to apply predictive analytics. In our research **57%** of organizations reported achieving a competitive advantage through the use of predictive analytics. It's no surprise that **92%** plan to deploy more predictive analytics.

If you are not using predictive analytics today, you may be placing your organization at a disadvantage.

Takeaway: Apply predictive analytics aggressively to compete more effectively.

Analyze to Maximize Profitability

Every organization's goal is to increase profitability. Nearly half **(46%)** the organizations in our research reported they have increased profitability through the use of predictive analytics to increase revenue, reduce expenses or achieve some combination of the two.

This process starts by breaking down the business into revenue and expense categories to be able to analyze each in search of low-hanging fruit. For example, should you increase revenue by acquiring new customers or enhancing customer retention? Can you reduce expenses by reducing fraud or improving operational efficiency? Both categories offer promise – after all, **reductions in expenses can be just as valuable as additional revenue.**



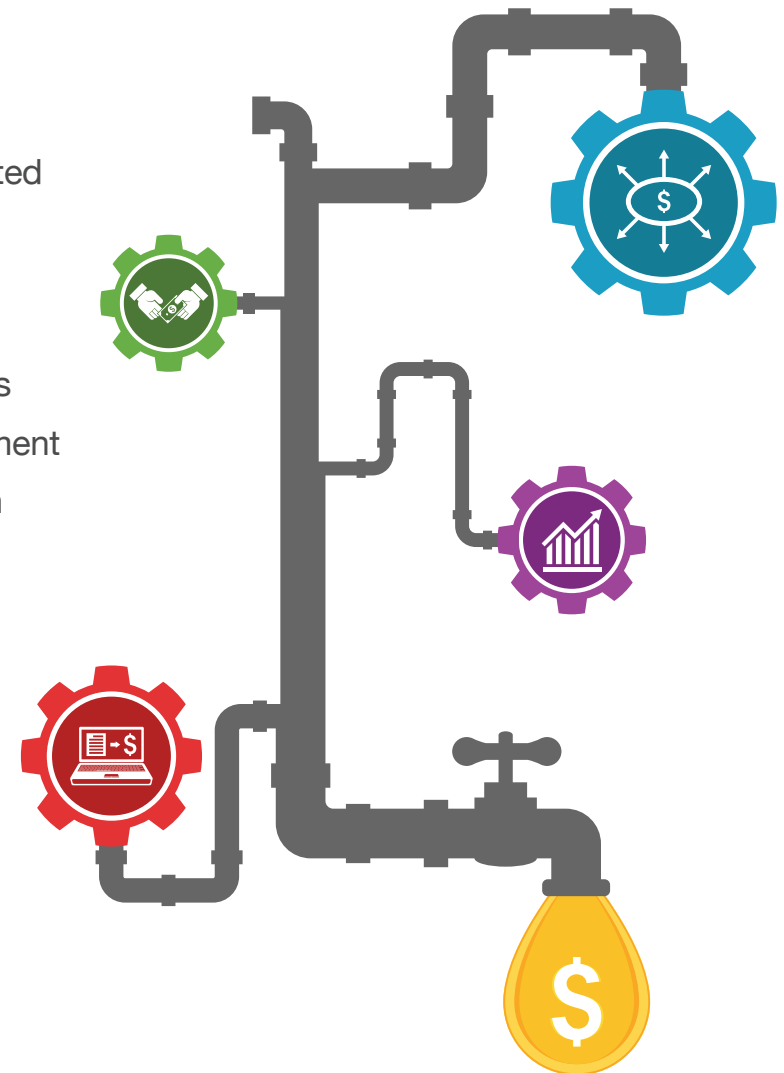
Takeaway: Approach analytics as a bottom-line undertaking.

Create New Sources of Revenue

In looking at revenue, consider opportunities for new streams as well as increasing existing revenue. Half the organizations in our research reported creating new revenue opportunities through the use of predictive analytics.

Analytics can be used to identify value-added services to complement the products or services you offer today. For example, manufacturers of durable goods can offer predictive maintenance services to keep equipment operating at peak performance and prevent outages. Data from sensors on the equipment, combined with environmental and customer data, can be used to create models that drive service schedules. Such premium-priced services can provide additional sources of revenue to the manufacturer.

Takeaway: Use analytics to identify opportunities to enhance the value of products or services for customers.



Expand Revenue from Existing Customers

Savvy organizations expand their relationships with existing customers through up-sell or cross-sell activities.

Predictive analytics can help determine the best offer to make to each customer to **increase the likelihood of an additional purchase**. Anyone who has shopped on Amazon has seen cross-sell recommendations: **“Customers who viewed this item also bought...”**.

Effective product recommendations begin with two steps: segmenting customers into groups that behave similarly and studying those groups’ past purchasing patterns to develop models that predict the best recommendation for each customer during the current transaction. Then deploy these models into production applications and processes.



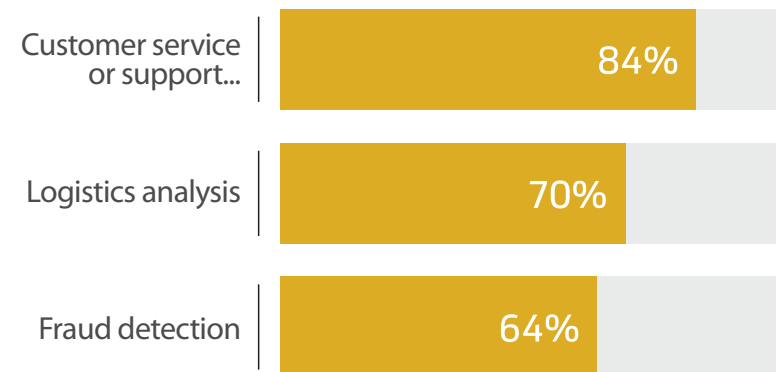
Takeaway: Predictive analytics can help grow the value of customer relationships through cross-sell and up-sell opportunities.

Reduce Costs

Using predictive analytics, organizations can drive down costs without impacting revenue. Analytics can help **identify potential cost reductions** and **suggest choices to minimize the impacts of changes** on expenses.

84% of organizations are using or plan to use predictive analytics to guide customer service recommendations, reducing the time it takes to reach a resolution. **Seven in 10** are using or plan to use them in logistics analysis. Almost two-thirds (**64%**) use or plan to use predictive analytics to detect and prevent fraud. Cost reductions in areas such as these can save large organizations much money.

Organizations Reduce Costs with Predictive Analytics



Takeaway: Use predictive analytics to explore ways to reduce costs.

Increase Operational Efficiency

Increasing operational efficiency saves money. For example, purchasing decisions can be made better by considering the lowest total cost, not just the initial cost. **Predictive analytics can be applied to supplier data** to predict the likelihood of on-time delivery, quality defects, cost to repair and impacts on production schedules. This informed view of vendor performance can be used to reduce overall purchasing costs.

Improving supply chain logistics also can reduce costs. Adverse weather and traffic conditions cause delays in many supply chains. Predicting such delays and the best course of action in the event of a delay can greatly reduce costs.



Takeaway: Minimize inefficiencies with predictive analytics to reduce operational costs.

Identify All Data Sources

Make sure that predictive analytics is being applied to all relevant data sources. Customer, marketing, product and financial data are the most common focuses, but look also for outside data: **Weather, traffic, geographic, social media and financial market data** all can enhance the accuracy and value of analyses.

Consider unstructured data sources as well. **54%** of organizations are using or plan to use social media data in their predictive analytics.

When the scope of analytics includes external and unstructured data, big data management technologies may be needed. **78%** of organizations said that predictive analytics is the most important type of big data analytics.

Takeaway: Identify all the data that can improve analytics.
Then ensure you can manage it.



Empower Data Scientists

The skills of data scientists or data management executives are critical to successful implementations of predictive analytics. Provide them with their tools of choice to maximize their productivity. Additionally, **tools are available** that eliminate coding and automate many of the steps involved in data science, enabling a broader group of users to apply these techniques.

For those familiar with coding, open source technologies are among the most popular tools for predictive analytics. R, Java and Python are three of the top five programming languages used. Spark, another open source tool, is gaining popularity as well.

Having tools that support both of these approaches can help maximize the efficiency of your data scientists.



Takeaway: Provide tools that will maximize the value of your data science resources.

Embed Analytics in Business Processes

The value of predictive analysis comes not just from one-off analyses but also from being able to **deploy the results of analyses** at the point where decisions are made so they can be considered in **real or near-real time** — for example, embedding analysis-based performance and retention evaluations in candidate tracking applications.

One key value of analytics is their immediacy. Analytics algorithms should be revised as market conditions change. Therefore, it is important to be able to update as needed analyses in applications regardless of where the applications reside, on-premises or in the cloud. This will keep the organization agile and responsive to whatever changes occur.



Takeaway: Make sure the analytics users rely on for day-to-day business activities will be up-to-date.

Improve Your Bottom Line

Predictive analytics is powerful. It can help drive significant improvement to an organization's bottom line. Look for ways to use it to grow revenue, shrink costs and improve margins.

Provide a platform that enables your data scientists to work efficiently using tools and algorithms they prefer. Enhance your analyses with internal and external data, structured and unstructured data. Then make the analytics accessible in order to reap the full benefits of these valuable analyses.

Stay ahead of the curve in your market with predictive analytics, and give your organization a competitive advantage and an improved bottom line.



The benchmark research report *Next-Generation Predictive Analytics* can be purchased from Ventana Research at www.ventanaresearch.com.



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