



The Analytics Journey

Planning for Predictive Analytics

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For most organizations, “big data” is an open buzzword. Facing increased pressures from regulatory reporting to cost reduction, companies are finding that using data to drive business strategy and performance has morphed from being a “nice to have” to an imperative for survival. What does it mean to be a data-driven organization—to fully recognize and embrace the value of information as a corporate asset? Getting value out of data means using it to make the right decisions, based on the right information, at the right time.

What are Predictive Analytics?

Simply stated, predictive analytics comprise quantitative and qualitative methods that leverage data in ways to identify trends that in turn can predict future events. Many companies have gained competitive advantage by continuously evaluating empirical data to identify and act on specific behavior patterns and events. They use this ability to make predictions about the future—to look for innovation in new and

unexpected places—and decisively act upon those which are the most competitively advantageous.

The science behind predictive analytics is not new. As most statisticians will tell you, the mathematics behind statistical modeling has been around for generations. Many industries have successfully embraced predictive analytics in areas such as financial forecasting, demand analysis, inventory planning, weather, prediction, risk assessment, etc.

But what we see changing, particularly over the past several years, is that the science of predictive analytics is driving a much deeper, granular and more accurate understanding of behavior and trends. Technology is now playing a much greater role in the daily life of consumers—which allows for an astounding amount of consumer behavioral data to be collected, analyzed and used. In addition, significant advances have been made in technologies that analyze structured and unstructured data as well as real-time events—making it easier to identify new patterns to unlock understanding and value. This growing universe of “big data” is fueling a revolution in behavioral insights.

Why is this important?

The same technology advancements that provide these insights and opportunities have also introduced a business environment defined by increased global competition. As business cycles shrink due to disruption and enhanced consumer knowledge, companies may be facing a Darwinian-like scenario—where businesses that remain agile and adaptive are rewarded, while businesses that are rigid and slow to embrace change may find themselves irrelevant, at best.

In response to these macro environmental conditions, a growing number of executives have embraced predictive analytical-based solutions to drive significant value out of data. Analytics are giving them the ability to better adapt to market conditions, increase relevancy to consumers, and improve operational efficiency.

Consider a situation whereby a business understands and can predict consumer behavior given a known set of conditions, and has built this construct into its operational systems and processes. When this occurs, marketing campaigns can become significantly more effective, lift rates improve, and costs such as call center activity or fraud are significantly reduced and/or deflected.

Challenges to Data Access

When asked about systemic and tactical challenges encountered during predictive analytics initiatives, most program owners will point towards data access and quality as a two of the hardest. Data sources within an extended enterprise are often large and complex, spanning a multitude of point applications and data warehouses, as well as comprising multiple identifying schemas and data interpretation rules. In some cases, access often requires crossing organizational boundaries, and may introduce conflicting objectives and/or agendas. In addition, barriers to data access may include business constraints generated from an organization’s legal, regulatory and privacy policies.

These issues can negatively impact the return-on-investment for an analytics program because of the program’s high dependency on data. Conversely, greater access to understandable data usually means higher impact to the business case. This is because a piece of information on its own lacks context—but adding and aggregating unrelated data often results in a correlation and association effect that may improve confidence and decision-making.

Foundational Building Blocks

Many technology program implementations can be compared to constructing a building. A well thought-out foundation is usually required before the structure can take shape. Whether your analytics program is in support of marketing, operations or risk, the fundamental building blocks remain the same—a Center of Excellence (COE), Business Case Development, and Data Management and Integration.

Analytics Center of Excellence

The goal of an Analytics Center of Excellence is to develop and operationalize a set of best practices designed to maximize business benefits derived from the organization's predictive analytics-based investments. This demonstration of executive strategy provides a holistic approach addressing human capital, structure and organization, data, information and infrastructure, process standardization and culture.

Typical COE success criteria include increased adoption of analytics across major business functions, better collaboration between business and IT, and development of standardized information modeling and reporting methods across the enterprise. The typical COE establishes a service model taking an organizational approach to operationalizing predictive analytics and big data. This often includes the development of a strategic vision and framework built around business value, definition of roles and responsibilities, policies and procedures and mechanisms to communicate with the executive teams.

After developing and implementing an operations framework, the COE is able to focus on the development of line of business-specific frameworks such as campaign analytics for marketing. Examples of typical outcomes include the development of baseline analytical models, profitability measurement frameworks, Net Present Value (NPV) estimation models, refined financial models, and marketing attribution models aligned to multiple channels such as digital, broadcast, direct mail and offline.

Business Case Development

The second foundational building block for a predictive analytics program is the development of a business case. Establishing a business case for any major investment initiative is an essential step for the project's success, as it provides an anchor for establishing the investment base, as well as the investment returns. Perhaps eclipsing the importance of the business case, however, is the alignment of goals and objectives across the enterprise. This is due to the fact that a predictive analytics program can be, and usually is, expansive and dynamic, requiring cooperation across the enterprise.

As stated previously, modeling efforts for predictive analytics programs may be significantly hampered by barriers to data access. For example, corporate legal and regulatory groups typically maintain a charter to protect the organization, and given all of the publicity around privacy and reputational risk, are understandably inclined to take a conservative view on how data can or should be used. While considered necessary to

protect both the enterprise and the consumer, a risk-adverse culture may end up hurting the organization by becoming a barrier not only to data access, but to innovation.

Progressive organizations are finding that aligning both personal and departmental performance goals with the firm's predictive analytics program goals can foster a cooperative culture. A culture that works to develop innovative solutions that end up achieving program or enterprise-level objectives, while minimizing risk. This alignment of goals can help drive cooperative behavior and deconstruct barriers, paving the way for a successful predictive modeling initiative—a model that can accelerate company growth and success.

Data Management and Integration

The final foundational building block for a predictive analytics program concerns data management and integration. From our experience with predictive analytics, we have observed a direct correlation between return on investment and the availability of unified enterprise data. A growing number of organizations are evaluating their data architecture and data management approaches to support predictive analytics programs. Because of the iterative nature of modeling and correlation, extracting information from data and using it to predict trends and behavior patterns requires data infrastructures that not only accommodate new technologies, but that are responsive in an agile manner.

Information is a corporate asset. As such, the successful company understands that to thrive in today's marketplace requires not luck, but the ability to turn information into actionable insights. This ability does not require hiring a fortune teller or determining whichever way the wind is blowing to make predictions about the future. It requires analysis—of patterns in current and historical data sets—to identify and accelerate growth opportunities, improve business performance, and manage regulatory pressures and risk. **Harnessing the power of predictive analytics unlocks the future. Your future. Are you ready?**