

COMPETING ON ANALYTICS

How Fact-Based Decisions
and Business Intelligence
Drive Performance

An Executive Symposium

featuring

Thomas H. Davenport and
Leading Executive Practitioners

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Executive Summaries



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Competing on Analytics—Keynote Address

Thomas H. Davenport, Professor, Babson College Business Institute

Overview

Competing by using analytics has moved from the margins to the mainstream. Companies in all situations and industries are using analytics to support and improve their distinctive capabilities. Analytics helps organizations make better decisions and enables optimization of key business processes.

But, competing on analytics doesn't occur overnight. It is a process that often takes years. It starts with the CEO's commitment and involves building the necessary enterprise-wide infrastructure, analytical skills, and culture. When done successfully, competing on analytics creates value and strategic advantage.

Context

Professor Davenport discussed the evolution of analytics as a competitive tool, explaining why firms are competing on analytics, how they are doing so, and what lessons have been learned.

Key Learnings

- **Analytics has moved to center stage because it allows optimization of key business processes.**

The use of analytics, statistics, and fact-based decisions in business is not new. From decision support systems to business intelligence, a range of tools and terminologies have been employed. While these activities have been important and provided value, they have mainly been in the back room and out of the limelight.

What is new is that for an increasing number of companies, these activities have moved from the margins to the mainstream. For many, the use of analytics has become a primary activity used to support the overall business strategy.

More companies are now choosing to compete based on analytics because analytical decisions are more often correct than decisions derived from intuition. Also, analytics allows for optimization of key business processes. The key business processes that can be optimized vary based on what strategy is important for a given business. For one business it may be marketing, by finding the best customers and charging the right price. For another, the use of analytics might be most important in optimizing the supply chain by minimizing inventory and maximizing availability.

"Whatever your firm's core competency, it can be supported and enabled with analytics."
- Thomas H. Davenport

- **Analytics can create value regardless of a company's industry or situation.**

Research by Professor Davenport of those companies which are successfully competing on analytics indicated that analytical competitors include:

- *Established, successful companies:* Leading companies such as Marriott, Wal-Mart, and Procter & Gamble have all incorporated analytics as a key part of their cultures and strategies for two decades.
- *Turnarounds:* Harrah's, MCI, and Gallo each used analytics differently to help emerge from troubled situations.
- *New companies:* Firms such as Capital One, Amazon, Yahoo, and Netflix were built around analytics from day one of their existence.

These examples show that analytics can be successfully employed at companies of different stages and situations, and also across different industries. The industries highlighted in the research include financial services, travel and entertainment, consumer products, and retail. In addition, an example was shared of how Cemex, a cement company, uses analytics to optimize its supply chain.

"If you can be analytical about cement, you can be analytical about anything."

- Thomas H. Davenport

- **Analytical competition takes place in a series of stages.**

Professor Davenport's research among 32 companies with an orientation toward analytics identified five distinct stages of analytical competition. These stages are:

1. *Clearly competing on analytical capabilities (11/32):* Such organizations have made a conscious decision at the highest levels to compete on analytics. They have identified the key strategies and capabilities to be supported by analytics, and are actively using analytics in how they conduct business.
2. *Clear intent, and almost there (6/32):* These organizations are on their way, but are not quite there. The barrier may be that senior management has not yet bought into the full power and value of analytics.
3. *Have the vision, but a long way to go (7/32):* These are organizations that see the opportunity and want to compete on analytics, but aren't there yet. Their issues are mainly related to implementation.
4. *Some local, non-strategic analytical activity (6/32):* These organizations are using analytics on a local basis for business intelligence. But, there is no vision around how to use analytics for strategic advantage and it is not on the CEO's radar.
5. *Still wrestling with the basics (2/32):* While these organizations may have an orientation toward analytics, they have no vision of how to use analytics for competitive advantage,

their data is not integrated, and they lack appropriate systems and people.

- **Organizations successfully competing on analytics exhibit a set of common attributes.**

These attributes include:

- *CEO commitment:* To use analytics as an important basis for competition requires commitment from the top of the organization. It requires an allocation of resources, long-term funding, and in some cases, a shift in culture. In many of the organizations using analytics most effectively, the CEO has a unique background that orients him or her personally toward analytics.
- *Strategic focus:* Successful users of analytics don't just use analytics in general. They first define their distinctive capability and then use analytics to support that capability. For example, Harrah's strategic focus and distinctive capability is loyalty and its analytics activities are focused on supporting loyalty. For UPS, the strategic focus and the use of analytics are primarily concentrated on operations. (Firms may use analytics for more than one area of strategic focus.)
- *Enterprise application:* Firms that are competing on analytics as a key part of their strategy don't manage it locally. They eliminate fiefdoms of data, centralize the data and expertise, and develop one version of the truth.
- *The right tangible infrastructure:* This includes integrated systems (robust hardware and integrated analytical software) that capture high-quality transaction data and make it available in a data warehouse or mart.
- *The right intangibles:* These intangibles include a high level of analytical skills and a culture of learning and testing. Hiring the right people is critical. The ideal people are "PhDs with personality." The culture of testing is exemplified by Harrah's where testing is strongly encouraged, but a control group is required.

"At Harrah's lack of a control group is a fireable offense."

- Thomas H. Davenport

- **For those interested in competing on analytics, get started now because it is a lengthy journey.**

Developing the people, systems, and capabilities doesn't happen overnight. The most successful organizations have invested years to develop the infrastructure and capabilities to effectively compete on analytics.

"It takes a while to put the data and infrastructure foundation in place, and even longer to develop human capabilities, a fact-based culture, and "success stories."

- Thomas H. Davenport

Other Important Points

- **Decision speed.** Some participants wondered whether use of analytics would slow decisions by creating "analysis paralysis." Professor Davenport argued that organizations know the decisions they must make. Use of analytics helps make those decisions and make them better, but it needn't slow the decision process.

However, there are decisions which must be made very quickly and/or without data. In such situations decisions will rely more on intuition and judgment than on analytics. The best intuitive decisions are made by experts, but those are in short supply.
- **Analytics education.** Participants commented that there is a short supply of individuals with an adequate analytical education. Analytics courses are often not required in MBA programs, and the few PhDs on the market either lack the right personality or are swept up by Wall Street. But, if the business community demands such skills, universities and students will over time respond to these opportunities and the supply will increase.

Competing on Analytics—Panel Discussion

Speakers: **Keith Coulter**, Managing Director, Barclays UK Consumer Cards and Loans
Thomas H. Davenport, Professor, Babson College Business Institute
Ted Gifford, Vice President of Engineering and Research, Schneider National
Irving “Bubba” Tyler, Vice President and CIO, Quaker Chemical
Glenn Wegryn, Associate Director, Global Analytics, Procter & Gamble

Moderator: **Kirsten Sandberg**, Executive Editor, Harvard Business School Press

Overview

Those organizations that are currently competing on analytics have evolved to this position through a long journey involving numerous steps. In most instances, the use of analytics began in one area within a company, success was experienced, and the role of analytics grew. Over time, senior management bought into the use of analytics as a way to create competitive advantage, analytics became part of the organization’s culture, and the processes and technologies were put in place to support this focus.

The primary value of analytics seen by these practitioners is better, faster, more well-informed decision making, as well as better aligning the organization by getting everyone looking at the same data.

Context

This panel of executives, joined by Professor Davenport, described their real-world journeys implementing analytics.

Key Learnings

- **Use of analytics is a long-term evolutionary process.**

Each of the panelists described the path his company has taken in making analytics a key part of his organization’s strategy and capabilities. In every case, this process has been an unfolding journey, which has taken many years and gone through multiple steps.

The story at Quaker Chemical began ten years ago as each regional sales organization looked at its business separately and inconsistently. Beginning in Europe, the firm added a business intelligence layer and incorporated more analytical thinking into decisions. Success in Europe resulted in reapplying these practices on a global basis while also implementing knowledge management. Today, use of analytics has become instilled as part of the company’s culture, and web-based tools provide decentralized managers around the world with the ability to make more informed decisions. The result: faster, better decisions at all levels of the company.

At Procter & Gamble the culture of analysis dates back to the 1930s. Formal use of operational analysis began in 1963 and an operational research group was formed in 1968. However, some false starts in the 1980s and a change of directors led to loss of funding. The use of deep analytics was resurrected in 1992 as analytic techniques were employed to decide on optimizing plant locations. These efforts were expanded in the mid-1990s as P&G instituted a companywide initiative to develop a more optimized supply chain. Eventually multiple groups were combined to form the current analytics organization, which is comprised of more

than 100 people. This group has been separated from IT and is now referred to as “Information and Decision Support.” This team participates in tackling the most important strategic problems faced by the company.

Beginning in the early 2000s, Barclays has built analytics into its business functions, particularly marketing. The realization that analytics was a necessity followed a period during which the credit card business floundered. Since then, an analytic culture has been created, new people have been brought in, and the company’s marketing mix and philosophy have changed. The results have been phenomenal, which has led to greater adoption of analytics in the supply chain and customer service functions.

Schneider National’s experience shows the use of analytics in the low margin trucking business. Six years ago there were three separate pockets of internal analytics. Over time, a new CEO with an operations research background was installed, a new infrastructure including a data warehouse was put in place, and the three groups were combined to form one analytics organization. The group demonstrated value and the scope of the projects and responsibilities increased.

The commonalities among these organizations reiterate many of the points made by Professor Davenport in his keynote address. These include:

- *It doesn’t happen overnight:* At each company, evolving to compete on analytics and building the capabilities to do so was a multi-year process.
- *Success builds:* In general, use of analytics began in one area of the company and with success the use expanded to become enterprise-wide.
- *Culture is critical:* At each of these organizations the use of analytics has become instilled in the culture as part of the company’s DNA. This process took time.

“You don’t just teach people to fish. You have to give them the pole and bait the hook.”

- Irving “Bubba” Tyler (Quaker Chemical)

- *Executive support is required:* To make analytics a key part of an organization’s strategy and culture required executives who understood the power of analytics, and saw it as both a major strategic issue and a source of competitive advantage.
- *It takes infrastructure and people:* These organizations realized that wanting to be analytical wasn’t good enough. Getting there required investments in technology and bringing on board people with deep analytical capabilities.

An area of difference was in how these companies—each of them successful in using analytics—structured and funded their analytics groups. At Schneider the analytics group is centralized and corporately funded. At P&G, there is one central analytics

group, but this group acts as an internal consulting organization and secures its funding through “customers” within the organization. At Barclays, the use of analytics resides in different businesses. And, at Quaker Chemical, the use of analytics is distributed throughout the company to all regions and all levels. Based on the business, culture, and global structure of each company, each of these models has worked.

“The people who are running the business use analytics to run the business.”

- Keith Coulter (Barclays)

- **Analytical technology has changed tremendously in the past decade, though the panelists have different views on which changes have been most important.**

In Mr. Wegryn’s view the most important change relates to data. New technologies have made it much easier to aggregate data in one location, and have that data be clear and consistent. Previously time was invested in aggregating and cleaning the data; now time can be invested in analysis.

Mr. Gifford expounded on this point, noting that tools such as advanced math, genetic algorithms, neural networks, and tree-based regression enable practitioners to look more efficiently at huge data sets and glean insights.

Based on Quaker Chemical’s focus on pushing analysis throughout its global enterprise, Mr. Tyler sees the greatest technical advance as web-based technology which puts consistent data in everyone’s hands around the globe.

Mr. Coulter sees the most significant development as software tools that provide the ability to integrate data into operational decisions much more quickly.

While advances in technology have enabled analytics, the panel agreed that the success of analytics is the combination of technology, people, and process.

- **Despite the power of technology, selling analytically-based recommendations is a human process involving trust and credibility.**

While in some instances analytical tools are automating decisions, in most instances—especially in regard to major strategic decisions—users of analytical tools develop ideas and recommendations which must be sold internally. Often, these recommendations are unique, different, and counterintuitive, making them challenging to sell.

The panelists were in agreement that selling these recommendations is no different from any other type of difficult internal selling situation. Necessary are credibility, which is built over time, and trust from the decision maker that the use of analytics and the perspective of an analytics professional lead the organization to make better decisions.

“We sell confidence in decisions.”

- Glenn Wegryn (P&G)

- **The panel was in agreement that most analytics capabilities must reside within the organization and not be outsourced.**

Because analytics requires understanding the business, the organization, the workflow, and the culture, the panelists found it difficult to conceive that it would be possible to outsource this role. As Glenn Wegryn said, “Since we view analytics as a competitive advantage, you can’t outsource your competitive advantage.” However, Mr. Coulter and Professor Davenport thought that perhaps some elements of the analytics process might be able to be outsourced under a very hands-on outsourcing process.

Use of Analytics at Harrah's

Gary Loveman, CEO, Chairman of the Board, President, Director, Harrah's Entertainment, Inc.

Overview

In 1998, dealt a hand of a struggling company with poor assets and low morale, Harrah's only alternative was to focus on improving customer loyalty. Embarking on a single-minded loyalty strategy, Harrah's employed analytics to capture detailed information about consumers' behavior and to use this information to create thousands of micro-segments, each receiving different offers. Analytics has also been employed in areas such as yield management and slot machine optimization.

While the technology and methods employed are sophisticated, the greatest challenge has been changing the company's culture to one where people don't make intuitive decisions claiming "I think," but base decisions on data and are able to say, "I know." This shift has required forceful championing by the CEO and replacing people who didn't buy into this philosophy.

The results speak for themselves. Loyalty and revenues are up significantly. Harrah's stock has climbed from \$14 to \$73 as cash flow and earnings per share have both grown by an annual growth rate of at least 15% per year. Harrah's has improved its assets by acquiring Caesar's and growth is continuing along all key measures.

Context

Dr. Loveman described Harrah's strategy, adoption of analytics, and success over the past eight years.

Key Learnings

- **Harrah's decision to use analytics to drive customer loyalty was born from lack of alternatives.**

When Dr. Loveman joined Harrah's in 1998 the company was struggling. The basic business—casino gaming—is a commodity. The traditional focus of those in the industry had been on differentiation through extravagant facilities, and Harrah's assets were of low value and inferior to competition. (Harrah's invested capital was \$315 million compared with \$1.6 billion invested in the Bellagio.) The company was seen as a takeover candidate and morale was low as employees had the attitude of victims.

While Harrah's tangible assets were of modest value, of far greater value was an intangible asset—its rich transactional database with behavioral data from customers at its many casinos (now 43) around the country. It became apparent to Dr. Loveman that because the quality of his company's product was inferior, Harrah's only alternative was to leverage its customer data to increase loyalty. In 1998, Harrah's customers spent 36% of their gaming dollars at Harrah's, spending 64% at Harrah's competition. Just a 1% increase in loyalty of existing customers would increase Harrah's share price by \$1.10. As a result, focusing on improving customer loyalty became Harrah's sole and obsessive focus, and analytics was seen as the way to go about achieving this strategy.

"Most businesses have too many objectives and they change them too frequently...Focus is critical to the use of analytics."

- Gary Loveman

- **The use of analytics at Harrah's is primarily focused on relationship marketing.**

Relationship marketing is the engine that drives the company. It begins with Harrah's issuing customers a Total Rewards card (more than 40 million consumers currently have one). At the casino, use of the card helps earn customers rewards. Important for Harrah's is that the card is the vehicle used to elicit extensive behavioral information from each consumer. Use of the card captures information about who the customer is (gender, age, location of residence), what games the consumer is playing (how much he wagers, how long he plays, what his outcome/success is, etc.), and other factors such as is he with his spouse, is he staying at the hotel, has he eaten in a restaurant, is he responding to an offer, etc. Currently, 80% of Harrah's revenues are derived from card-carrying customers, and at busy times such as New Year's Eve, 99% of revenues are from those with Total Rewards cards.

The data that is captured is then analyzed and thousands of different micro-segments are created. Analytics are applied to predict the behaviors of consumers in each segment and to determine the value of each consumer/segment. For example, a 60-year-old woman who lives close to a casino and places \$10 bets is a far more valuable customer than a 35-year-old man from hundreds of miles away who plays briefly and makes \$1 wagers. Older consumers tend to have more time and money; women are attractive consumers; those who place larger bets are more attractive customers; and customers who live closer to the casino are more likely to become loyal customers.

For each segment, highly targeted offers are made, tests are run (always using a control group), the results are measured and analyzed, and the process repeats itself. For example, the offer extended to a first-time customer who lost money on her first visit to Harrah's will be substantially different from the offer to a customer who won a great deal, as their mindsets and behaviors are different. Unlike most marketing programs, Harrah's efforts are longitudinal and not programmatic, and unlike many rewards programs, Harrah's actually invests hundreds of millions of dollars in providing inducements as part of its loyalty program.

"We do 'opportunity-based segmentation' and use predictive models in combination with offers to affect behavior."

- Gary Loveman

Analytics are also used in a variety of other areas such as yield management to increase revenues from perishable assets such as hotel rooms, and to optimize the revenues from slot machines. Yield management is valuable in that Harrah's enjoys incredibly high hotel occupancy rates. The challenge is not selling the hotel room; it is filling the room with the most profitable customers, or "optimizing heads in beds." Use of complex analytics helps price

rooms based on who the customer is. Since 1998, yield management at Harrah's has resulted in increasing the revenues per room per day by \$82. This is analytics enabling the business to generate significantly more revenue from the same assets.

Harrah's is going a step farther in undertaking real-time analytics. The idea is to monitor a consumer's behavior while in the casino, and based on decision rules, intervene when appropriate to do so. For example, a first-time customer who is losing money might be greeted by a host who offers the customer a free meal. Or, a consumer who is wagering a minimal amount at a profitable slot machine might receive an offer to move to another machine that is not being used, freeing up the more profitable machine for another customer. Such real-time analytics will enable real-time interventions.

- **The successful use of analytics requires a change in culture, which must be driven by the CEO.**

The fact that there are few examples of successful use of analytics is based less on the technology or the complexity of the methods, and is more a function of the organizational barriers that need to be overcome. People in any industry, including the hotel and gaming industry, are used to making decisions based on intuition. Many experienced people tend to be reluctant to adopt a more data-driven approach to decision making.

"Overcoming the organizational barriers is more difficult than doing the work of analytics itself."
- Gary Loveman

The CEO must be a passionate champion for the use of analytics and for a different culture and way of making decisions and running the business. At Harrah's analytics became part of the culture because it was forced upon them from above. Employees could become educated about this new way of doing things and could change, or they could leave the organization—and many did. Reforming people is often more difficult than replacing them with people who have the right skills and are fundamentally passionate about using analytics to solve complex problems.

Other Important Points

- **I don't know.** A key part of changing the culture was making people feel comfortable saying that they don't know the answer to something. They can't say "I think" but can say "I don't know," and can then go find the answer.
- **Ten Commandments.** An illustration of how difficult it is to focus on multiple objectives is the reality that most people cannot recall all ten of the Ten Commandments—the basis for most western religion and law. If people can't recall the Ten Commandments, they are unlikely to be able to recall and effectively execute on ten objectives.

SAS Executive Exchange

Jim Davis, Senior Vice President and Chief Marketing Officer, SAS

Overview

Use of analytics and fact-based decision making is gaining acceptance. This can be seen through interest in this conference, the success stories and progress of the practitioners in attendance, and the projected growth rate of the business intelligence category.

But, in the midst of this growing wave, organizations need to assess their organizational readiness to use technology for fact-based decision making. This is a critical question to ask as many organizations lack preparedness and need to engage in a concerted effort to improve this information maturity. Being better prepared and changing an organization's culture is an incremental process. But, those firms which achieve the highest level of readiness are not only able to use information and fact-based decision making to drive bottom-line results, they can also use data as a critical asset to innovate and create new lines of business.

Context

SAS' chief marketing officer reflected on the sessions of the day and provided a framework to help practitioners think about their organization's readiness for embracing fact-based decision making.

Key Learnings

- **Analytics is gaining traction.**

Mr. Davis remarked that had this symposium been held four or five years ago, only ten people would have attended. But today, the subject of analytics is hot. This is evident through the attendance at this event and through the success stories shared by both speakers and attendees. It is also reflected in the expected growth of the business intelligence software category. For 2006, IT spending is forecast to increase 5%-7%; however, business intelligence spending is projected to grow 22%.

- **Organizations need to assess their readiness to use analytics to engage in fact-based decision making.**

Use of analytics to drive fact-based decisions is fundamentally not a technology issue; it is a strategic, cultural, and organizational issue. Organizations would benefit by assessing their readiness to absorb information in their day-to-day activities in support of fact-based decisions.

"Ask the question, 'Are we in a good position to use information to support fact-based decision making?'"
- Jim Davis

A tool for conducting this assessment is a model termed "the information evolution model." This model classifies readiness along a continuum of five levels:

- **Level One: Dominated by individuals.** This is a dangerous position as information mavericks control the data and access to it within a firm. They tend to present findings from data which gets people's attention, but these individuals make assumptions and bring the data together in ways that

may not be accurate. The benefit of these mavericks is that they push the envelope and help their organizations realize what can be done with data, but their efforts need to be corralled.

- **Level Two: Standards at the department or division.** At this level data management has progressed beyond an individual to a department or division. The general use of data at this stage is for traditional business intelligence. These organizations have not used data as much as they could.

- **Level Three: Data integration.** These organizations have broken down barriers and tackled data integration across silos. Getting to level three is difficult as political issues emerge. Most organizations are stuck between levels two and three as they understand the benefits of bringing data together, but they can't get there.

- **Level Four: Optimization.** Now that the data is integrated, these organizations are optimizing their process of using data in decision making. Optimization drives the bottom line. Companies at this level are optimizing their supply chains, their segmentation efforts, and their customer relationship management.

- **Level Five: Turning data into a critical asset.** Organizations at this level are going a step further. They have come to view data as a critical asset and are leveraging it for new innovations.

Once an organization has assessed its situation, it is necessary to ask if it likes where it is in relation to competition and the market. If not, efforts must be made to move the organization to the more desired level. While infrastructure (hardware and software) are certainly considerations in moving from one level to another, the more important factors are:

- **People:** For a firm to improve its readiness requires having people with the capabilities and commitment to fact-based decision making. Programs are needed to continuously advance people's capabilities.

- **Processes:** Needed are processes throughout the enterprise that build the use of analytics into all decision making.

- **Culture:** This starts with commitment from the top and involves creating an organization that embraces both the use of analytics and change.

- **Changing culture is an iterative process.**

The key to changing the culture is to do so in steps. These steps should create fast wins with measurable results which build momentum. Yet, while the steps to changing the culture may be small, they must be enterprise-wide to break down silos and create a platform for the company.

Other Important Points

- **Recommended reading.** On January 9, Mr. Davis' new book, *Information Revolution*, was released worldwide by John Wiley & Sons, Inc.

Use of Analytics in Sports

Speaker: **Rob Neyer**, Senior Writer, ESPN.com

Moderator: **Thomas H. Davenport**, Professor, Babson College Business Institute

Overview

Baseball people make the same mistakes as business people. They often fail to use data to make decisions, relying instead on intuition and emotion, which are often wrong. And, despite some use of analytics in baseball, the baseball establishment is relatively slow to change behaviors and adopt new practices. This can create an advantage for those who do systematically engage in such practices.

Context

Mr. Neyer drew on his experience as a user of analytics in studying baseball to offer comparisons between baseball and business.

Key Learnings

- **In baseball as in business, practitioners often make emotional, intuitive decisions that are not based on data.**

Many baseball executives as well as observers of baseball rely on their intuition and opinions in making decisions. The result is that these decisions are often inconsistent, inaccurate, and lacking in firm grounding. (The exact same behaviors are demonstrated in the business world.)

The example was shared of one baseball writer who was offering his perspective regarding players who should/shouldn't be in the Baseball Hall of Fame. In writing about former Red Sox outfielder Jim Rice, the writer argued against Rice's inclusion in the Hall of Fame, stating that Rice benefited by playing in a hitter-friendly stadium. At the same time, the writer argued for former Los Angeles Dodger first baseman Steve Garvey, contending that the night air at Garvey's home stadium diminished his home run total. (The writer failed to note that Garvey hit far more home runs at home than on the road.) The example demonstrates inaccurate data and inconsistent logic. The writer had an opinion and then tried to use data to support that decision as opposed to using analytics to help make the right decision.

"Baseball writers often decide on their conclusions first, and then decide what data they need to grab to make their case."

- Rob Neyer

In another example, Neyer noted how remarkable it is that despite the incredible demonstrated success of long-time Atlanta Braves pitching coach Leo Mazzone, Mazzone's unique methods have not been copied. This shows how deeply entrenched certain behaviors are, and how reluctant people are to change even in the face of overwhelming data. Neyer chalks this up to people in business and baseball both making "stupid emotional mistakes."

- **The adoption of analytics in sports has been relatively slow, but will become commonplace in the next 10-15 years.**

There is a great deal of data available in baseball to help teams evaluate players and guide tactical game decisions. For decades author Bill James has used analytics in baseball to draw unique conclusions. But, with rare exception, neither James' methods and thinking nor other analytical approaches have been widely embraced by the baseball establishment. This may be because those running baseball organizations did not grow up with analytics, are not comfortable with it, and are reluctant to change.

There are a few teams that have bucked the conventional wisdom. Organizations such as the Oakland A's, the Boston Red Sox, and the Los Angeles Dodgers under former general manager Paul DePodesta (who asks, "If this isn't the way we were already doing it, would we do it this way?") have incorporated analytics into their operations in a major way. But, while analytics once looked like it might become a mass movement, the momentum has slowed (and Mr. DePodesta was fired). Mr. Neyer predicts that wholesale use of analytics in baseball will take place as the current generation of leadership changes, but this transition might take 10-15 years.

And, even when management embraces analytics, it doesn't mean that all of the employees buy in. This was never more evident than when Boston Red Sox manager Grady Little defied his management and relied on his intuition in leaving in pitcher Pedro Martinez in a key situation despite overwhelming data showing that his effectiveness diminished after 105 pitches. (Mr. Little is no longer an employee of the Red Sox.)

Other Important Points

- **Moneyball.** The central premise of *Moneyball* by Michael Lewis does not revolve around the use of certain statistics; it is about using data to optimize how a team spends its money.
- **Salary cap.** Mr. Neyer does not foresee a salary cap coming to baseball in the near future. The owners are making too much money and the players want no limitations on their earning power. It won't happen.
- **2006 predictions.** While Mr. Neyer would not offer up any specific predictions for 2006, he did note that the Yankees, Mets, A's, and Indians should all be very good.

Biographies

Summary 1 Competing on Analytics—Keynote Address

Thomas H. Davenport

*President's Distinguished Chair in Management and Information Technology,
Babson College Business Institute*

Thomas H. Davenport is the President's Distinguished Professor of Information Technology and Management at Babson College, the director of research for the School of Executive Education, and the academic director of the Working Knowledge Research Center, the Institute for Process Management, and the Innovation and Corporate Entrepreneurship Research Center. He is the former director and current fellow of Accenture's High Performance Business Institute. He is the author or co-author of nine books, including *Working Knowledge: How Organizations Manage What They Know* and *The Attention Economy: Understanding the New Currency of Business*. Tom's latest book is *Thinking for a Living: How to Get Better Performance and Results from Knowledge Workers*. Davenport is a frequent contributor to *Harvard Business Review* and other leading journals.

Summary 2 Competing on Analytics—Panel Discussion

Keith Coulter

*Managing Director,
Barclays UK Consumer Cards and Loans*

Keith Coulter was appointed managing director of Barclays UK Consumer Cards and Loans in February 2005. He originally joined Barclaycard in January 2001 to lead the Information Based Customer Management (IBCM) strategy. Prior to his recent appointment, he was responsible for all customer and staff operations as chief operating officer of Barclays UK Consumer Finance based in Northampton. Before joining Barclaycard, Keith had 15 years' experience in the credit card business with Citigroup, First Chicago (now part of First USA/Bank One), Associates, Diners Club, and Radio Shack.

Thomas H. Davenport

See Summary 1

Ted Gifford

*Vice President of Engineering and Research,
Schneider National*

Ted Gifford is vice president of engineering and research at Schneider National, Inc. In this role he has responsibility for groups engaged in supply-chain and transportation engineering, industrial engineering, statistical analysis, operations research modeling, and consulting. Prior to joining Schneider, he was a professor of Mathematics and Computer Science at the University of Alaska. Previous positions include director of quantitative research for an investment firm, senior software architect at Symantec Corp., and president of a software development company. He has an MS in

Operations Research from Georgia Tech and an MA in Mathematics from University of California Berkeley.

Irving Tyler

*Vice President and CIO,
Quaker Chemical*

Irving Tyler is the vice president and chief information officer for Quaker Chemical Corporation, a global developer, producer and marketer of custom formulated chemical specialty products. Tyler oversees all of Quaker Chemical's information services on a global basis. He is responsible for developing information systems (IS) strategy, and for providing business support in integrating IS actions and programs into Quaker's business strategies.

Glenn Wegryn

*Associate Director, Global Analytics,
Procter & Gamble*

Glenn Wegryn is associate director, global analytics, at Procter & Gamble. He leads a corporate group of analysts providing modeling and business expertise to manufacturing site location analysis, distribution network design, supply chain design, planning and scheduling, purchasing analysis, business strategy development, and financial and inventory analysis.

Kirsten Sandberg (Moderator)

*Executive Editor,
Harvard Business School Press*

Kirsten Sandberg is an Executive Editor at Harvard Business School Press. She has edited such bestsellers as *The Experience Economy* by Joe Pine & Jim Gilmore, *Information Rules* by Hal Varian & Carl Shapiro, and *Unleashing the Killer App* by Larry Downes & Chunka Mui. Recent publications include Gerald Zaltman's *How Customers Think* and *The Future of Competition* by C.K. Prahalad & Venkat Ramaswamy. She has also written for HBSP Newsletters group and participated in HBSP Conferences.

Summary 3 The Use of Analytics at Harrah's

Gary Loveman

*CEO, Chairman of the Board, President, and Director,
Harrah's Entertainment, Inc.*

Gary Loveman is chairman, CEO, and president of Harrah's Entertainment, Inc. (www.harrahs.com), the world's largest gaming entertainment company. A former associate professor at Harvard Business School, Loveman joined Harrah's as chief operating officer in 1988 and implemented the gaming industry's most successful loyalty program, Total Rewards, which today boasts 44 million customers. Loveman was recognized as the gaming and lodging industry's best CEO by *Institutional Investor* magazine in 2004 and 2005. He is an outside director of Coach, Inc. and also serves on the Dean's Advisory Council at MIT's Sloan School of Management.

Summary 4 SAS Executive Exchange

Jim Davis

*SVP and Chief Marketing Officer,
SAS*

Jim Davis, senior vice president and chief marketing officer for SAS, leads a staff of 900, devising marketing and product strategy. Responsible for global messaging and creating awareness of SAS products and services in corporate boardrooms, he also guides the direction and strategy for SAS products and solutions. Davis joined SAS in 1994, first as a support engineer, and then as an enterprise computing specialist focused on IT issues. He served as a program manager for data warehousing, one of SAS' first global projects to incorporate customer feedback in the development process. It was in this role that he began to develop the model for continuous communication among engineers, marketing experts, and customers that he champions today. From there he was promoted to director of product strategy, and then vice president of worldwide marketing before assuming his current role.

Summary 5 The Use of Analytics in Sports

Rob Neyer

Senior Writer, ESPN.com

Rob Neyer, a senior writer with ESPN.com, worked as a research assistant with legendary baseball writer Bill James from 1989 through 1992. Following a two-year stint with STATS, Inc. as an editor and writer, Rob moved to Paul Allen's Starwave Corporation to write for the website that eventually became ESPN.com. In the nearly ten years since, he's perhaps written more words for the web's most popular sports-related site than anybody. Rob's fifth book, *Rob Neyer's Big Book of Baseball Blunders*, will be published this summer by Simon & Schuster.

Thomas H. Davenport (Moderator)

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