



Analytics: The Path to Business Intelligence and Decision Making

A Mapping Analytics White Paper



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According to the Harvard Business Review, the way for companies to pull ahead of the pack is to “use sophisticated data-collection technology and analysis to wring every last drop of value from all your business processes.”¹

The publication goes on to cite Capital One, whose analytics initiative has spurred at least 20% growth in earnings per share every year since the company went public. Marriott International, which uses analytics to increase revenues as a percentage of the optimal rates that could be charged from 83% to 91%. And even sports franchises such as the St. Louis Cardinals and New England Patriots, that use analytics to help field more competitive teams.

Xerox is another example of a company that uses analytics to compete. To keep up with a rapidly changing environment, Xerox segments its customers into industry classes, assesses the relative potential across markets, and then sizes and deploys its sales organization to access that potential. From understanding how territory size drives performance, to the penetration of key industries by market area, analytics plays a part in key business decisions.

More than 50 years ago, IBM published a paper describing business intelligence (BI) as the quest for repeatable, structured, disciplined support of the decision making process. Today, as then, the foundation of that decision making support is analytics. Analytics is the use of data, statistical and quantitative analysis, explanatory and predictive models, and fact-based management to create business intelligence, which in turn drives the decisions and actions that lead to success.

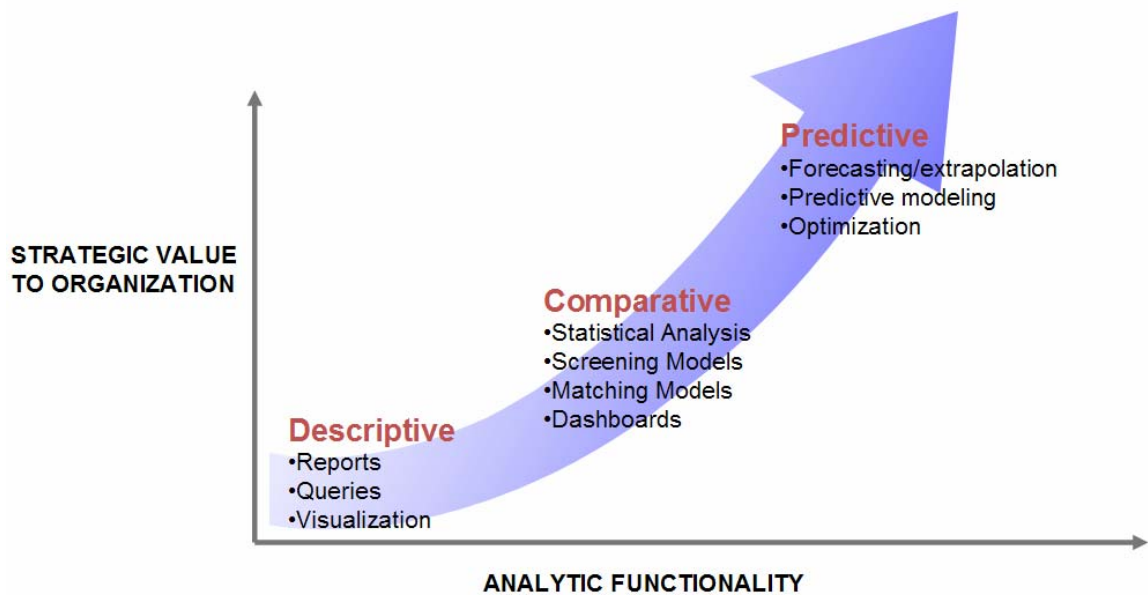
¹ “Competing on Analytics,” Thomas H. Davenport, Harvard Business Review, 2005.

The path to support better business decision making, in simplified form, looks something like this:

Analytics → Business Intelligence → Action

The Analytics Continuum

There is no single definition of analytics. Organizations typically progress through a continuum of analytics, measured by the complexity and power of the analytics deployed, and mastering one stage before advancing to the next. We can create three broad segments of analytics, each distinguished by functionality, and each increasing in strategic value to your organization: **descriptive**, **comparative** and **predictive**.



1. Descriptive

Descriptive reports and queries reside at the low end of the analytics continuum. User tools include individual or siloed databases, spreadsheets, and simple reports and maps which are produced and may be used by multiple

departments. This approach empowers individual employees, but can lead to multiple versions of the ‘truth’ because multiple versions of data are often used. Research shows that between 20% and 40% of all spreadsheets contain errors², and a PriceWaterhouseCoopers study found that 75% of companies experience financial pain from defective data.³ The logical conclusion is that higher standards and greater rigor are required to truly compete using analytics.

2. Comparative

As analytics sophistication grows, organizations use statistical packages, geographic information systems (GIS), and data processing and management tools to sift through large amounts of data and perform comparative analyses. At this stage, analysts establish metrics for comparison purposes, develop screening or matching models, use segmentation systems, and begin deciling data. Dashboards are often deployed to provide a quick understanding of business drivers. In other words, answering the question of why something happened.

3. Predictive

Much greater value is derived when an organization moves from describing business operations and drivers to predicting the value of making a specific decision. The ability to predict the outcome of a set of actions, such as placing a store in a particular location, or targeting a specific customer set, or using a certain inventory mix, allows for more efficient and effective allocation of resources — towards those activities that will produce the most profitable outcomes.

Analytics and the Decision Making Process

At every level of deployment — descriptive, comparative or predictive — using analytics at the beginning of the decision making process leads to better results. Here are two examples:

- Part of any salesperson’s job is to quickly assess prospects and either qualify or disqualify them. The amount of time it takes to weed out the unqualified takes time away from leading qualified prospects through the sales cycle. Analytics can be deployed to determine who your best prospects are in the first place and their potential to your organization. Arming your sales

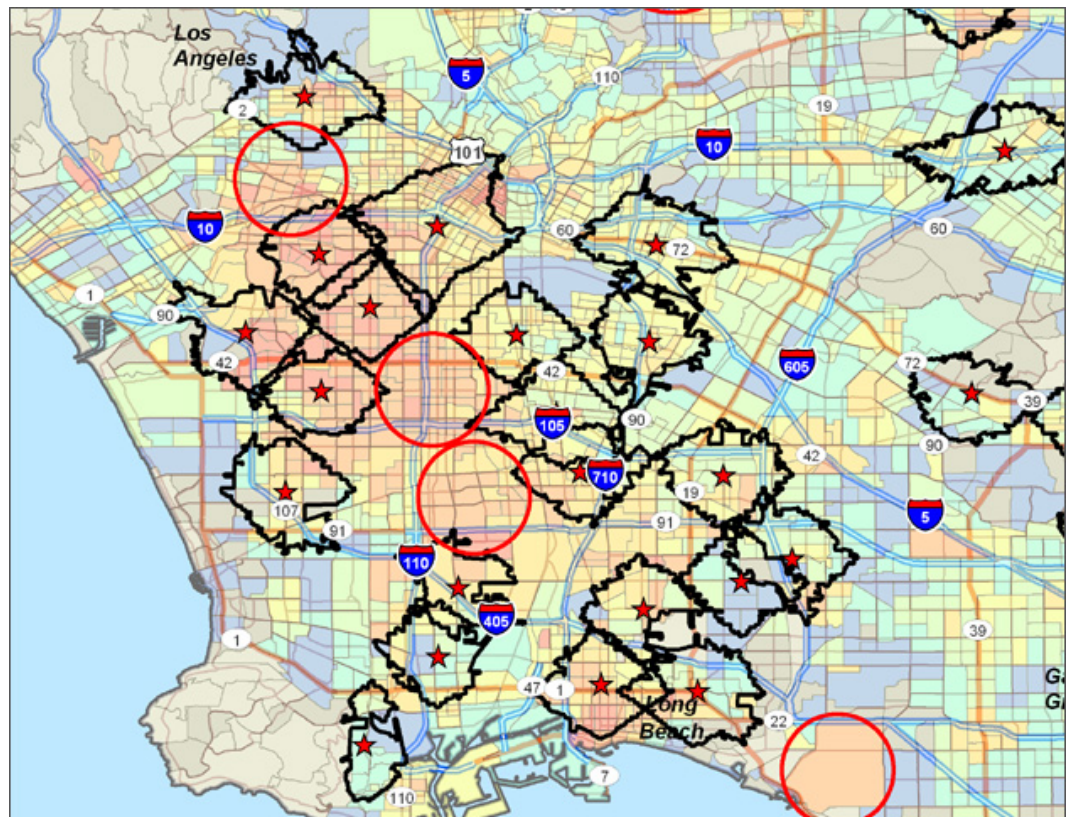
² IBID

³ “In Plain English,” Get Smart About Business Intelligence, Computerworld Executive Briefings, 2005.

organization with this actionable information allows faster, more accurate decisions in the qualification process.

- In site selection, studies have shown that for every site that gets built, 100 or more locations are evaluated and 3-5 finalists are brought to the table for final consideration. The cost of vetting the finalists can range between \$25K - \$75K each. Deploying analytics in a model that predicts the suitability of any location can reduce both the costs and time to establish a successful new location.

Output from an analytics model offers map visualization showing drive time market areas around existing stories (red stars with black boundaries), and identifies gaps in the market where new stores could be placed (red circles). A quick glance at the output can save hours or days of analysis.



Some Companies are at the Top of the Analytics Continuum

What is the difference between organizations that remain at the low end of the analytics continuum and those that progress through each stage to reach and hold a top position as an analytics competitor?

Organizations that use their analytic strength to achieve competitive advantage drive the use of analytics throughout their organization. They often stand out in three areas: **focus**, **culture** and **technology**.

Focus

These companies understand that analytics is essential to their success, and know where to focus their analytics effort to achieve the best results. For example, SONY knows it gains customers for certain products when technical problems can be addressed quickly by appropriately trained personnel. However, a geographic imbalance in location of trained personnel in relation to customer need drove up costs of customer service. By using analytics and predicting the need for different types of service, SONY better matched service technicians with customer need, increasing customer satisfaction levels while driving down overall cost.

Culture

Companies steeped in analytics culture have a defined and funded business practice in analytics. There is respect for quantitative evidence and decision making based on data. Analytics is embedded in the corporate culture, advocated from the top executives down, and a key part of a company's overarching competitive strategy. Instilling an analytics culture often means changing the way managers and employees think and work. To use a cliché, it means "walking the walk, not just talking the talk."

Each company must find how analytics fits within its culture and organization. For example, at HSBC, the Branch Network Strategy team supports analytic requests from across the organization: upper management, finance and planning, customer analytics, product management, ATM network strategy, community development, and other operating departments. This team is the center of business intelligence for the bank. They have access to all the necessary internal and third party data. They use GIS, reporting software, statistics, and data management and processing tools to create, analyze and disseminate data critical to the decision processes of the organization.

Technology

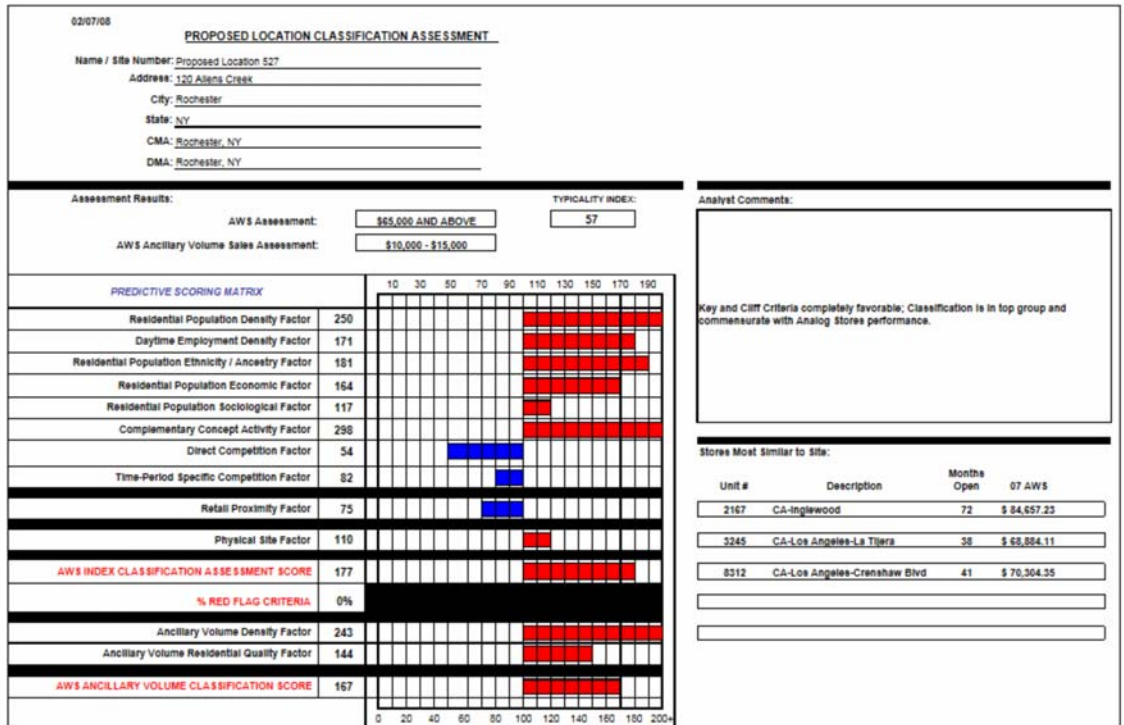
Some people assume that analytics is all about the supporting technology and tools. While there can be no analytics success without the right technology, there is a reason we discussed focus and culture first. Without widespread belief and adoption of the analytics mindset, all the technology and tools in the world won't make a bit of difference.

That said, no matter how good the tools and technology are, they must be built and deployed to match your organization's needs. An analytical tool may be brilliantly accurate, but if it cannot be deployed to match decision-maker capabilities or requires too much effort, then it will not be used and is a waste of money.

As a general guideline, technology should be chosen that does the following:

- Enables ease of use
- Simplifies and expands user access
- Promotes best practices
- Ensures data consistency and quality
- Improves response time
- Provides flexibility
- Updates easily

Analytics can produce reports summarizing key data. This enables managers to quickly and accurately act on information instead of gathering it, such as this example report showing the potential of a proposed store location. Technology allows the deployment of summary analytics either via the Web or within an organization.



Steps in Evaluating Technology and Tools

You have a choice among many BI platforms and analytic tools offered by a variety of vendors. How do you know what is the right solution for your organization? The process of choosing a BI platform should be deliberate and performed in consultation with a partner who understands your business and goals.

The first steps in selecting the right solution are knowing:

- What business objectives you want to achieve using analytics
- Who in your organization will use the technology and tools
- Who will “consume” the resulting business intelligence and in what format

The right partner can help you address these questions and choose the appropriate set of technology and tools. When evaluating potential partners, ask them these ten questions about their analytics technology platform to get a realistic assessment of their offering:

1. **Does the platform require the skill set of IT professionals to install or use?**
2. **What type of data can be accessed? How is data accessed?**
3. **Does the platform provide access to internal data, key demographic, geographic and industry-related data sets?**
4. **How does the platform ensure data quality, accuracy and consistency?**
5. **Can you create and re-use custom workflow engines and analytical processes?**
6. **Can you provide performance metrics on how long it takes to run processes and queries?**
7. **Does the platform include important spatial processing tools to understand the impact of location on your business?**
8. **What types of reporting and visualization tools are included?**
9. **Can the platform be easily installed on a trial basis in our organization?**
10. **How much does the solution cost?**

About Alteryx™

The Alteryx BI platform combines the best functions of ETL (extract, transform, load), data quality management and analytics. It provides access to any data in your organization and presents it to decision makers in an organized, intelligent fashion that fosters fast and accurate business decisions.

Alteryx complements and extends existing BI tools, providing spatial analysis and mapping capabilities, data cleansing and integration, demographic and market databases and more. All at a cost and complexity much lower than traditional BI tools.

About Mapping Analytics

Mapping Analytics offers analytical consulting, software and data to help businesses profile customers, accurately assess market opportunity, select successful retail and franchise sites, and plan sales and service territories, helping contribute to overall growth and profitability for our clients.

Founded 1989, Mapping Analytics is led by an experienced leadership team with a background in consumer marketing and proven success in geographic and predictive analytics, mapping, project management and application development. Our focus is business management, including sales, marketing, real estate, strategic planning, and GIS consulting. Our clients span virtually every business segment, from manufacturing/distribution, banking/finance, retail and restaurants to marketing/media/advertising, insurance, and health care.

To learn more about Mapping Analytics, please visit www.mappinganalytics.com or call toll-free (877) 893-6490.