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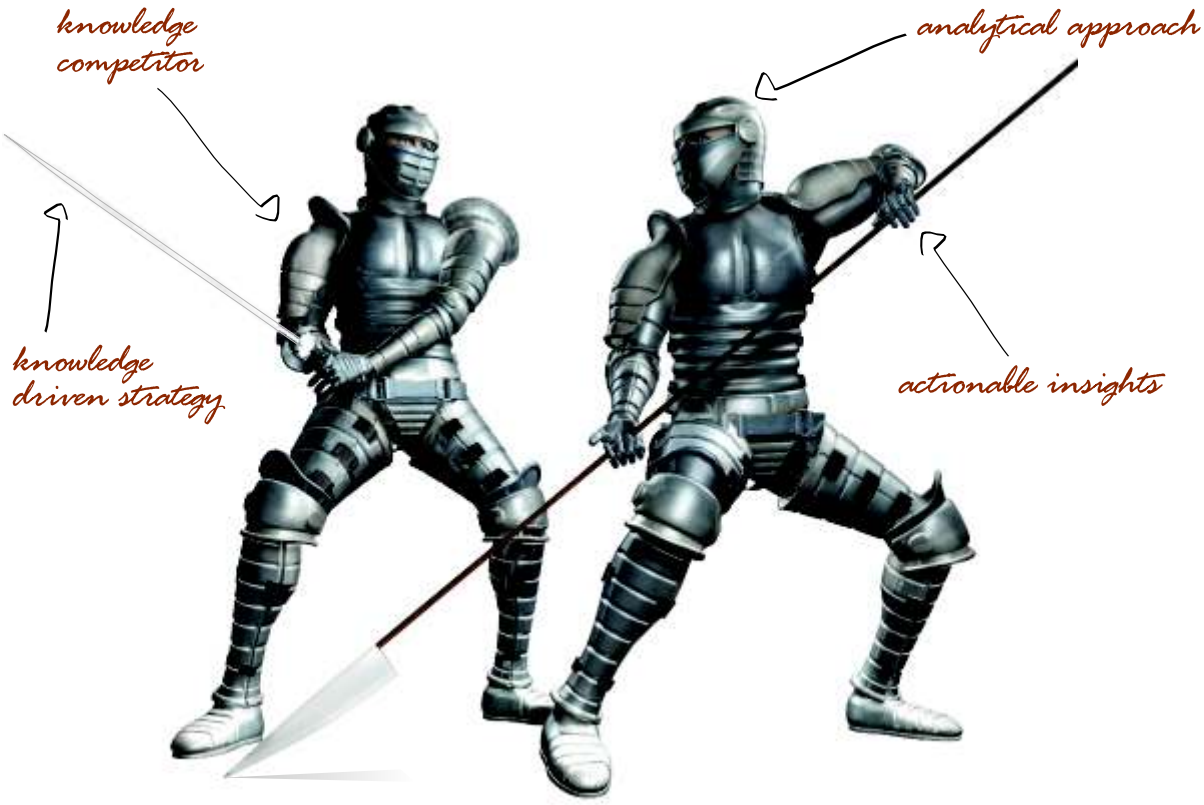
Extending Your Enterprise



Armed With Knowledge

Gaining competitive advantage through analytics outsourcing

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Extending Your Enterprise

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Executive Summary

Continuous and sustained growth is the goal of every organization. However, as an organization expands, it has to confront challenges which can be considered as by-products of growth. How the organization tackles these challenges (some companies may view them as goals) determines its success. Some of them are:

- Understanding customer behavior in different regions
- Monitoring and optimizing marketing spend
- Driving sales force productivity to the next level
- Establishing and optimizing logistics to gain supply chain efficiency
- Reducing risk
- Entering new markets with a targeted strategy

In addition, growing organizations will also have to get their arms around concepts like Big Data, Cloud, Mobile Platforms and Social Media.

If accomplished, these goals can quickly differentiate a company from its competitors.

But how does a company achieve these goals or surmount these challenges?

By competing with knowledge and driving their decision science by actionable insight! In this context, what is knowledge? Knowledge is a comprehensive and linked set of insights obtained with discipline and speed, based on fact and transparent in methodology, generated by rigorously and consistently assessing all drivers of performance, both inside and outside the business.

Insights are generated through research and analytics – the quantitative methods, investigative and predictive, used to explain and identify trends and causal relationships between economic outcomes and the drivers of these outcomes.

Let's take a simple example. Every day, companies make hundreds of decisions that impact their competitive position. Those decisions that are seen as 'core' to the business — performance during the sales lifecycle — are generally based on strong, continual analytic support. But more often than not, analytic support for fuelling decision science comes in bursts, perhaps when there is a radical unforeseen change in the business or when the management changes. And those decisions that are not seen as 'core' are starved of knowledge support.

What it means to compete with knowledge

In contrast, those few organizations that win by competing with knowledge (perhaps less than 10 percent of all companies) generate insights inside rigorous 'knowledge processes' where standard operating procedures for performing these efforts are hard-coded into the organization. The culture of knowledge-driven decision science permeates every function and every level of the business.

Competing with knowledge involves determining which of a company's many daily decisions allow the organization to out-maneuver its competition. The knowledge competitor analyzes those chosen decisions deeply and continuously, examining all relevant facts that create a context for decision-making. Managers at all levels of a knowledge competitive organization buy in to decision-making frameworks that incorporate intuition as well as the insights generated from research and analytics. And importantly, these frameworks are flexible, and easily reinvented to adapt to changing conditions.

As an example, Capital One, a leading global financial services firm, grew from a relatively small division of US-based Signet Bank to a Fortune 200 organization that rivals even the largest global credit card companies by competing with knowledge. The company runs about 300 'experiments' every day to understand the likely effectiveness of new products or programs before it launches any full-scale initiative. Through these knowledge-enabled experiments, Capital One has dramatically increased customer retention and lowered the cost of acquiring a new account.

The sophistication and consistency with which companies leverage knowledge processes and industrial strength analytics separate top-tier competitors like Capital One, P&G, Amazon and Tesco from the rest of the pack.

The edge lies in Analytics Outsourcing

Most companies know very little about where and how they can deploy knowledge processes to drive decisions within their organizations. Their decisions are often reactive rather than proactive and based on intuition rather than knowledge. Even when an organization recognizes the need for knowledge discovery, their understanding as to how knowledge processes should be structured for maximum benefit is often poor.

Despite its criticality to business performance, a substantial percentage of companies do not leverage knowledge in their decision science. Why? Because truly competing with knowledge is difficult.

Negligible automation, limited documentation and restricted knowledge transfer limit data re-usability. This leads to repeated need for data engineering, impacting productivity. The lack of a common framework of engagement leads to seepage of knowledge and limited governance on intellectual property (IP). The inability to quickly scale up leads to inefficient utilization of highly skilled analytical resources.

Companies seeking to change the way they develop and act on insights can look to a trend that has been developing since the 1970s: outsourcing.

For organizations that really want to succeed as knowledge competitors, Analytics Outsourcing presents an opportunity to rapidly transform their business from one driven by intuition and ad-hoc knowledge gathering and analysis practices to one that is driven by insight. Some companies have successfully outsourced their analytics requirements with remarkable impact.

A leading home entertainment chain maximized its revenues in a short shelf life product cycle by accurately forecasting its daily SKU inventory. A leading beverage manufacturer created scalable cross-country tiers to optimize product concept tests it needed to launch a new product. In these cases, the analytics service provider's teams worked as extensions of the companies' staff, and leveraged access to data, as well as the centralized nature of an analytics delivery center to increase sophistication levels and render industrial strength analytics that top tier companies look for.

Analytics Outsourcing resolves the challenges associated with becoming a knowledge competitor by:

Establishing a federated engagement model and systematically standardizing fragmented analytics services (within the organization as well as across third party service providers) creating efficiencies in horizontal leverage across the company. This enables enterprises to examine business opportunities and challenges in a consistent and systematic manner. Rather than creating an internal model to define how knowledge is created and distributed, which is time-consuming and difficult, the company can turn to a provider to deliver, and standardize the knowledge repository spanning all business areas and geographies. All you then need is openness to joint investments and a strong governance model across the company's business units and third party analytics service providers.

Augmenting suboptimal corporate skill sets by expanding the capabilities of a single departmental analyst with a full range of knowledge specialists and data scientists. The effects of disaggregating the single analyst's skills into a trinity of specialized skill sets — industry or domain knowledge, quantitative skills such as

statistics and data management skills — introduce the benefit of speed (ability to scale up or down, and deliver services fast), reducing cost and increasing productivity.

Making knowledge processes easily scalable by effortlessly expanding to create knowledge across a company's geographies, every day, 24/7. Because analytics service providers are dedicated to the business of knowledge discovery, they have the benefit of scale — size, scope and location — that most companies simply cannot replicate when they perform their processes internally. This helps develop industrial strength analytical capabilities company-wide, establish a strong backbone of enterprise analytics in the company and achieving Every Day Low Cost (EDLC) in the delivery of analytics services.

Breaking down corporate silos and establishing best practices by becoming the company's clearing house for knowledge requests; establishing broader and deeper resource pools; and delivering expertise in areas outside the company's primary domain.

Breaking the cultural barriers that inhibit competing with knowledge. Sophisticated analytics service providers implement collaboration tools as a delivery method to speed up the consumption of knowledge. So even far-flung stakeholders in the company can see what types of business problems are being solved by their colleagues in different parts of the organization. That itself can spark a cultural shift to knowledge-driven decision making. This also promotes increased creation of IPs and artifacts, and improved documentation and knowledge transfer.

The Knowledge Center of Competency (CoC)

The solution may lie in transitioning to an analytics delivery center — a Knowledge Center of Competency (CoC) — which ensures that knowledge discovery is standardized to avoid multiple versions of the truth. The CoC can also help companies leverage this knowledge across geographies to account for unique market differences, and is institutionalized and governed by a set of best practices that can be disseminated across the organization.

The benefits from setting up an outsourced Knowledge Center of Competency can be remarkable:

- Standardized sales force effectiveness models ensure that each market approach is uniform; adjusted to local market context
- Standardized sales and marketing reports provide the management a consistent and accurate view of market conditions
- Insights can be extracted from market and business research
- Analytics optimize closed loop marketing efforts
- New product launches are fully supported across the globe with pricing, forecasting, product and competitive research, consumer analytics and economic and financial modelling
- Compliance processes can be governed better and standardized
- Graphics development is industrialized
- Cost reduction in research and analytics operating expenditure
- Improvement in turnaround times
- Development of more productive models, backed by facts.

Because many companies do not compete with knowledge, those who do are today's out-in-front competitors, using research and analytics to generate actionable insights across their businesses. Some leverage analytics outsourcing to more quickly, more effectively and more cheaply get — and stay — ahead of the competition. And as the global business environment continues to change — as competitive forces become dramatically sharper — competing with knowledge is now more important than ever before.

Introduction

This WNS industry thought leadership series paper examines the important role that knowledge processes play in all aspects of corporate decision making, and how companies can 'move up the knowledge curve', in order to compete more effectively.

In a world where economic realities seem to change every day, and the behavior of competitors and customers is no longer easily predictable, companies that are readily equipped to identify their opportunities, define their needs, standardize their methodologies or change their organizations and tools in order to quickly navigate today's turbulent waters are the likely winners – and they win by competing armed with knowledge. For the purposes of this paper, knowledge is defined as a comprehensive set of **insights** obtained with discipline and speed, based on fact, transparent in methodology, and generated by rigorously and consistently assessing all drivers of performance both inside and outside the business – with a 360° view.

Where do insights come from? They are generated through the rigorous use of research and analytics (R&A). Research refers to the process of gathering and synthesizing information from primary sources (directly from customers or opinion leaders) and / or secondary sources (from published content). Analytics refers to the quantitative methods, both investigative and predictive, that explains and identifies trends and causal relationships between economic outcomes and their drivers. R&A processes can be conducted on an ad-hoc basis, such as one-off piece of research or spreadsheet exercise, or inside more rigorous 'knowledge processes' where standard operating procedures for process delivery are hard coded into the organization.

Most business decisions are made in an environment where a variety of forces are in play at the same time: competition, consumer behavior, economics and demographics are just a few of the vectors that impact the shape of the decision. And processes to develop knowledge are more highly developed around the core disciplines of a company; for example, credit risk rating in a credit card company or analytical processes for catching fraudulent claims in a health insurer, given that these processes are critical to the core business. These processes typically reside within functional silos; hence these knowledge processes do not draw upon the greatest depth of institutional knowledge. Often the resources that deliver the processes have a range of skills that focus only on the core discipline. As a result, the approach lacks a full 360° view, a full set of insights.

To illustrate the importance of a comprehensive approach, which brings a variety of disciplines together to generate holistic insights, take the example of pricing for a product or service.

Making price point decisions based on benchmarks a company must achieve, or on competitor behavior alone, gives only one view. Adding an analysis of demand, including a new analysis of consumer elasticity curves, cannibalization analysis or positioning on a brand equity map adds new dimensions. And even more insight could be generated by determining the impact of trade promotions, displays and packaging changes on demand. Assembling the entire picture requires skills and models that analyze all these factors in totality, and the capacity and discipline to respond in real time.

Take another example: In many companies, R&D efforts for new product or SKU variants are driven by logic that ranges from 'my competitor is going to do it so I have to do it' to a strategy of 'letting a thousand flowers bloom.' As a result, the financial and market benefits of the deployment of financial and human resources behind those efforts are not fully evaluated. Early-stage forecasts are often overly optimistic or may not evaluate the implications upon the entire product portfolio adequately. And consumer propensity-to-purchase models are typically generalized rather than being evaluated for their uniqueness to a company's positioning on a brand equity map.
Why? The analytic rigor with which decisions are made is sub-optimal. Understanding the implications of every driver — quickly and with the right tools and rigor in order to institutionalize insights — is key to becoming a knowledge competitor.

This paper serves as a guide for those organizations that, like Capital One, desire to compete with knowledge – ready to elevate the quality and the rigor of their insights, potentially changing the way the entire enterprise works. It is designed to provoke each company's answers to key questions

- How do knowledge processes support decision making?
- What are the challenges most organizations face when moving to a knowledge-centric company?
- How do organizations effectively compete with knowledge?
- What models are leading companies increasingly adopting in order to become full-fledged knowledge competitors?

Case Study

A Knowledge Competitor: The Capital One story

In the 1980s, Signet Bank — at the time, hardly a leading competitor in the American credit card business — hired two financial services consultants to leverage knowledge to generate better customer insights. The pair found, based on a series of analyses, that those customers who incurred large amounts of debt in short periods and then slowly paid off the balances were far more profitable than customers who made small purchases and paid their balances in full each month.

This realization led Signet to introduce the industry's first balance transfer card. It later spun off its increasingly successful credit card division as Capital One, by then a leading competitor. Capital One has stayed true to its knowledge-based roots, running an average of 300 research and analytics (R&A) 'experiments' each day to better target its individual customers. The experiments are a cost-effective strategy to estimate the effectiveness of products and programs before the company launches any full-scale initiative.

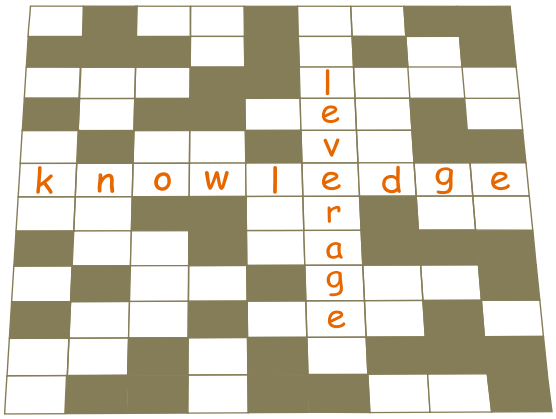
For example, in its savings business, Capital One's experiments with CD interest rates, rollover incentives and minimum balances have allowed the company to predict — with relative precision — how different offers will change retention rates and revenue generation. Using research and analytics, the Capital One savings business dramatically increased retention and lowered the cost of acquiring a new account. Competing with knowledge, Capital One has grown from a relatively small division of Signet Bank to a Fortune 200 organization that rivals even the largest global credit card companies.[1]

[1] Thomas H. Davenport and Jeanne G. Harris, Competing on Analytics (Boston: Harvard Business School Press, 2007), 42.

1. Winning Companies Compete with Knowledge

The success of Capital One, along with other enviable corporate brands, certainly establishes that knowledge processes separate the outperformers from the pack. Yet becoming one of those outperformers by competing with knowledge is likely easier said than done. And acknowledging a high-level need to institutionalize knowledge is only the first step. This section examines the other factors that are important in order to compete with knowledge.

As is the case with corporate changes, it is easy to understand the need, but implementation is the challenge. By their very nature, knowledge processes permeate every corporate function – whether it is sales and marketing, human resources or risk management. And each industry has specific knowledge needs; for example, the specific analytic processes embedded in media industry research and development do not compare to those in a financial services organization for the launch of a consumer finance product.



Competing with knowledge as a competitive differentiator

Despite the clear importance of knowledge-driven decision making, a substantial percentage of companies do not leverage (or do not fully leverage) knowledge in their decision science. As recently as May 2002, a survey by executive search firm Christian and Timbers found that 45 percent of corporate executives relied more on instinct than on facts and figures in running their business.

Even more recently, Harvard University management professor Tom Davenport and consultant Jeanne Harris found similar results in a survey of 371 medium- to large-sized firms. The survey was designed to decode the amount of analytical capability embedded in the organizations. Only 10 percent of respondents put themselves in the highest category, which was described by the statement "Analytical capability is a key element of strategy."[2] Davenport and Harris further suggested that of those 10 percent, probably half are "full-bore analytical competitors."

While Davenport and Harris did not disclose the specific companies in that 10 percent, it is not difficult to identify these pioneers. Tesco sending you the coupon for a product that you intended to buy on your next shopping trip; Capital One's offer of a card with an interest rate, spending limit and loyalty bonus features that perfectly match your lifestyle; it is analogous to creating a shampoo that somehow seems to address your unique hair care needs.

[2] Thomas H. Davenport and Jeanne G. Harris, Competing on Analytics (Boston: Harvard Business School Press, 2007), 24.

So it appears that those companies, which are full-fledged knowledge competitors, have gained considerable competitive advantage, and first-mover status, over peer companies. However, this advantage — leaving the firms whose decision making is still driven primarily by suboptimal intuitive processes — cannot last forever. Just as best practices are institutionalized, competing with knowledge processes such as research and analytics will eventually become commonplace, becoming a business imperative rather than simply a competitive one. All the more reason then that the time to compete with knowledge — to move ahead of the pack — is now.

Intuition is not knowledge

Competing with knowledge is not about denying the benefits of strong intuition. Companies are well-served by leaders at all levels who act on finely honed intuition. Making knowledge-driven decisions is about pursuing intuition in a more measured way – checking out and verifying the soundness of intuition through research and analytics, then acting on it.

At times the possession of knowledge can actually spark intuition. Indeed, insight and intuition together make an extremely powerful decision-making team. While one can argue that the companies that make knowledge-driven decisions will out-compete firms that make intuition-driven decisions, the most successful organizations are generally those that combine the two.

St. Louis Cardinals coach Tony La Russa does just that, and has two World Series titles to show for it. In the book 'Three Nights in August', which profiled La Russa throughout a three-game series between Cardinals and Cubs in late 2003, Pulitzer-winning journalist Buzz Bissinger writes

> La Russa appreciated the information generated by computers. He studied the rows and columns. But he also knew that they could take you only so far in baseball, maybe even confuse you with a fog of over analysis. As far as he knew, there was no way to quantify desire. And those numbers told him exactly what he needed to know when added to twenty-four years of managing experience.[3]

Intuition alone is an inferior driver of business decisions, even though making decisions based on intuition alone is incredibly alluring. Business strategist Eric Bonabeau, while writing for the Harvard Business Review, described that allure: "We want to believe in the transformative power of intuition. For one thing, it's romantic. It raises business above the drab world of spreadsheets and income statements and turns it into something of an art form. The executive office becomes a place of inspiration and vision rather than planning and number crunching."[4]

While intuition-based decision making is seen as swift and attractive, knowledge-based decision making is anything but slow and dull. Competing with generated insights is not merely working with spreadsheets and income statements, planning and number crunching; it is about using what corporations know (based on research and analysis) to drive business decisions, which is sparked and illuminated by intuition.

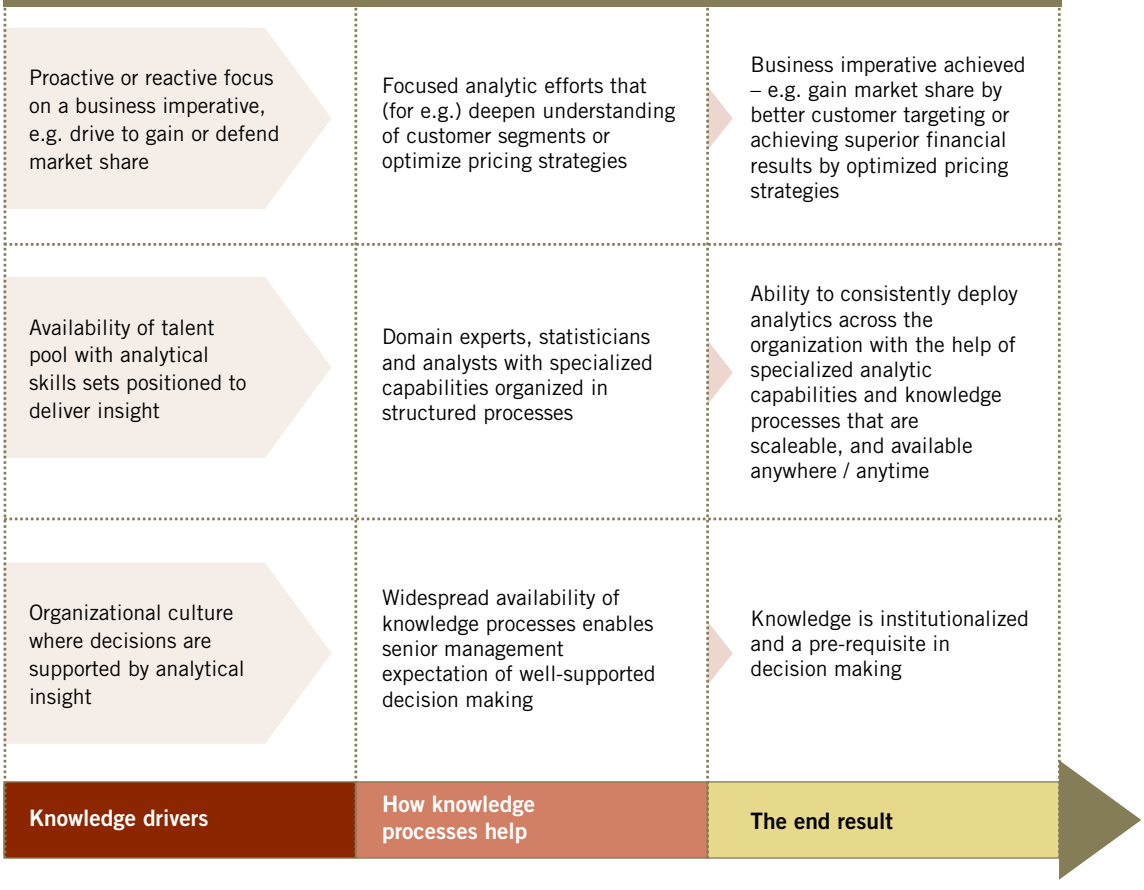
Bonabeau sums up the benefits of knowledge combined with intuition succinctly. "Our desire to believe in the wisdom of intuition blinds us to the less romantic realities of business decision making. We remember the examples of hunches that pay off but conveniently forget all the ones that turn out badly."[5]

[3] Buzz Bissinger, Three Nights in August (Boston: Houghton Mifflin, 2005), 201.
[4] Eric Bonabeau, "Don't Trust Your Gut," Harvard Business Review, May 2003, 3.
[5] Eric Bonabeau, "Don't Trust Your Gut," Harvard Business Review, May 2003, 3.

Acting on knowledge

Companies competing effectively with knowledge know that simply unearthing reams of information is not enough. Rather, it is important to make the right information available in a manner that allows an organization to act on that knowledge. In one of the leading guides to becoming a great organization, management consultant Jim Collins writes, "We found no evidence that the good-to-great companies had more or better information than the comparison companies. None. Both sets of companies had virtually identical access to good information. The key, then, lies not in better information, but in turning information into information that cannot be ignored."[6]

Exhibit 1: The path to competitive advantage



Source: WNS

[6] Jim Collins, Good to Great (New York: HarperCollins, 2001).

Without a doubt, better knowledge leads to superior business outcomes for companies. Perhaps the company is losing market share or has an outdated product mix. Knowledge processes — whether they deliver sophisticated customer segmentation study, analyze distribution channels or support a new product launch — help the company to solve the business problem or realize the opportunity. The result? Increased market share, fewer stock-outs, faster product launches and an improved pricing strategy, resulting in a position where a company can potentially out-compete peer companies.

Implementing knowledge processes could be termed analogous to diligently turning over rocks in order to see what is lurking in the dirt. In 'Good to Great', Collins quotes Pitney Bowes executive Fred Purdue: "When you turn over rocks and look at all the squiggly things underneath, you can either put the rock down, or you can say, 'My job is to turn over rocks and look at the squiggly things,' even if what you see can scare the hell out of you."[7]

> We found no evidence that the good-to-great companies had more or better information than the comparison companies. None. Both sets of companies had virtually identical access to good information. The key, then, lies not in better information, but in turning information into information that cannot be ignored.
>
> **- Jim Collins,** Management Consultant

The rocks are akin to customers, suppliers, competitors and the inner workings of the company. Companies that compete with knowledge ring-fence all the facts and issues, seek to understand them, and make decisions accordingly – rather than making blind decisions, unaware of the potential impact of facts and traps that lurk beneath, waiting to damage the company. Ignorance, in business, is not bliss.

[7] Jim Collins, Good to Great (New York: Harper Collins, 2001), 72.

2. Actionable Insights in Every Corporate Function

Clearly, winning companies drive their decisions using actionable insight generated from research and analytics. This section underscores the need for insight in every corporate function. Certainly the need for analytics is critical in industries that generate reams of data from transactions – retail, telecom, financial services and gaming, for example. But there is no function, regardless of industry, that cannot benefit from the insights that research and analytics (R&A) yields.

How actionable insights are generated: research and analytics

No matter what the function or industry, insights are gained through the application of research and analytics – methodologies and protocols which allow the business to gather, synthesize and extract insights from data. **Exhibit 2** highlights some of the most common types of research and analytics processes.

Exhibit 2: The components of research and analytics

Business and financial research	Domain-specific analytic services
▪ Company / industry research ▪ Business intelligence ▪ Corporate finance ▪ Equity research ▪ M&A research ▪ Library / documentation services	▪ Consumer analytics ▪ Operational analytics ▪ Risk analytics
Data services	**Market research**
▪ Data management ▪ Report delivery and development ▪ Customer communication management ▪ Ad hoc analysis and insights ▪ Sourcing and spend analytics	▪ Research design ▪ Survey management ▪ Data collection ▪ Data processing ▪ Analysis and presentation

Source: WNS

Business and financial research

Business and financial research, at a high level, is the process of accumulating and synthesizing secondary information on markets, geographies, competitors, products and other less structured data available in syndicated reports, information portals, company literature, industry-specific and financial databases and the Internet. The objectives are linked to the business context for which the research is being performed.

The research provides a profile of marketplace activities: what is occurring, who the players are, how they are doing it, and other key facts about the situation. It is either used as-is by decision makers tasked with making subjective decisions based on intuition, or paired with more quantitative results coming from correlative analytic models to deliver a deeper understanding of the quantitative implications of industry trends and competitor behavior in the context of a market situation. For example, business research (BR) could involve gathering competitive data about new product launches for a consumer packaged goods (CPG) firm, identifying competitor store locations supporting a new store opening strategy for a retailer, delineating competitor product features for a consumer financial services (CFS) company, gathering product and commercial information on steel suppliers for the procurement arm of a major automobile manufacturer.

When consumed as a discrete product, business research typically informs qualitative decisions and acts as a foundational step for strategic decisions on markets and products. Discrete could mean that the requirement is one-time, but many companies actively maintain and refresh market, product and competitive information, especially if this information is a vital input to a structured knowledge process within the decision making apparatus of the company. When married to an analytic process where business research becomes a supplier of 'meta-data' to an analytic or data-driven decision process, business research plays a powerful role in bringing external context to internal data.

Financial research has embedded within it fundamentally the same process of aggregating and synthesizing data as in business research, but the nature of the data, the uses of the product and the skills required to perform it are quite different. As indicated by its name, financial research focuses on creating insight from financial information, primarily information extracted from financial statements.

Companies use financial research to develop benchmarks and relative performance metrics for themselves. In such applications, analysts use higher-end financial techniques to break consolidated statements into geographic, business unit, or product level financials. In the world of professional and financial advisory services, this capability is used to identify M&A targets, screen securities for investment purposes and populate equity research reports with quantitative financial facts.

Financial research can also be extremely powerful when married to certain types of analytic modeling. As an example, when companies are evaluating the sequencing strategy for a product or service in the global marketplace, understanding the revenue and financial performance of players with geographic skews is one of the defining

variables, along with broader demographic and attitudinal data. Whereas in business research, extracting insights from data has a qualitative aspect, the skills required in financial research require analysts with strong financial and accounting backgrounds.

Market research

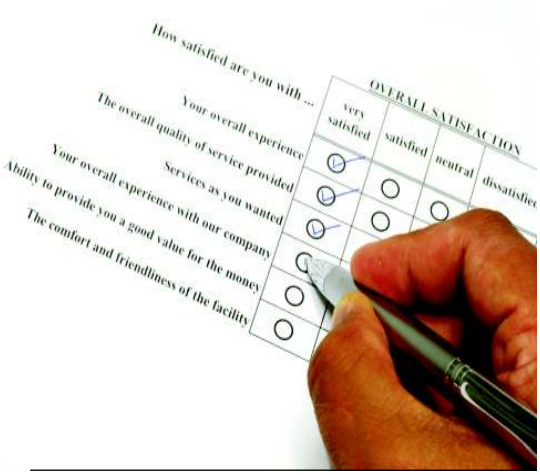
Market research (MR) is a discipline that fundamentally gathers a wide range of information relative to the market for goods and services by profiling the behaviors of current, former and prospective customers. Historically, companies tap into market research agencies to decide which questions should be asked, how should they be asked, and to whom they should be asked in order to better understand or predict the behavior of their customers. A significant amount of spend in market research is driven by the need to make an informed decision when spending billions of dollars reaching existing and prospective customers through advertising.

Commonly, companies that wish to reach specific segments of the mass population or exploit the inspirational qualities of a brand to drive consumption are the heaviest users of this service. Market research also comes into play when companies are launching new products or services and/or features where communication with existing and prospective customers is important.

Despite the need to understand and track the behavior of today's customer ever more closely, the amount of market research performed is actually limited. The reason? Most marketing managers believe that there is always some degree of uncertainty with the reliability of results. The studies themselves are labor intensive and expensive to conduct. But most importantly, despite tons of data gathered from consumers, companies find that their ability to extract insight from this data is limited and constrained by economics and the objectives of the research itself.

Given that the primary function of MR is to inform advertising spend decisions, the depth and breadth necessary to support many and frequent tactical analytic decisions is not always affordable. Market research agendas are typically set annually by the strategic team within the marketing department. When a tactical decision on price or micro-messaging comes up six months later (potentially in a geography that was not studied at the outset), this body of research is difficult to fund or obtain quickly. What does exist is often not fit for purpose and the resources to analyze the information for a new campaign may not be available. Therefore, the only way in which market research can prove to be valuable at a tactical level is if it can be performed in a scalable, frequent, low-cost manner.

Even in companies that are structured to get the best value out of their market research, a certain percentage of their spend is dedicated to simply refreshing the body of research accumulating over the years – a relatively repetitive process. In this instance, the need to re-build and test the basic survey design and strategy model is minimal. Once the higher-value, front-end component of market research is stripped away, the process of collecting and processing the data is actually fairly commoditized. Collecting data from consumers or businesses is becoming significantly less expensive with the availability of tools such as Computer Aided Telephonic Interviews (CATI) or with the use of technologies such as Computer Aided Web-based Interviews (CAWI). Processing data in tools like SAS or SPSS requires programming skills that are now found in relative



abundance in the marketplace. The extraction of basic information from MR is also something that requires a fairly low level of incremental skill – a combination of the ability to create a headline from a table of data, and visual aid (for example, MS PowerPoint) skills.

With the trend towards commoditization of a substantial portion of the MR process, it is increasingly possible to drive the use of market research down into the tactical bowels of an organization. The cost advantage emanating from the disaggregation and portability of skills enables companies to perform a lot more market research, deploying it more broadly within the organization to better support tactical decision making. For example, a leading consumer packaged goods company studies the propensity to purchase its products. It uses structured equation modeling to identify the discrete product features that are important to its customers, then launches a short market survey to make sure that the results of that analytic exercise are valid when actual customers are, through market research, asked about the perceived value of a specific feature / price combination. A leading consumer financial services company designs a credit product with certain specific features based on an analysis of the behavior of their existing customer base. It then validates that hypothesis with market research to ensure that the right segment of consumers in fact find value in that feature.

Data services

Data services refers to a set of capabilities by which a company manages, extracts and manipulates the vast data sets that most organizations obtain from their enterprise systems. Typical data sets contain information on customers, sales, products, financials, supply chain information and transaction-level information. The objectives of data services range from obtaining information on what has happened in the business (MIS) to establishing the right data sets to perform higher-level analytics.

While there are a variety of processes and technical skills required to perform these processes, data aggregation processes are not in and of themselves 'knowledge processes'. Rather, they are key enablers of knowledge processes.

Take MIS, for example: The service is reflective of data management and representation rather than assembly. When it comes to processes where data sets must be created to support analytics, more complex skills may be required. Such as understanding what kind of data must be assembled requires a deeper understanding of the analytics that will be ultimately performed using the data. As a result, in most cases, data services and analytics are deployed in conjunction with each other.

Some of the specific processes within data services include:

- Data management, which helps companies manage their complex data processes. In addition to managing data integration from disparate systems, data management teams ensure that clean data is available in usable, complete and uniform formats for analysis via stable data processes.
- Report delivery and development, which focuses on transforming raw data elements into usable business-centric reports for decision support across a range of functions. The output range varies from MS Office outputs to graphical user interface-driven drill-down reports prepared via requests which can be either customized or standardized.
- Customer communication management assists stakeholders with management of the end-to-end customer communication process across multiple channels such as direct or e-mail. Services may include campaign targeting /

response modeling or campaign execution and evaluation measured by ROI, which in turn is fed back to complete a closed-loop marketing process. Skills required for customer communication management include proficiency in both proprietary software and standard campaign tools as UNICA / SAS.

- Ad-hoc insights and analysis (I&A) delivers a specific understanding of transactional data in order to connect disparate trends to better understand the market / operational landscape. It uses both statistical techniques and algorithms to corroborate, evaluate and uncover business issues which would otherwise be ignored or unexamined.
- Sourcing and spend data services assist stakeholders with vendor selection as well as the management of the sourcing process. This service helps companies source correctly, manage and forecast spend, and identify savings opportunities.

Business domain-specific analytics

While business research, financial research and market research are typically focused on collecting and synthesizing facts, data mining assists organizations in managing, integrating and manipulating data and analytics focuses on taking those facts and extracting insight out of them. It is the last step in creating actionable insights from knowledge to drive business decisions.

How are business decisions driven by actionable insights? At the highest level, multi-faceted business issues, questions or challenges are broken into analytic problem statements and solved by specialists. The first step in this process requires developing an understanding of the problem itself – an intimate understanding of what business issue must be solved or what hypothesis proved or disproved. However, proficiency with respect to the statistical techniques that should be deployed for the analysis, or surety as to what kind of data is actually available within the organization, is generally missing.

The type of business issue being tackled, the kind of data available for analytics, and the skills or techniques required to unearth the solution vary by function. Broadly speaking, consumer-related analytics typically find their application in sales and marketing departments; operationally-oriented analytical problems are found in manufacturing or supply chain environments; and financial or risk-related analytics are the focus of finance organizations.

Given that analytics deals with data, which analytics are performed is both driven and limited by what kind of data an organization collects or has access to. For consumer analytics, the most typical data sets involve market research data and / or transactional data. Transactional data can be internally generated by companies that deal directly with their consumers (such as retailers or telecom firms) or can be purchased from third party vendors (such as retailers that sell shopper data). Broadly, these types of analytics are focused around revenue and marketing-oriented issues such as: Who is buying? Why are they buying? When are they buying? Are they buying more or less than in the past? Organizations striving to develop a deeper insight into customer behavior will typically augment their information on consumers with internal data from other parts of their organization (such as the data that can be derived from their call centers) or meta-data (environmental data such as demographics and wealth information). Ideally, they will gather information from market research or shopper data on their competitors as well so that their models are more fully informed.

In the case of operational analytics, the focus turns to how efficiently an organization is doing its job of fulfilling consumer demand. From a manufacturing perspective, firms are looking at generating production efficiencies at a production-line level all the way up to a network of manufacturing plants. They are measuring and analyzing through-puts, reject-rates and factor costs such as the labor and raw materials required to create a unit of output. Service elements of organizations that process transactions or handle calls approach analytics with a similar perspective; in this instance the 'product' may be handling calls from customers.

Analytic techniques also support supply chain decision making where companies strive to optimize their supply chain and distribution network, looking to minimize the costs incurred in this part of the value chain and achieve Every Day Low Cost. Data generated by company ERP systems is the basis on which analytics are performed; therefore ERP systems have sophisticated analytic tools built on top of their core systems. Evolved organizations also consider the demand element when optimizing what is shipped where so as to minimize inventory, stock-outs and returns. With the advent of just-in-time supply chains, manufacturers deploy predictive models that use historical demand, stock positions and environmental factors to modulate the speed with which replenishment is taking place. Optimizing networks and a focus on the financial costs of making and moving products are the key analytic imperatives in operational analytics.

Financial analytics is typically centered on the need for finance organizations to control and drive predictability into a company's financial performance. Analytics can be used to predict financial performance — revenues or costs — based on historical performance, environmental drivers, booking history, or other leading indicators. Costs can be predicted based on a detailed understanding of cost drivers. Risk analytics are typically most developed in the financial services industry from a credit risk management perspective but can also be used in less credit-intense environments to assist in collections. Fraud is another area where predictive analytics can reduce the chances that the organization will be on the receiving side of a fraudulent transaction.

But for detecting frauds, and understanding of the business domain is imperative. Hence, at the outset of any analytical investigation, a domain expert (typically an MBA with prior experience in the industry and in the function) engages with the stakeholder and explores the boundaries of the issue itself. The 'what' and 'why' of the situation is discussed in some detail so that the domain analyst understands the objectives of the analytic effort. Recommendations are made on altering the scope of the study based on the analyst's previous experience solving similar problems for other stakeholders. If the problem posed is being investigated for the first time, then there should be a fairly detailed conversation about the availability of data sets within the organization, the architecture within which the data resides and limitations inherent within the data. It may also require discussion about what other kinds of internal data or even third-party data need to be integrated with the traditionally deployed data sets.

In the perfect scenario, a statistician and the lead data engineer are teamed with a domain expert. The statistician is typically proficient in certain types of data sets (market research or pricing or transactional datasets) but has also spent time working on solutions for the particular industry. His (or her) responsibility is to ensure that the appropriate statistical techniques are used based on the objective of the data problem and the type of data to be analyzed. The data engineer is typically proficient in certain programming

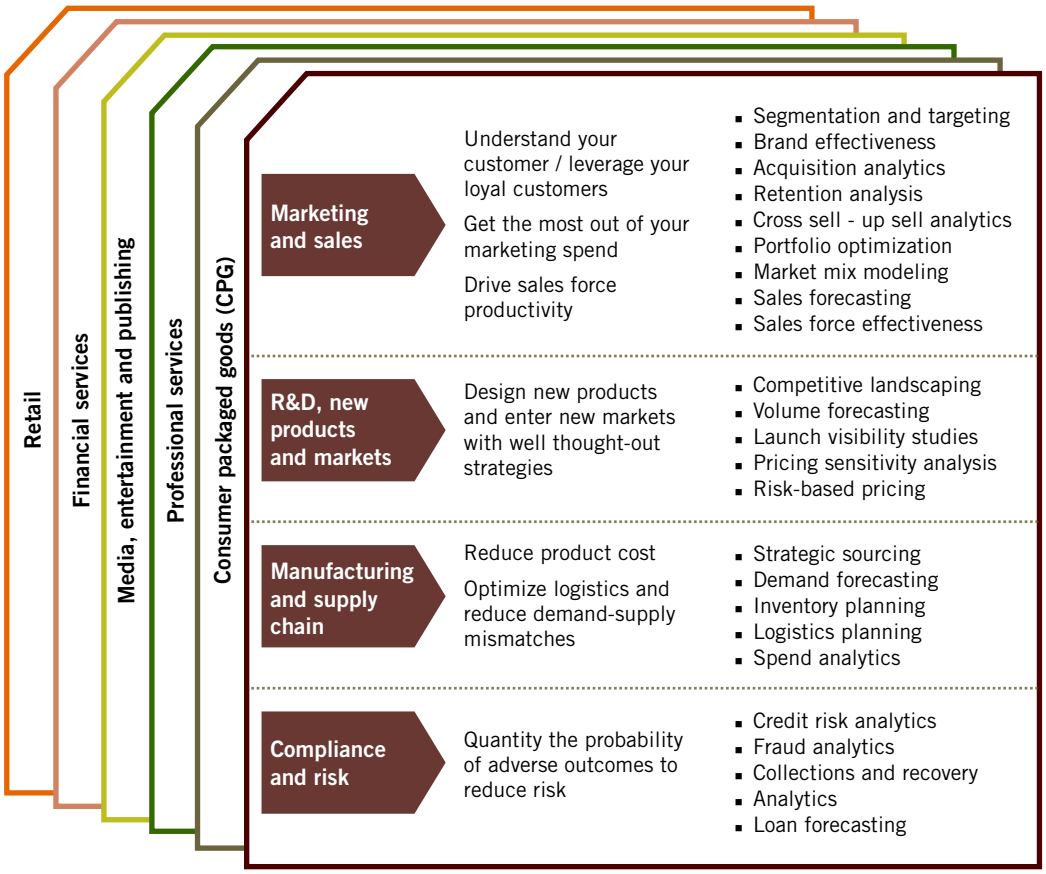
languages and certain types of relational databases. His job is to either deploy his knowledge of the stakeholder's data architecture or understand (in the case of a new relationship) where the data resides, how it can be extracted and what kind of manipulation it will require in a tool such as SAS – based on the solution defined by the statistician and the issue as understood by the domain analyst.

The final result or end product of the analytical investigation can vary dramatically depending on the type of problem posed to the team. In a situation where a stakeholder requests an analysis of why a particular product lost market share in a particular geography, the end product may be a PowerPoint presentation with a storyline that lays out the logic flow and analysis. In a situation where there is a need to score existing customers on their likelihood of attrition, for example, the end product might be a database with attrition scores against customer identification tags.

Often a point or 'development' solution rolls over into a 'production' solution. There may be a need to automate the algorithms developed into a tool or model that is run and maintained by the analysts on a periodic basis. A good example of this is a situation where one of the world's leading IT services companies periodically runs models to identify existing customers for new product promotional information distributed through e-mail campaigns.

Exhibit 3 highlights the ways in which analytics support business decisions in every functional area, ranging from sales and marketing to research and development functions and manufacturing and supply chain to risk management functions.

Exhibit 3: How analytics supports decision making across the business - an illustration



Source: WNS

How actionable insights are leveraged

An organization that is not leveraging knowledge in all functional areas — from sales and marketing, production and R&D to supply chain and corporate strategy — will not gain the full range of benefits that come with being a knowledge competitor. Indeed, within today's increasingly complex, global companies, the outputs of every corporate function in some way impact the market position of a company's products or services. For example, advanced supply chains must obtain the right product at a lower price point and deliver it faster to the right point of sale. Finance departments must find innovative ways in which to structure their own credit or products so that they become cheaper to consumers. Marketing functions in any industry are challenged to identify a precise slice of consumers whose aspirational or other needs remain un-served. R&D functions must speed product launches by streamlining and focusing the discovery process. Research and analytics allows the corporate functions to generate those outputs more efficiently, more quickly, and more effectively.

Leveraging actionable insights in sales

When implemented correctly, research and analytics supports informed decision making at every phase of the sales lifecycle, from acquisition to cross-selling / up-selling to managing attrition to enticing customers who have left to return. In the business-to-business context, consistently applying sales analytics helps companies understand which phase of the sales cycle customers are in, and what actions might move them from one part of the sales lifecycle to another. In short, the right sales analytics determines which decisions will lead to maximum success in sales programs.

Tesco, the UK's leading retailer, is a good example of an organization which gained competitive advantage over its peers by using research and analytics in sales to drive customer retention decisions. One of the world's largest food retailers, operating in 13 countries and through every type of retail format, the company began its transformation through analytics in 1995 when it introduced its loyalty card, the Clubcard. With the customer insights it derives from Clubcard purchase data, Tesco creates promotions tailored specifically to its customers' priorities and interests, issuing seven million targeted variations of product coupons each year. As a result, Tesco has outstripped its competitors in terms of coupon redemption rates, customer loyalty and financial performance.[8]

Retail banks such as Wells Fargo routinely 'score' their customers to predict the likelihood that an existing customer would be interested in purchasing another product from its diversified product slate. As a result, while most customers of retail financial services organizations buy between two and three discrete products from their service provider, Wells Fargo boasts of a cross-sell rate of over five products per retail customer. Their scoring models are not the only reason why they are able to achieve such path-breaking experience. Wells Fargo has researched and analyzed the very process by which consumers can be induced into consuming more products and has aligned the organization to support this process.

A leading U.S. auto insurer long struggled with finding the right compensation model for its agent broker community. Research and analytics helped the company cluster its agencies based on the profile of the products they have sold, along with variety of other practice specific markers. It was

[8] Clive Humby and Terry Hunt, Scoring Points: How Tesco is Winning Customer Loyalty (Philadelphia: Kogan Page, Ltd., 2003).

then able to use this information, combined with panel research, to attribute motivational drivers to each cluster and design specific compensation programs to meet the needs of the clusters. As a result (after some trial and error), the insurer was able to grow revenues and enjoy greater profitability, despite paying out more in terms of absolute commission to fewer loyal, high-performing agents.

Leveraging actionable insights in marketing

While research and analytics are important in every area of the business, it is in the marketing arena that organizations invest more on knowledge than any other functional area – in part because of the breadth of data required for analysis. Whatever the industry, marketing organizations are charged with the challenging task of trying to meet the infinitely varied needs of consumers. This effort encompasses almost every feature of a product or service – price, packaging, point of sale promotions and marketing messaging.

Because of their extreme reliance on data, marketers are faced with a dual challenge – both extracting insight from mounds of quantitative data increasingly available through ERP systems or by distribution channels in the form of customer data, and predicting unarticulated needs and behaviors from qualitative data gathered through market research. These challenges must be met at two levels: a strategic level where the broad positioning of the product or service is cast in concrete and adhered to rigorously, and at a tactical level where decisions on factors like price are made both periodically and frequently, depending upon market conditions. Compounding this challenge is that each tactical decision itself sets in motion an effort to analyze the success or ROI of marketers' efforts. This attempt to analyze, learn and act from a constant cause and effect cycle is further regularly affected by the decisions that competitors and the trade channels are making, not to mention broader societal macro-trends such as economic conditions, demographics and buying power that over time shift fundamental consumption behavior.

On messaging alone, customers are exposed to a large number of marketing messages every day, in one form or another. Implemented in the right way, analytics identifies which messages to send, when, and to whom, cutting through the glut of competing messages so that one resonates and compels action. Marketers must be able to answer a number of questions:

- What is the universe of potential buyers for my product and how are they segmented? Which segments prefer me to my competitors and why? Are those segments growing or shrinking?
- How does my consumer see me or why does he buy me? Is that image changing? Do I have the right positioning or does my competitor have a more sustainable brand position? Should I reinforce or alter the image?
- How can I reach my existing customers and new potential customers? For example, what media will they be watching? Where will they be watching? What will they be watching it on? Is the time that I reach them a time which will spark consumption?

Managing competitive price strategies, SKU proliferation and multiplying trade channels requires the marketing department to use research and analytics to develop an understanding of such fundamental questions as:

- What truly does the pricing power of my product in the marketplace mean? When will a price reduction in a premium product undercut the position of other products in my portfolio?
- When a competitor drops his price, should I react? If yes, by how much? What is the optimal price-volume tradeoff?
- What are the tradeoffs that consumers make in deciding package size and price per ounce? How is that tradeoff impacted by where the product or service is consumed?
- What should be my promotions or discounting strategy? What kind of a lift will it give my sales? Will it damage my brand position?

While many of these questions focus on the externalities that marketers have to deal with, analytics must make marketing more of a science than an art. Given the vast budgets spent on marketing (both advertising and promotions), marketers remarkably spend little time measuring themselves. As advertising pioneer John Wanamaker said, "Half my marketing dollars are wasted; I just don't know which half."
Post messaging, the application of R&A gauges success. The output evaluates the effectiveness of marketing campaigns, whether the initiative is impacting consumer decisions as expected.

Indeed, analytics that measure the effectiveness of marketing activities are very powerful. As an example, one leading CPG firm has a $2.5 billion annual marketing budget. The company uses very sophisticated methods to analyze the effectiveness of its marketing spend – it actually knows, for example, whether 100 or 75 TV commercials are more effective. That kind of measurement is not typical in marketing functions, but is reflective of the level of sophistication companies can achieve through knowledge processes.

Leveraging actionable insights in finance and risk management

In the finance function, actionable analytics are a vital forensic and forecasting tool, helping organizations assess the implications of past performance and model future implications. All too often, financial planning and analysis departments spend the bulk of their analytic resources looking at results out of context and time evaluating such reports as variance of actual spend versus budgeted spend. Analyses such as these are fundamentally flawed if the base budgeting process, which is inextricably linked to the business, is broken. Rather, finance departments

should be able to predict what the spend should have been, given the appropriate cost drivers of a particular category. For example, Activity Based Costing (ABC) is a classic analytic tool by which costs are organized not by spend category (labor, depreciation) but by an underlying activity which drives the cost (warehousing, selling, distributing). Once one understands the relationship between the cost driver and the cost itself, rather than the cost by period, it is possible to predict with some accuracy a pro-forma cost based on what actually happened in that financial period. Variances can then be analyzed against predicted values which sharpens the forensic analysis context.

Spend analytics for products and services purchased from third parties is another area where finance or procurement functions can effectively leverage research and analytics to reduce direct and indirect costs. Hunting for alternate suppliers, identifying the right commercial agreement and benchmarking against other companies all play a role in reducing cost in all categories.

Analytics also plays a large role in the fraud arena, a function where finance functions must pay increasing attention. Taking consumer fraud as an example, analytics helps companies create the

markers which identify a potentially fraudulent transaction even before it is consummated. This example is particularly relevant in online businesses; for instance, one of the leading online travel agencies combats fraud with a unique combination of analytic tools. It has identified a variety of transaction-specific and consumer-generic factors that predict the likelihood that a particular transaction is fraudulent. When analyzing past fraudulent transactions, it found markers such as the city pair of the airline ticket being purchased combined with the time of purchase, the location of the transaction, the past purchase pattern of that client, the time of year, the dollar value of the transaction and time between the date of the transaction and date of travel, then built a series of complex business rules into a fraud tool that flagged transactions for further human evaluation.

Particularly in the current economic environment where it is essential to quantify the probability of adverse outcomes to reduce corporate risk, it is imperative to focus research and analytics on managing risk and compliance. All industries, particularly financial services, have been hit hard because of inadequate risk practices. For example, credit risk analytics predict the likelihood that a prospective customer will be delinquent or default on his / her obligation to pay. It is also used to decide what the appropriate interest rate is that the customer should be charged and which terms and credit limit should be extended. This type of analytics is performed using past credit history (as provided by FICO scores or similar scoring), income and asset / liability information, employment profile and a variety of other factors.

Leveraging actionable insights in research and development

Within the research and development function, analytics plays a key role in helping companies ration increasingly limited research dollars by focusing them on R&D effort where the probability of commercial success is the greatest.

Analytics adds vital marketing insights to the research process. Companies traditionally exhaust major funding on market research before they undertake product development in an R&D environment. However, this tells them little about how to sequence their launch in a global marketplace. To provide insight, one of the United States' largest consumer packaged goods companies uses research and analytics to define the sequencing of product launch and support across more than 60 countries globally. This company knows that, when compared to the developed West, most global markets are still evolving from a consumer-behavior and readiness-to-consume perspective. The consumption of products such as hair conditioner and disposable diapers, for example, is highly correlated to a variety of income and socio-cultural factors; the penetration of products can predict an emerging sophistication in consumption behavior or suggest the need for local remedies with similar applications. A combination of research and analytics gave the CPG major the insights to assess where the 60+ markets lined up on a consumption curve, thus highlighting the markets for first wave launch and investment. To provide the right decision support, the company created predictive models correlating demographic data such as wealth, urbanization, and age cohorts with historic consumption rates of products launched in recently developed markets, supported by research to identify comparable products and attitudinal qualities of the consuming population.

Leveraging actionable insights in human resources

There are a variety of ways in which research and analytics adds actionable insights to the critical task of maintaining employee satisfaction as well as high performance. Companies often refer to their employees as their most important assets but it is unclear how many of them understand the factors that drive employee satisfaction. Obtaining answers to questions such as: 'Which employees are likely to leave the organization?' 'Why?' 'What characteristics of their employee experience are potentially causal factors?' is critical.

The first step in the analytic process is polling the employees with the appropriate set of questions that identifies their attitudes towards their work and professional desires. Analyzing their responses along with performance data, demographics, tenure, compensation practices and other policies can reveal and predict which employees are most likely to leave and which are most likely to stay. In environments such as call centers or transaction processing centers where retaining staff can play a key role in keeping external customers satisfied, these types of analytics play a key role.
As an example, a leading online travel agency faced with attrition issues analyzed the factors driving employee retention and found that work content, front-line agent empowerment and shift staffing patterns were the most significant factors driving employee retention. With research and analytics, the company had the tools to effectively manage its workforce satisfaction.

Employee compensation models — particularly in sales forces and in work environments where people are paid on a work output basis — can also be transformed through the help of analytics.

Understanding what sparks performance in sales people and then designing variable compensation policies in response can drive higher sales productivity and retention of the best and brightest.

Understanding what sparks performance in sales people and then designing variable compensation policies in response can drive higher sales productivity and retention of the best and brightest. For example, in a transaction processing environment, a major outsourcing company converted a fixed with variable compensation model into a primarily variable compensation model. Supporting analytics suggested that the variance in productivity in a highly repetitive and standardized task was too great to be explained by innate capability but was better explained by motivational issues. Thus, bringing average and below-average performers up the curve created a 30 percent rise in productivity. The work was performed with fewer people; as a result, those that were retained earned more – a true win-win situation.

Training is another area where analytics can play a role –improving training techniques and helping the retention of course collateral. Using analytics, the aforementioned outsourcer was able to perform test trials on different classroom formats in order to evaluate content retention and productivity on the production floor.

3. The Current State of Knowledge Processes

No two companies execute knowledge processes quite the same way. They are executed variously across the corporate landscape, based upon the positioning of three primary environments – internal roles, technology and the use of third parties.

This section examines how companies leverage those environments differently. Some companies standardize the use of analytical technology while others perform knowledge processes on tools ranging from MS Excel spreadsheets to sophisticated technologies deployed throughout the organization. Some companies augment delivery with contracts with third party analysts, while others outsource a substantial portion of their knowledge functions.

Internal roles

Many roles in the corporate roster contain at least some responsibility for analytics. A good way to understand the spectrum of talent that is deployed is to look at the two primary positions that typically shoulder the bulk of the company's 'analytic load' – the departmental analyst and the 'Analytic Superman'. They are worlds apart in terms of individual capability and how they deliver analytics.

The departmental analyst

Departmental analysts are typically hired from MBA programs. They possess good general 'business sense' along with some level of proficiency with spreadsheet programs and above-average math skills. Most MBAs look at the analyst role as a stepping stone to greater responsibility. The departmental analyst is trying to learn enough about the company and its products to quickly move into a line or supervisory position. While numerically adept, he's unlikely to be a specialist in any particular knowledge skill set such as statistics. Such a specialization could, in fact, get in the way of being promoted to a line job – pigeon-holing the MBA as an analytic specialist.

Within a few years, the analytic work completed for a few specific business situations positions the analyst for the next line job while his analytic models are inherited by the next recently hired MBA. In high-growth environments, the pace of rotation through analyst positions is raised to a speed which makes the institutionalization of knowledge practically impossible. In tough times, the first positions companies cut are these generalist analyst positions. As a result, it is difficult to embed a structure and skill set to turn a company's knowledge into insight.

The 'Analytic Superman'

The Analytic Superman is a math genius or statistics whiz who generally is long tenured within the specific organization. He (or she) knows the business inside and out, knows the source and the dependability of the data, and understands the behavior of the competition. And he is exceptionally fluent in the bedrock of analytics – statistics and math.

For all this knowledge, he is highly compensated. And, as one of a very few such professionals, he is a black box. Requests for insight go in, and domain-relevant insights come out eventually, at the pace at which he can turn around a project. In effect, the Analytic Superman is the only guy in the company who can do what he can do. He has a line stretching out his door and down the hall to the elevator, people waiting for this superman to

give insight into their problem or question.

Companies deploy the Analytic Superman to solve their important analytic problems. But they cannot afford to hire sufficient supermen (even if they could find them) on a global scale. This is clearly not a scalable model for a company aspiring to compete with knowledge. Supermen are not only rare, but expensive and reputation savvy, so only first tier companies can retain them. And when they leave, there is limited talent to fill their shoes.

The upshot? The Analytics Superman is a bottleneck in democratizing the consumption of actionable analytics across the organization. Only the largest geographies get attention. And the methodologies are not standardized nor communicated.

Technology

The technology tools which companies deploy vary in their level of sophistication. Wherever an analytic problem has a material impact on a company's cost of doing business or its ability to compete, the technology is generally robust and sophisticated. These tools typically provide directional 'markers' or clues in industry-specific situations such as identification of fraudulent insurance claims. Other tools deal with functional challenges such as intelligent call routing in call center settings. In either case, this technology can rarely be deployed straight out of the package. The business challenges they address are typically well-bound within a specific function or task. While they codify the more mechanical aspects of analytics by providing filters and 'what-if' scenarios, insight remains the domain of the analyst. They also require a high degree of customization to incorporate business-specific situations, processes, policies and rules. In some cases, their biggest value-add is the ability to create work-flows around knowledge processes, enabling diverse stakeholders to provide input and be alerted to tactical decisions being made.

Yet the need for analytics extends well beyond these 'closed-loop' environments where repetitive, mechanistic decisions need to be made. In the more 'fuzzy logic' environments of a business, the prevailing analytic tool is the common spreadsheet. However, tools — whether spreadsheets or otherwise — are not analytics in and of themselves; rather, they consume analytics. If anything, deploying tools only increases the need for a company to create analytics in the form of algorithms or quantitative business rules that feed and refresh these tools. So while tools are an important means by which a company can become a knowledge-based competitor, they in no way solve the basic need for companies to analyze their data.

Use of third parties

Another approach to delivering knowledge processes is to outsource a task or a series of tasks of which research and analytics is simply a component. For example, companies often outsource the analytics and execution supporting direct mail campaigns. A number of service providers will, based on the client's input, segment a universe of prospects, design and distribute a direct mail campaign around a product or service. Another example is in the field of collection analytics where companies commonly hand over pools of consumer receivables for cents on the dollar to third parties who then use analytics to figure out what they will be able to recover from the pool through call center agents.

Clearly there are third-party companies that are experts in the fields of direct mail or collections, and it often makes sense for the organization to tap into best practices through those third-party players, rather than to try and become an expert in direct mail and collections itself. It follows the old adage of doing what one's good at and leaving the rest to someone else.

4. Achieving Knowledge Centricity

Organizations that compete with knowledge — that use knowledge to drive business decisions at all levels of the organization — become knowledge-centric. The concept that knowledge is king permeates all functions and all levels. It becomes ingrained in the culture, in the CEO's vision, in every aspect in which the company does business.

Yet many organizations struggle to achieve knowledge centricity. This section examines common challenges companies face in becoming knowledge-centric and what can be done to overcome these obstacles.

Moving through the five levels of knowledge competition

Organizations can become knowledge-centric in three ways – by re-engineering their internal knowledge processes and organization, by developing the right methodologies and controls to leverage the talents of select third party resources to augment internal processes, or by developing a strategy to outsource processes end-to-end to third party analytics service providers. No matter what the approach, the goal is the same: to best peer companies by becoming a knowledge competitor.

Using Davenport and Harris' research as a point of departure, the first step in becoming a knowledge competitor is assessing the current state of knowledge processes within the organization. Their research indicates that companies typically follow a continuum of development as illustrated in **Exhibit 4**.

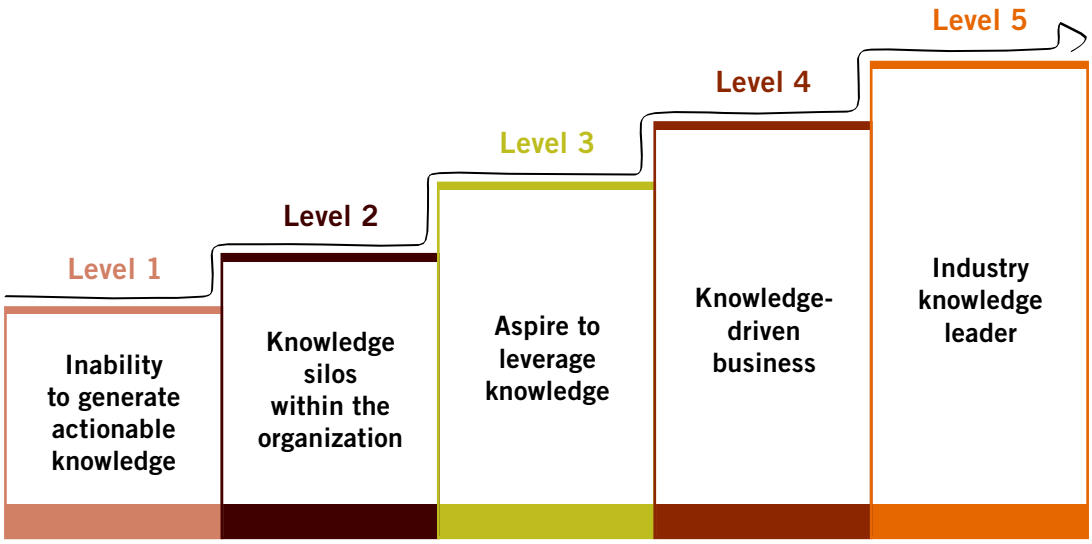


Exhibit 4: The five levels of knowledge competition

Current state of analytical readiness	Organizational knowledge capabilities	Value derived	Research and analytics footprint
Level 1 Inability to generate actionable knowledge	▪ Required skills not extant internally ▪ Lack of organizational will ▪ Focus only on basic transactional functionality	Understanding on an ad-hoc, post-mortem basis as to why it happened	Little analytical infrastructure
Level 2 Knowledge silos within the organization	▪ Business unit / function-centric knowledge creation ▪ Lack of vision to action / compete on knowledge ▪ Little or no information sharing across business units / functions	Understanding of business and issues which must be addressed to improve individual business units / functions	Analytical resources embedded in local functional teams
Level 3 Aspire to leverage knowledge	▪ Desire to leverage knowledge driven from the top ▪ Efforts underway to integrate / better understand internal knowledge capabilities	Ability to capture current conditions attempt to understand future trends	Local analytical delivery model in place
Level 4 Knowledge-driven business	▪ Centralized efforts to understand business trends holistically ▪ Knowledge creation, capture and management key driver for people performance	Ability to anticipate / adapt to changes in external / internal environments to obtain / retain competitive advantage	Central, enterprise-wide analytical structure
Level 5 Industry knowledge leader	▪ Knowledge driven innovation driving business growth ▪ Employees passionate and committed to analytics	Generating consistent business value through insights to obtain competitive advantage over competition	CXO-driven, well-established analytical processes embedded in organization

Source: Adapted from Thomas H. Davenport and Jeanne G. Harris, Competing on Analytics (Boston: Harvard Business School Press, 2007), 36.

The continuum suggests that the journey towards becoming a knowledge competitor involves the levels in which a company evolves on a variety of fronts. Initially, in level 1, the challenge is a fundamental one – while there may be a desire to become more analytical, the company finds that it has neither the resources nor the skills to embark on the journey. To compare, level 2 companies find that over time they have developed some knowledge capabilities in pockets within their organization, typically in areas where not having quantitative skills is simply not an option.

Achieving level 3 is an important watershed for an organization; it reflects a situation where executives (typically senior management) have realized that, in order for their company to keep up with the competition, they must become more quantitative in their decision making.
This realization is typically arrived at when a company's competitors consistently generate higher returns, launch better products and gain market share. Level 4 can be considered an incremental step from level 3 but most importantly, it demonstrates to the organization that the aspirations of level 3 can be converted into tangible results on the ground.

Level 5 knowledge centricity: Achieving a 360° view of the business

Amongst the most knowledge-savvy level 5 leaders, knowledge-driven decision science is part of the company culture. The process of knowledge discovery and consumption is collaborative, encompassing the organization in every department, at every level. To become a level 5 leading-edge, out-in-front knowledge competitor, companies must adopt a 360° approach – it is the brass ring of competing with knowledge.

Achieving level 5 implies an evolution on a variety of fronts. At a minimum, it requires that the ability to leverage knowledge on specific issues and situations that was achieved in level 4 is now a feature of just about every material decision the company makes. This ability spans the full spectrum of business decision making – from strategic decisions to tactical decision making.

It also assumes that the senior management objective to become more analytically driven has now percolated further down into the organization. The culture of using quantitative support to guide decisions is now something to which most managers within the organization ascribe. As a result, meetings and business discussions are peppered with facts and analytic investigations.

So far, the stage-by-stage evolution described emphasizes how knowledge discovery and its importance is viewed and deployed by an organization. But equally as important is the 'how' and the 'what' – 'how' the knowledge is created and 'what' kind of knowledge is created. Only companies that truly believe in the benefits of creating a knowledge repository and insight creation go the extra mile, taking the time to think through changes in organizational design as a catalyst to the process of knowledge discovery, and making investments to ensure that the knowledge created is complete and rich in insight.

Because knowledge processes within organizations typically sit within white-collar environments, managers mistakenly assume that these processes cannot benefit from standardization, that they are not scalable, and that there are no efficiencies to be gleaned from centralizing them and disaggregating them by skill set. It is this lack of standardization and scalability that actually stands in the way of a company becoming a true knowledge competitor.

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Finally, while all managers would readily agree that their business issues are multi-dimensional in nature (it would help them to understand not only the quantitative relationships that their data provides them with but also contextual data – for example, information about competitive moves, what consumers are saying on blogs or trade channel developments as it relates to the business issue at hand), managers in level 5 companies are willing to invest in knowledge creation that fills in the blanks on contextual information – we call this a 360° approach to knowledge creation.

The five level of knowledge competition quiz: Where do you stand?

Where does your organization fall on the path to becoming a knowledge competitor? Is yours a knowledge-centric organization where knowledge is easily accessible to drive all business decisions, large and small? Or is your organization still impaired? Where knowledge is used to drive business decisions, is it ad-hoc?

Answer these questions to see where your organization falls on the knowledge competition continuum

1. What are your company's knowledge capabilities?

- ☐ **1 point:** Our knowledge capabilities are negligible; in decision making, we're largely 'flying blind'.
- ☐ **2 points:** Knowledge creation is local and opportunistic and does not support our company's full range of capabilities.
- ☐ **3 points:** Our organization has started to implement integrated knowledge processes.
- ☐ **4 points:** We are able to leverage knowledge-driven decision making to create a point-in-time advantage for a specific business issue against our competition.
- ☐ **5 points:** We are equipped to leverage knowledge-driven decision science to create sustainable, enterprise-wide advantage over our competition.

2. What questions might knowledge answer in your business?

- ☐ **0 points:** Don't know / We rely on individuals rather than any systematic method for making business decisions.
- ☐ **1 point**: We know what has happened historically in our business; for example, we can accurately explain where we have gained or lost share and why.
- ☐ **2 points:** We can extrapolate existing trends, for example on price or on consumer preferences.
- ☐ **3 points**: We know which levers we can deploy and by how much we need to activate them to improve a specific metric against a competitor. For example, we can predict with reasonable certainty our share position against a competitor based on a specific change in our price.
- ☐ **4 points**: We know how to use knowledge to innovate and differentiate our products and services. For example, we can use our knowledge of the consumer and how his / her preferences have evolved over time to predict demand for our product based on features we plan to introduce into our product or service over the next year or two.
- ☐ **5 points**: We ask, and answer, questions such as: What's next? What's possible? How do we stay ahead? We know enough about the market, consumer behavior, where our

competitors are headed, and what new products and services will emerge in the future to predict the next sea-change in our product or service markets.

3. What are your knowledge objectives?

- ☐ **0 points:** Not clear about our knowledge objectives.
- ☐ **1 point:** To obtain more accurate data on where we are today.
- ☐ **2 points:** To use knowledge so that decisions are supported by facts, not just made by intuition.
- ☐ **3 points:** To institutionalize processes so that we consistently use knowledge in our decision making.
- ☐ **4 points:** To extract unique insights from knowledge processes in order to gain competitive advantage from specific decisions in specific situations.
- ☐ **5 points:** To use knowledge constantly so as to consistently make decisions that range from the strategic to the tactical with the objective of changing our competitive position in a fundamental and permanent way.

4. How do your knowledge processes currently drive value?

- ☐ **0 points:** We don't have any knowledge processes in place.
- ☐ **1 point:** They do not drive discernable value.
- ☐ **2 points:** The value of knowledge processes can be measured in the ROI of specific decisions where we have applied knowledge.
- ☐ **3 points:** Knowledge processes may eventually drive future enterprise performance and market value.
- ☐ **4 points:** At some point in time, knowledge processes will be the important drivers of enterprise performance and market value.
- ☐ **5 points:** Knowledge processes are the primary driver of performance and market value of our enterprise.

5. What would best describe your organization's current research and analytics footprint?

- ☐ **0 points:** Our research and analytics footprint is non-existent.
- ☐ **1 point:** Few analytic processes or dedicated resources are embedded in the organization.
- ☐ **2 points:** Analytic resources are embedded in local functional teams.
- ☐ **3 points:** Analytic delivery models are embedded in specific processes.
- ☐ **4 points:** There is an enterprise-wide analytic structure in place but CXO backing is not apparent.
- ☐ **5 points:** Analytic processes are well-established across the enterprise with visible leadership from the CXO.

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Where do you fit on the knowledge competition scale?

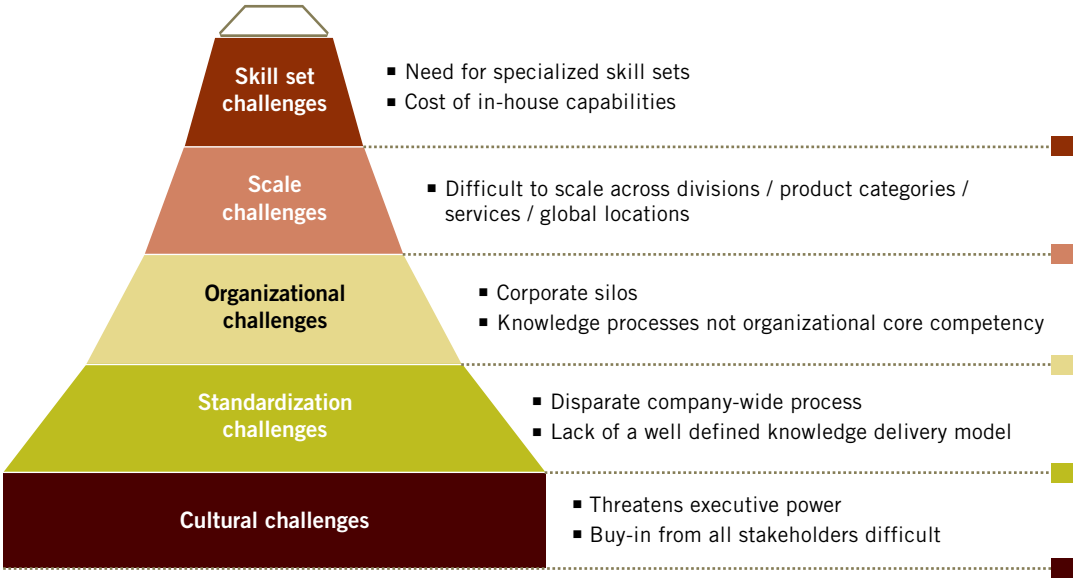
Level 1	Level 2	Level 3	Level 4	Level 5
If you scored between 1 and 5 points, your organization is at **Level 1: Lacking the ability to generate actionable insights** To move to level 2, your primary goal should be to put basic, integrated transaction functionality and high-quality data in place, then to harvest the proverbial 'low-hanging knowledge fruit' – to begin making knowledge-driven decisions with discrete, easy-win knowledge processes.	If you scored between 6 and 10 points, your organization is at **Level 2: Generating knowledge in local teams or units** To move to level 3, your primary goal should be to develop a clear vision among stakeholders that driving decisions with knowledge will add value to your business.	If you scored between 11 and 15 points, your organization is at **Level 3: Aspiring to compete with knowledge** To move to level 4, your primary goal should be to clear the major capability hurdles on your path to knowledge competition.	If you scored between 16 and 20 points, your organization is at **Level 4: Leveraging knowledge, but not comprehensively** To move to level 5, your primary goal should be to develop cross-functional, coordinated, programmatic approaches to knowledge creation and knowledge-driven decision making.	If you scored between 21 and 25 points, you are at **Level 5: Competing with knowledge** To maintain and enhance your advantage as your competition moves aggressively toward knowledge competition, your primary goal should be to expand your 360° view of knowledge-driven decision making, using knowledge to solve business problems and take full advantage of business opportunities.[9]

[9] Note: This quiz was developed by WNS based on Davenport and Harris' "Competing on analytics stages model."
See Thomas H. Davenport and Jeanne G. Harris, Competing on Analytics (Boston: Harvard Business School Press, 2007), 36.

What stands in your way to becoming a knowledge competitor?

For most organizations, embedding knowledge in business processes is easier said than done. Challenges range from the inadequacy of skills to scaling knowledge resources and processes across the organization. **Exhibit 5** highlights some of the most common challenges associated with companies' prevailing methods of internally creating and consuming knowledge.

Exhibit 5: Challenges to becoming a knowledge competitor



Source: WNS

Skill set challenges

The delivery of knowledge processes requires specialized skill sets in order to generate actionable insights. Yet, in organizations that have not achieved a measure of knowledge centricity, knowledge process professionals' skill sets are generally suboptimal.

Where well-educated, domain-rich knowledge process employees do exist, they often are — by education or experience — not capable of delivering the full range of analytical processes. Unfortunately, analytic processes require highly specialized capabilities. The result? Companies are relying on small teams of individuals without the collective skills necessary to respond to any and all knowledge requests, suggesting that organizations are making decisions based on inadequate or incorrect knowledge.

If a company does decide to make the investment in specialized skills, these resources are hard to find. The number of graduates with math, science, statistics and other quantitative degrees continues to decline in the United States. Even if these resources can be sourced, they are very expensive. For example, a U.S.-based statistician with five to nine years of experience earns, on average, over $77,000 per year, while an analyst with less experience earns over $56,000 per year. Given their short supply, these resources are only willing to work for top-tier companies, companies that already embedded an analytic culture in their style of working.

Scale challenges

When companies create and consume knowledge in an ad-hoc or department-by-department fashion, effectively scaling knowledge work can be extremely difficult.

Analytic capabilities tend to be well-developed in pockets and closely allied to certain geographies, departments or perhaps even specific analytic tasks. The loyalties of the resources tend to be aligned to their managers and often their capabilities are a well-kept secret from the rest of the organization. In such circumstances, it is very difficult for an organization to fully leverage these capabilities across geographies or in new functional areas.

Companies that rely on individual contributors, rather than organized teams, to generate knowledge often find it challenging to quickly and effectively ramp up knowledge creation to service a business challenge or opportunity. In organized teams, analytic processes can be disaggregated by skill requirements, ensuring that resources specializing in hard-to-find skills are used in the most efficient manner across a larger analytic workload.

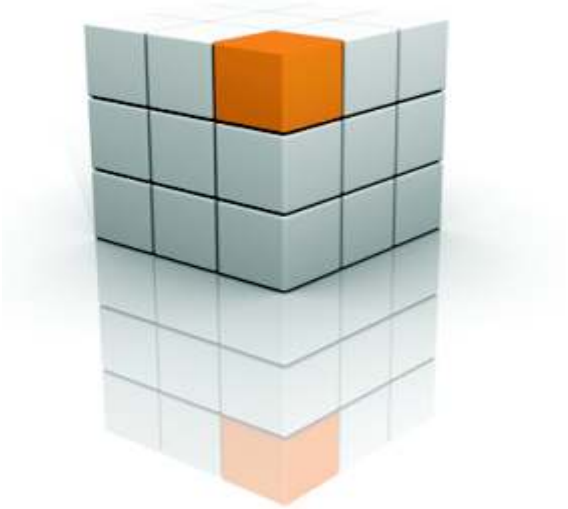
Organizational challenges

Many knowledge processes require collaboration across corporate departments in order to achieve optimal results. However, these departments are usually at uneven stages of development when it comes to research and analytic capabilities. The 'silo' effect is also in play; leadership has various, and often conflicting political objectives and aspirations. These factors render a collaborative knowledge effort extremely challenging. Therefore, the results of analytic tasks are driven by the lowest common factor rather than the highest common multiple. Forecasting is a classic example of this challenge – while planning may be the function that owns the process, the process requires data from just about every other function. How much a company will sell of a product (particularly a new product) depends on a variety of factors, including the dynamics of market supply and demand, past performance of the company's products in launch situations, the degree to which a product meets the needs of consumers, the position of the brand in the mind of the consumer, the pricing strategy, the competitive set the product faces and the sales strategy. The input into this process therefore must come from conceivably every single function within the organization. And once a forecast has been created, the results of the effort should be communicated back into each of the functional areas so that the results govern the manufacturing, distribution, sales and marketing plans of the organization – a truly collaborative process.

It is fair to say that the delivery and management of knowledge processes are typically not within an organization's core competency. This lack of attention to the process itself by which insight is created means that when other seemingly more pressing business issues surface, any progress or investment in further knowledge centricity goes by the wayside. To compete effectively, knowledge processes designed to inform business decisions should be as integral a part of business operations as budgeting, marketing to new customers or developing a new product line.

Standardization challenges

Given that knowledge processes are generally developed and used in pockets by transient resources without deep specialties, one can expect these processes themselves to lack standardization across product divisions, geographies or business units. As a result, analytic processes with the same objective are run with inconsistent data



definitions; analytics that manipulate price information from a company's transaction systems, for example, can create vastly different outputs depending on the definition of price. Spreadsheets built by individuals across business units or geographies may use different modeling techniques, statistical techniques, or assumptions on consumer metrics like elasticity or macro-economic variables such as growth and inflation. As long as these processes are delivered in silos, there is little prospect of standardizing the rules, assumptions and techniques for analytics.

Cultural challenges

Competing with knowledge, unlike other corporate transformation initiatives, is not a 'panacea that the CEO can simply delegate'.[10] When implemented correctly, knowledge processes are fully integrated top-to-bottom in every function, every process, and in every decision throughout the business. They are deemed strategic and ingrained into the company's culture.

Implementing knowledge processes correctly is not easy and moving to knowledge-driven decision making can be a hard pill for some executives to swallow. Stanford professors Jeffrey Pfeffer and Robert I. Sutton write in the Harvard Business Review that "evidence-based practice (such as knowledge-based decision making) changes power dynamics, replacing formal authority, reputation, and intuition with data."[11]

Knowledge-based decision making is also a great leveler. Rather than being solely accessible to executives with many decades of experience to inform intuition, knowledge can be — and should be — accessible to anyone and everyone inside the organization. Pfeffer and Sutton quote former Netscape CEO James Barksdale: "If the decision is going to be made by the facts, then everyone's facts, as long as they are relevant, are equal. If the decision is going to be made on people's opinions, then mine count for a lot more."[12]

The trade-off that an executive is asked to make in leading his organization to become a knowledge competitor is worthwhile. He may give up some of the seeming prestige that comes with being the one with the talent and experience necessary to make intuition-based decisions in exchange for being the leader of an organization that consistently outperforms its competitors. Clearly, asking executives to make that trade-off — and then getting the buy-in of stakeholders at all levels — will be difficult.

[10] Michael Hammer and James Champy, Reengineering the Corporation (New York: HarperCollins, 2003).
[11] Jeffrey Pfeffer and Robert I. Sutton, "Evidence-Based Management," Harvard Business Review, January 2006, 11.
[12] ibid.

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5. Changing the Game

Organization, culture, skills, talent, tools, standardization – together all these challenge the company to become a true knowledge competitor. But companies that seek to make rapid, substantive change can look to a trend in business models that has been taking hold since the 1970s, and has proven to be an effective and flexible strategy to scale, tap into talent, and most importantly, change the way the company develops and acts on insight. This trend is outsourcing. As leading companies become increasingly adept at tapping into sources of talent offshore, they have outsourced higher value, complex, specialized skill and knowledge-based work such as research and analytics, commonly referred to as **analytics outsourcing**.

The evolution of analytics outsourcing

When companies first outsourced, the focus was on obtaining support for the implementation of technology within their company. Processes such as the development of applications were migrated offshore in order to tap into the emerging workforces in countries such as India. Over time, other processes grouped together as information process outsourcing or ITO — help desk, IT support — found their way offshore as technology made it possible to work 24/7 in geographies around the world.

This movement of work brought an added advantage – cost savings. The availability of lower cost labor in emerging economies, more accessible technology and the ability to rapidly shift non-core, repetitive and discrete tasks drove the first phase of the trend to outsource. During the late 1980s and early 1990s, organizations came to the realization that they could not only leverage outsourcing to save cost, but also mitigate risk, avoid capital outlays and expand skill sets.

Organizations also realized that there were opportunities to leverage those benefits in other areas in addition to IT. The industry moved from outsourcing IT processes to the outsourcing of business processes — commonly referred to as business process outsourcing or BPO — initially transactional or rules-based processes such as accounts payable or customer care, moving up the complexity ladder to judgment-based processes such as treasury or industry-specific processes such as underwriting support for life insurance companies. Moving these processes to third party providers is proving a good strategy to deliver not only cost and quality, but flexibility as companies' needs change.

Today, outsourcing in its various forms has been adopted as part of the business model of the world's largest companies. And cost, quality and flexibility are no longer the sole drivers; companies seeking competitive advantage are examining the potential to outsource processes that were formerly considered 'core' or 'mission critical'. Not only have these companies found that suppliers are fully equipped to provide industry-specific and complex problem solving skill sets such as those required by research and analytics, but that suppliers have implemented privacy, security and IP standards to mitigate any risk in transferring critical data.

Today, there is a ripe environment for the kind of high-end, strategic, partnership-based outsourcing that is analytics outsourcing. Indeed, estimates suggest that the size of the analytics outsourcing industry will range from $10 to 17 billion by 2010.[13] While ITO and BPO have grown at compounded annual rates of 34 percent over the last five years, and are projected to grow at 24 percent a year over the next five, the analytics outsourcing market is projected to grow by 50-70 percent annually.[14]

Analytics service providers are fully able to help their clients become 360° knowledge competitors. Initially, providers offered 'horizontal' services — market research, business and financial research, or analytics — largely for professional services firms. Client organizations typically purchased discrete services – research or analytics, for example, from the analytics service provider.

But as the leading analytics service providers' offerings have evolved, so have their client organizations. For example, rather than delivering discrete market research services to professional services or corporate firms, analytics outsourcing offers comprehensive, domain-targeted knowledge services such as business and financial research and analytics to clients in a wide range of industries, ranging from consumer packaged goods to consumer financial services, retail and entertainment, often to a level of sophistication that cannot be rapidly or easily replicated in house.

As it continues to evolve and grow, the analytics outsourcing market is moving toward a shared services center of excellence model, here called the 'Knowledge Center of Competency' model – an approach that goes hand-in-hand with developing 360° knowledge capabilities.

Exhibit 6: KPO evolves towards the knowledge center of excellence model

Analytics outsourcing started small but is evolving towards a shared services environment

	1st Generation	2nd Generation	3rd Generation	Knowledge shared services center
Relationship	▪ Engage a provider known for specific expertise	▪ Contract for a series of repeatable tasks	▪ Add new capabilities	
Type of work	▪ Analytical / research project work ▪ Simple MIS ▪ Graphics	▪ Series of projects in a stream of expertise ▪ Predictive modeling ▪ Business research ▪ Market research	▪ Multiple parallel projects ▪ Integrated approach to solving business problems using multiple capability sets - e.g. contextual information through primary of secondary research to support analytic findings	
Client objective	▪ Test to see if simple knowledge work can be offshored	▪ Seek improved service levels and process management, e.g. faster turnaround times, reduced errors	▪ Take advantage of knowledge management, scalability, best practices	

Source: WNS

[13] "WNS plans to up the ante in KPO business," The Economic Times, 27 Mar 2008, http://economictimes.indiatimes.com/Infotech/WNS_plans_to_up_the_ante_in_KPO_business/articleshow/2902891.cms

[14] TPI, "Knowledge Process Offshoring: A Balanced View of an Emerging Market," July 2007, http://www.tpi.net/pdf/researchreports/KPO_ResearchReport_july07.pdf

Exhibit 6 demonstrates the development of analytics outsourcing services from discrete knowledge process work to integrated, vertically-specialized services – not unlike the shared services model that has been widely adopted for finance processes. As providers have assumed end-to-end knowledge processes, the metrics on which they are judged have changed from simple service levels such as turnaround time or accuracy to whether or not the client achieves the business outcome it targeted by way of the knowledge process (For example, collection analytics).

In its first phase, clients try out the concept of analytics outsourcing, testing providers' capabilities by outsourcing lower-end, discrete knowledge processes. Satisfied with performance, companies often move to the second phase, testing the delivery of higher-end but still discrete processes, now delivered in a series or as a part of a program rather than as one-off projects.

With the acknowledged success of the second phase, companies are now comfortable leveraging a wider range of analytics service provider capabilities. They are adopting an integrated approach to knowledge work, asking providers to deliver higher-end services such as developing customer lifetime value models or fraud management models. This holistic approach gets close to the end-game, the 'Knowledge Center of Competency' where knowledge created by a vertically-specialized provider is consumed throughout the organization.

As we have discussed, level 5 efforts to create leverageable knowledge would be inadequate if they did not comprehensively deal with the decision support needs of the entire organization across departments and geographies. The output from this effort also needs to be disseminated across this broad spectrum to ensure the different pieces of an organization that the particular decision touches are well-coordinated. However, the basic building blocks that create this knowledge are essentially the same – finitely arrayed skill sets (statistical, data manipulation, domain) and types of research and analytics (business and financial research, market research, predictive analytics, etc.). Companies that want an all-pervasive knowledge environment and understand the power of concentrating in one location resources with similar skill sets have created analytic hubs, or 'Knowledge Centers of Competency' – again, essentially shared services environments for knowledge processes.

Within these centers, based on the relevant skill set they possess, resources are brought to bear in a project environment against types of business challenges (pricing, forecasting, etc.) and types of analytic / technical techniques (data sets used, statistical techniques, etc.). This specialization helps institutionalize the approach to similar kinds of problems. Further, analytic or research tasks for business challenges are broken down to match the resource specialization available – so a forecasting effort would be broken into research tasks, quantitative / modeling tasks, etc. Senior analysts then pull together the work output from the team and synthesize it, extracting insights along the way.

Appropriate individuals within the organization can interact (for example, request research) with this centralized resource through web-based knowledge portals no matter where they may be geographically. These web portals also serve as a repository for business challenges addressed in the past, helping analysts in different parts of the organization learn from the efforts of their peers thousands of miles away.

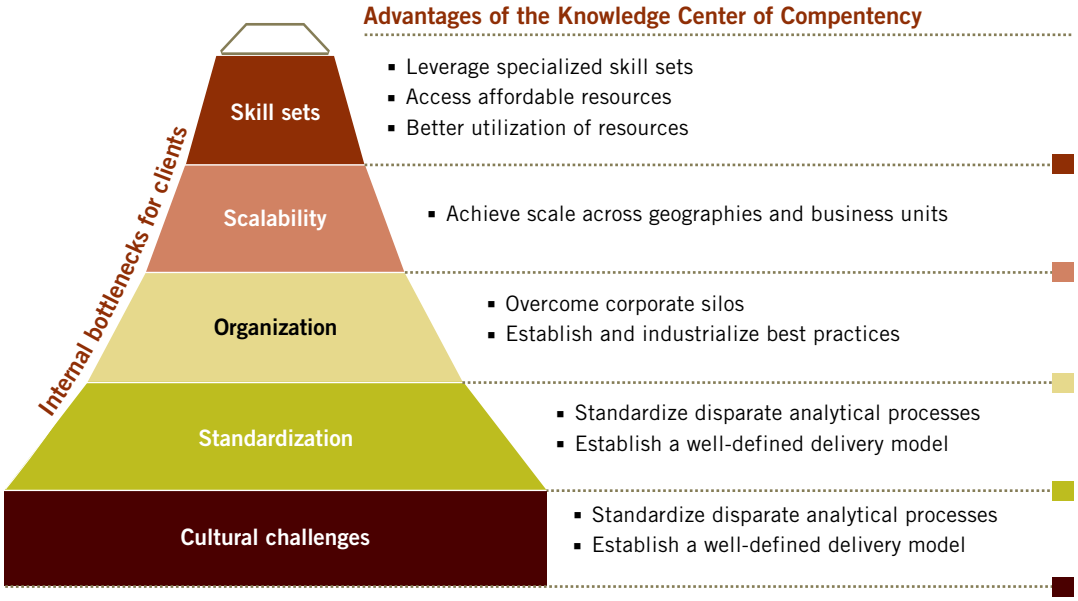
How analytics outsourcing resolves challenges to becoming a knowledge competitor

Smart companies are never afraid to change the business model when it moves performance onto a new trajectory. In the case of knowledge processes, companies can tap into external resources when those resources can perform knowledge services with higher quality, greater efficiency and effectiveness, at a lower cost, in less time.

That does not mean, however, that businesses are off the hook when it comes to using knowledge to drive business decisions. While outsourcing knowledge processes does relieve the firm from obtaining, manipulating and correlating knowledge in-house, it does not abdicate the firm from its responsibility for ingraining knowledge-driven decision science into the company culture. The external provider can conduct the knowledge discovery, perform the research, run the analytics, but the company must force a change in how the knowledge is used, allowing it to come from every corner of the organization. This is all the more applicable for companies with federated engagement models.

Exhibit 7 highlights how analytics outsourcing resolves the challenges faced on the path to knowledge centricity.

Exhibit 7: How analytics outsourcing resolves the challenges to becoming a knowledge competitor



Source: WNS

Resolving skill set challenges

Analytics outsourcing enables the organization to augment suboptimal corporate skill sets by expanding the capabilities of a single departmental analyst with as many as three knowledge specialists. Whereas client organizations might rely solely on the expertise of a single analyst to create knowledge, the analytics service provider can offer more – the domain analyst who works side-by-side on site with the brand manager supported by a statistician and a data scientist. That three-person approach ensures that every necessary skill set is available in the knowledge discovery.

The effects of that disaggregation of the single scientist's skills into a trinity of specialized skill sets are substantial

- Eliminates the bottleneck that results when all knowledge requests flow through a limited number of analysts, introducing the benefit of speed.
- Reduces cost. If it is even possible to find a statistician with deep domain knowledge, that talent is expensive. By disaggregating the scientist's functions, it is possible to dramatically reduce the costs associated with knowledge creation.
- Increases productivity by deploying a specific skill against that component of an analytic task that the skill is best suited to address, it is possible to increase productivity.

By delivering knowledge processes from lower-cost geographies, organizations benefit from access to high levels of training and expertise available within a substantial pool of PhDs and MBAs, coupled with the benefits of lower costs. For example, in India, from which many providers operate, the educational curriculum is rich from a quantitative skills perspective. Such skills are also prized from a socio-cultural perspective and families encourage their wards to get 'hard' degrees. At the same time, labor costs are substantially lower in India than in the U.S. or Europe.

Delivering analytics outsourcing also requires talent with domain experience. Fortunately, a variety of industrial sectors — such as consumer packaged goods, retail, financial services and telecommunications — have exploded from a domestic market perspective in countries such as India as the IT / BPO services industry has expanded. These companies increasingly provide a base of domain-savvy talent to help drive forward client engagements in analytics outsourcing Not surprisingly, India's growth story continues to drive the reverse 'brain drain' effect with more and more Indian professionals coming back to India, after education abroad, for professional pursuits. Business domain-specific roles in analytics outsourcing provide a vehicle for analytical Indians working in Fortune 500 companies to come back to India and perform their roles remotely.

Resolving scale challenges

Partnering with an analytics services provider means knowledge services are easily scalable – easily expanded up to create a knowledge repository across a company's geographies, every day, 24/7. By definition, the process of working with an outsourcing service provider requires an organization to extract its knowledge processes from the many internal nooks and crannies they reside in and optimize them for scale, skills (both quality and quantity), process steps, quality control and a variety of other process hygiene factors.

This examination itself is the first step in making knowledge processes scalable so that an optimized process can be provided to stakeholders across an organization on an 'any-place, any-time basis'.

Once an organization makes knowledge services available to the rank and file of an organization, one would expect (over time) a substantial increase in the consumption of these resources. Scaling sub-optimal processes (for example, processes where due to lack of standardization, core assumptions change from one instance to another, or processes that lack automation or streamlining and are therefore time consuming, expensive and prone to errors) would be an effort doomed to failure.

Because analytics service providers are dedicated to the business of knowledge creation, they have the benefit of scale — size, scope and location — that most companies simply cannot replicate when

they manage their processes internally. Outsourcing helps develop industrial strength analytical capabilities company-wide, establish a strong backbone of enterprise analytics in the company and achieving Every Day Low Cost (EDLC) in that delivery of analytics services. Service providers can streamline process steps, inject technology to make the processes more efficient, source talent from anywhere in the world, all at the right cost, and then deliver the process to the right stakeholders within an organization, no matter where they reside.

Resolving organizational challenges

Analytics service providers can resolve a company's organizational challenges, breaking down corporate silos and establishing best practices, by

- Becoming the client's main clearinghouse for knowledge requests. One leading CPG company was able to overcome one of the fundamental challenges associated with becoming a knowledge competitor — the pervasive corporate silo structure — by creating a centralized knowledge team offshore to provide support to brand managers distributed around the world. Within a centralized team that the company could not have created on its own, analysts could share information across what would be — in the client organization — corporate silos, promoting collaboration to standardize knowledge creation and leverage best practices.
- Offering broad and deep resource pools, leveraged from engagements with many clients across a range of industries. Providers staff highly-specialized analysts who can tackle business requests in a wide variety of functional areas.
- Offering knowledge expertise in areas outside the company's primary domain. While analysts on the client's centralized team may not be familiar with trends or functions outside the company's primary focus, an analytics service provider can leverage its experience across a variety of industries to offer wide-ranging knowledge expertise.

Resolving standardization challenges

By partnering with the right analytics service provider, a company can quickly implement a best practice delivery model. Rather than creating an internal model to define how knowledge is created and distributed to ensure collaboration among all business areas, the client can turn to analytics service providers to deliver and standardize, knowledge in all areas of its business. Establishing a federated engagement model and systematically standardizing fragmented analytics services (within the organization as well as across third-party service providers) also creates efficiencies in horizontal leverage across the company. Good governance is, of course, a pre-requisite for the federated engagement model to succeed.

Standardization means that for a certain types of analytic problems, a company uses a consistent analytic solution – a holistic approach that defines what issues need to be looked at for a given problem, statistical techniques that embody the latest and greatest thinking on how a particular problem is solved, data that is consistently sourced from the right data storehouses within an organization, and resource skill sets that are evenly deployed, no matter when or where the solution is required. A consistent approach to segmentation efforts may mean agreement within an organization on how consumer segments are defined from market research data. For example, a company can decide that a certain statistical modeling technique is the gold standard for analytic tasks around pricing. For other analytic tasks that involve the analysis of sales data, analysts can agree on which specific corporate data repository is to be used and with what adjustments.

Similar to the rigor brought by BPO service providers for transactional processes, knowledge processes also benefit from standard operating procedures that ensure that the solutions themselves are trustworthy and devoid of errors

that can creep in when a company relies more on art than science when resolving its analytic problems.

Resolving cultural challenges

Even with the most comprehensive change management programs in place, achieving cultural change is not guaranteed. An alternative to dealing with the complexities of tackling the cultural challenge is to implement a 'build it and they will buy in' approach. Leaders with the conviction that becoming knowledge-centric is an imperative for success can mandate the consolidation of research and analytical capabilities — ideally in an analytics outsourcing relationship in which all business areas can tap into the knowledge center of competency — to generate the knowledge to drive their business decisions.

Sophisticated analytics service providers implement collaboration tools as a delivery mechanism to speed up research and analytic consumption. A common approach is to put a knowledge center of competency at the other end of an 'analytic portal', a portal that acts as a library of analytic solutions and as a means to request and receive analytic solutions from the shared service environment created within the analytics service provider. Now far-flung stakeholders have a window into what types of business problems are being solved by their colleagues in different parts of the organization. This itself can spark the use of analytics where previously the reliance was on intuition. This practice promotes increased creation of IPs and artifacts and improved documentation and knowledge transfer.

These portals enable senior management to evaluate where analytics is being used inside an organization and provide a 'paper trail' on what decisions were made and why. They also provide a means to take the cost of analytics and allocate it to users within an organization, a key means of controlling the costs and RoI of such programs. This represents a radical shift in the rules of engagement and indicates a maturing of the analytics outsourcing service delivery model.

Once the naysayers see the success of analytics outsourcing for themselves, they may well jump on board. Perhaps they were unwilling to risk investment in knowledge capabilities sight unseen, but once they see the results of knowledge-driven decision making in their business, they are far more likely to buy in.

Additional analytics outsourcing benefits

For companies that really want to succeed as knowledge competitors, analytics outsourcing represents an opportunity to transform the business from one driven by intuition and ad-hoc knowledge gathering and analysis practices to one that is driven by insight – to resolve the challenges associated with becoming knowledge competitors. But analytics outsourcing also offers other business benefits. Like ITO and BPO before it, analytics outsourcing certainly delivers cost savings through economies of scale and labor arbitrage. But analytics outsourcing goes far beyond savings, generating gains through efficiencies, productivity increases and new capabilities.

Another advantage to be gained from analytics outsourcing comes from leveraging the client-specific domain expertise and organizational knowledge built up within a knowledge center of competency set up by an analytics service provider. While the best service providers bring business domain knowledge to such programs, sophisticated organizations are most interested in embedding their own way of looking at business issues. Creating a center of knowledge competency allows those organizations to externalize their knowledge and then make it available more broadly across their footprint.

Implementing actionable insights in the retail financial services industry

Today, an industry under siege, such as retail financial services, has more need for actionable insights than ever before. By obtaining powerful insights across the entire retail banking value chain, in order to maximize profitability, minimize risk and reduce cost, consumer banks can survive and thrive.

Certainly knowledge processes can support better decision making when it comes to cost control in customer operations. But savvy organizations infuse disciplined research and analytics processes in sales and marketing, risk and distribution processes.

Marketing and sales analysis

In this fierce competitive landscape, for the retail banking industry to remain profitable, its business model must increase its customer centricity across the customer's entire lifecycle. By implementing an end-to-end research and analytics program, banks are able to:

- **Improve customer satisfaction:** Customer satisfaction can be measured by fielding a disciplined customer survey program, taking customer feedback on aspects ranging from time taken to stand in a line in the bank to the salience of the available product suite.
  By analyzing feedback, the bank makes the adjustments necessary to increase market share through the right products, and enhance the customer experience.
- **Develop insights from data:** Targeted analyses on transaction datasets segments customers based on their transaction behavior. The segments can be then be further analyzed using data mining and advanced statistical techniques in order to understand which segments are the most profitable or which deliver the highest return on marketing investment.
- **Build and strengthen profitable relationships:** The stage at which customer is on the customer lifecycle is critical to the development of marketing strategy.

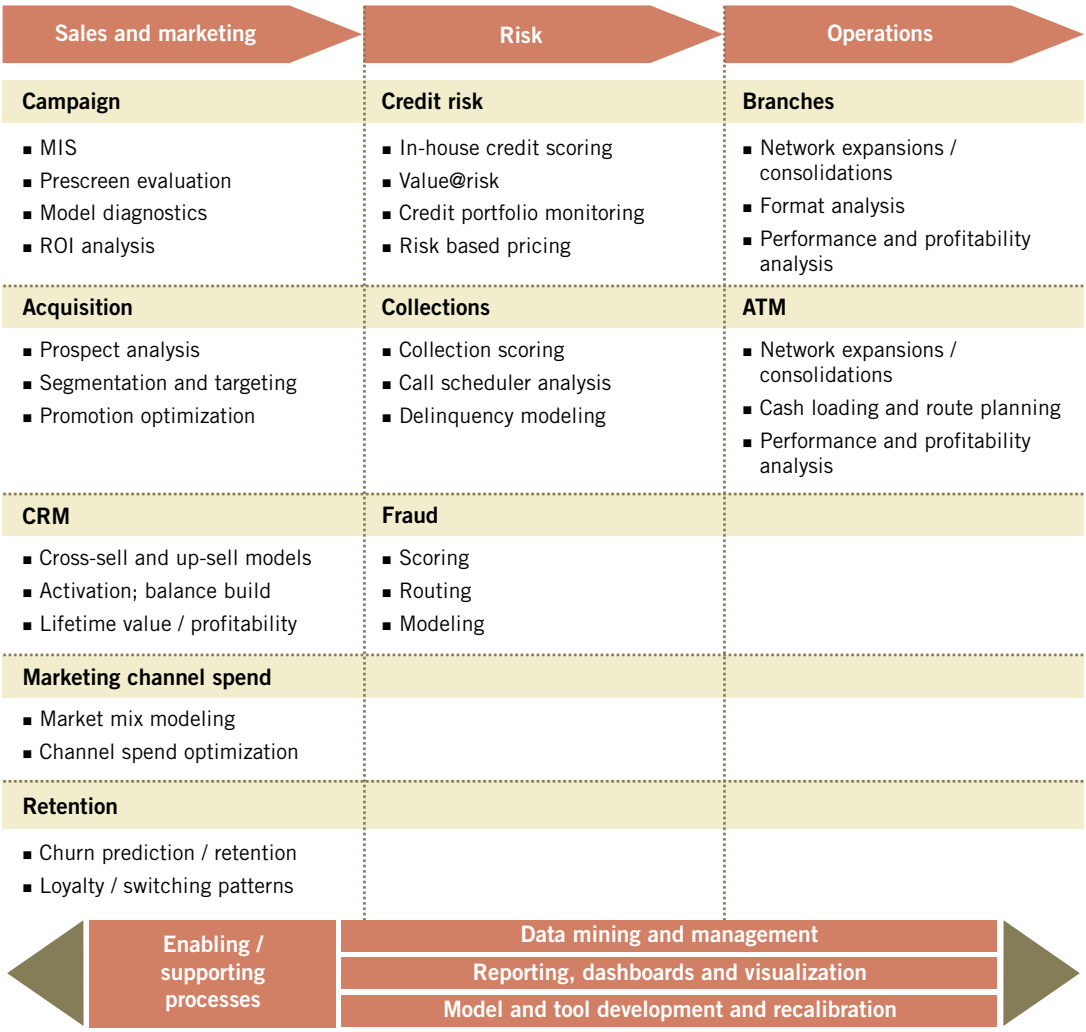
  For example:
  - By running specific campaigns, banks can more effectively acquire new customers.
  - Cross-sell strategies can be developed by mapping the customer's unmet needs to a product portfolio. Additional services and products can then be sold by offering products in the same range, or up-selling offering a product by answering to a customer's higher need.
  - Using research and analytics, retention strategies can be designed to target customers who are most likely to attrite. Marketing and promotional strategies can then be devised to target and reduce attrition.
- **Increase sales force effectiveness:** Sales force effectiveness (SFE) analytics analyzing and optimizing the interaction between the sales force and their clients in various SFE spheres such as segmentation and targeting, client profiling, call planning, sales force sizing and structure and territory design and alignment.

Risk management

With dramatic spikes in delinquencies and charge-offs, the retail banking industry has developed increasingly stringent lending standards for potential and existing customers alike.
By implementing insight-based lending strategies which allow a bank to take calculated risks, the bank can position for portfolio growth.

- **Credit risk:** Research and analytics can calibrate the optimum balance between losses and revenue growth, set the optimum cut off score for application approval, build predictive risk models for defaults, and support decision making on credit limit increases and decreases for a portfolio based on customer behavior, transaction history, change in credit score and other external factors
- **Collection strategy:** By implementing knowledge processes, banks are able to build delinquency models utilizing customer data including past transaction, payment and delinquency data

Exhibit 8: Knowledge processes in retail financial services



along with other external data to segment customers who self cure or who need collection treatment. These analyses in turn contribute to call intensity analysis – determining the optimum time and frequency with which to contact a delinquent customer.

- **Fraud strategy:** Research and analytics allows a bank to build effective identity, transaction and payment fraud defenses against growing losses. By tapping into the experience of subject matter experts in a particular area and coming up with business rules to identify the trigger points for each kind of fraud, it is then possible to develop predictive algorithms, building them into a process as a prevention mechanism.
- **Pricing optimization:** The struggle to price products competitively is a never-ending set of challenges, loaded with tough questions such as:
  - What should our overall rate level be, and how should it be spread to classification?
  - What's the competition doing?
  - What are the prevailing market conditions?

- How will customers respond to a price change?
- What is the potential impact on earnings?

Traditionally, companies have relied on cost-based pricing strategies to set prices. And while cost remains a critical consideration, it does not factor in the implications of the competitive context or customer behavior.

Distribution

To better serve existing and potential customers, banks must expand their network of branches and ATMs. Understanding market potential, customer habits, preferences, transactions and demographics is the key to effective decision making. Analytics can help the bank determine

- **New locations:** Which markets or areas have the greatest potential for new ATM or branch traffic?
- **Performance and profitability analysis:** Which locations will deliver the highest performance based upon capacity usage, profitability, risk factors and customer demographics?
- **ATM cash loading optimization:** What is the optimal cash replenishment schedule in what denominations and in which locations?

6. Becoming a Knowledge Competitor

The advantages of implementing analytics outsourcing vary according to the aspiration of the organization. If a company already drives its decisions with knowledge, analytics outsourcing can help retain competitive advantage more efficiently and cost-effectively. If the organization aspires to move up the scale of knowledge competition, analytics outsourcing can help achieve the end state more rapidly. Analytics outsourcing has a role to play in every company – knowledge-novice or knowledge-savvy, regardless of the industry. But how a company engages analytics outsourcing depends on where the company falls in the five levels of knowledge competition.

If the organization is at level 1 (Lacking the ability to generate actionable knowledge) or level 2 (Generating knowledge in local pockets), for example, the starting point on the path to knowledge competition will be different than if the company has already reached level 4 (Leveraging knowledge, but not fully).

Exhibit 9 highlights the four starting points from which companies can embark on the road to knowledge competition, depending on their level of sophistication and the type of market challenges they face. Outsourcing discrete analytic tasks is a good way to test whether the organization is ready to tackle a more analytic approach to decision making. It also tests an analytics service provider's capabilities.

Exhibit 9: Paths to knowledge competition

Discrete knowledge tasks	Solve peripheral or readily extractable knowledge tasks with modest domain knowledge requirements	▪ Resource constrained ▪ Need for specialized resources ▪ Variable cost model
Low-to-high complexity projects	Start with tasks that act as building blocks for more complex analytics – e.g., start with MIS, reporting and data analytics before forecasting and segmentation	▪ Easy to implement and scale ▪ Low failure rate ▪ Develop client-specific domain knowledge in service provider
Process thread - based projects	Partner across functions on related knowledge tasks that support a discrete process thread within an organization – e.g., a new product launch	▪ Benefits of a coordinated, program-based approach ▪ Concentration and standardization of analytic activities ▪ Cross-training, knowledge sharing
Business imperative - based projects	Identify knowledge process that are critical to driving enterprise-level business imperatives – e.g., stopping share loss to a competitor	▪ Razor-sharp focus on imperative ▪ 360° solution

Source: WNS

Levels 1 and 2: Lacking the ability to generate actionable knowledge and generating knowledge in local pockets – start with discrete tasks

If the organization sits relatively low on the analytical savviness scale, beginning analytics outsourcing implementation with discrete analytic tasks is generally the safest route. The goal for the organization is to pick the 'low-hanging fruit of the knowledge tree', commencing with a low-risk, readily extractable analytic task. Because the organization is just embarking on the road to competing with knowledge, starting with a task that is not overly complex and does not require much domain knowledge will increase the chances of a successful outcome.

At this level, the organization should focus on insights that can be developed without the allocation of many resources, generally without highly specialized resources, and developed under a variable cost model. Of course, just like exercise, even modest focus will pay rich dividends. Better response from marketing programs, reduced fraud, better forecasting all have hard dollars as benefits to offer. More importantly perhaps, this is an opportunity to invest in a proof of concept to prove to the company's stakeholders (internal and external) that knowledge-driven decision making can take competitive position to the next level.

Level 3: Aspiring to compete with knowledge – move from low-to high-complexity projects

If the company has achieved level 3 of competing with knowledge, it already conducts more complex, integrated analytics processes. Outsourcing as a proof of concept is still important and stakeholders will be closely monitoring the speed of completion and the quality of deliverables. This suggests the right place to begin outsourcing analytics processes is to start with less complex tasks that support the broader analytical capabilities of the client. For example, it may be appropriate to commence sourcing more investigative forms of knowledge creation such as MIS, reporting and data analytics. Processes that form the basic 'knowledge building blocks' inside your organization will help the sourcing partner build domain expertise unique to you. If you have pain-points and bottlenecks in these processes, your sourcing partner's process skills can remove them. It also frees up your analytical talent from their more mundane tasks and gets them focused on more strategic issues. Naturally, with right sourcing, you will get productivity and cost efficiencies. As decision science is increasingly driven by actionable insights, moving up the complexity chain to processes such forecasting and segmentation becomes the logical and anticipated next step.

Initial projects should be easy to implement and scale and designed with low potential for failure. Further, ramping up the complexity fosters a strong relationship with the analytics service provider, giving them the opportunity to develop the company-specific domain knowledge that is critical to success as the projects become more complex.

Levels 1, 2 and 3 engagements gain most traction when the initial engagements are focused on a business challenge. If the problem to be solved is the loss of market share or the improvement of overall customer experience by some factor, the analytic solution will resonate more strongly with stakeholders.

Level 4: Leveraging knowledge, but not fully and **Level 5**: Competing with knowledge – start with process thread-based projects / business imperative-based projects

Even companies that compete effectively with knowledge benefit from implementing analytics outsourcing. Analytically savvy companies use analytics outsourcing to augment their own resources and leverage the global delivery footprint of their outsourcing partners. As before, the organization gets all the benefits of outsourcing – refocus of internal talent, efficiencies, etc. The additional benefit that analytics outsourcing delivers uniquely to such companies is the ability to standardize knowledge processes and make them scalable. In these cases, remaining cutting edge in core areas of expertise is the driver to leverage the analytics outsourcing delivery model. Quality with speed, flexibility and lower cost are key benefits.

How should level 4 and 5 companies get started on a analytics outsourcing program? Such companies have well developed knowledge processes, particularly in pockets supporting high-impact decisions. Good examples are pricing analytics, supply chain analytics, forecasting or fraud. Another way is to organize the program around top of mind business objectives driving the senior management team. Processes and tasks supporting a drive to cut distribution costs — supply/demand optimization, fleet utilization, forecasting, store lifecycle management, etc. — are well linked and can be supported with a highly specialized skill-pool.

Whatever the scope of the analytics outsourcing engagement, it should set the organization on the path to competing with knowledge, or moving up the knowledge savviness scale. Analytics outsourcing is simply an extension of the company's enterprise, allowing a large complex organization to consistently make smarter, better decisions.

7. Summary

In today's environment with the largest drop in consumer spending since 1947; widely fluctuating oil prices; dramatically rising corporate borrowing costs; increasing competition from companies in emerging economies; and a global economic crisis that has already brought down scores of venerable institutions, organizations that have both deep and broad knowledge of its business, its customers and its competitors will have an important competitive advantage. The companies that compete with knowledge will be much better equipped to both survive the economic downturn and flourish in the upturn than its competitors.

Yet using knowledge to succeed in a tough economy is not the most compelling reason for becoming a knowledge competitor. Driving decisions with knowledge, in fact, is as important in a strong economy as in a weak one. In good economic times, it allows companies to move leagues ahead of their peers by leveraging knowledge processes to improve customer retention, more accurately forecast revenues, better manage risk or prevent fraud and optimize R&D investment.

Consider some of the greatest business success stories. Many of the corporate leaders we most admire gained a competitive edge by competing with knowledge – driving all aspects of the business with actionable insights. These winning companies use knowledge processes such as research and analytics as strategic weapons. And they know that developing knowledge-driven decision making capabilities in-house is not always the best way to compete with knowledge. Rather, many companies – more every day – are turning to third-party analytics service providers to create knowledge centers of competency within which companies can become leading-edge, out-in-front knowledge competitors.

This paper was developed as a guide to compete with knowledge elevating the quality and rigor of the organization's insight and ability to act on those insights. It was designed to provoke answers to key questions that include:

- How do organizations effectively compete with knowledge?
- How do knowledge processes support decision making?
- What are the challenges most organizations face when moving to a knowledge-centric company?
- What models are leading companies increasingly adopting in order to become full-fledged knowledge competitors?

How do organizations effectively compete with knowledge?

Examples and case studies make it clear that those organizations that leverage knowledge processes such as research and analytics to generate a 360° view of their business — and then act on the insights generated — are able to outcompete their peers.

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How do knowledge processes support decision making?

Hundreds of decisions are made every day across every business in every function. There is no function, no business, no industry that cannot benefit from insights that harnessing knowledge yields. In all areas of the business — from sales to marketing, finance and risk management to R&D and human resources — organizations can win by generating actionable insights. Research and analytics (R&A) processes — business and financial research, data services, domain-specific analytic services and market research — are some of the tools knowledge competitors use to gather, synthesize and extract insights from their data.

What are the challenges most organizations face when moving to a knowledge-centric company?

Leveraging research and analytics processes to make knowledge-driven business decisions is not easy. In fact, only a small percentage of organizations manage to drive decisions with knowledge, hence the power of becoming one of those few knowledge competitors. The common challenges that make competing with knowledge more difficult include inadequate or ill-matched skill sets, an inability to scale, the challenges of breaking down, the lack of a well-defined knowledge process operating model, and a cultural resistance to fact-based decision making.

What models are leading companies increasingly adopting in order to become full-fledged knowledge competitors?

Because of the difficulties associated with becoming a knowledge competitor, many organizations look to third-party experts for help. The rise of increasingly mature and savvy third-party outsourcing providers is allowing companies to leverage analytics outsourcing and a 'knowledge center of competency' model to quickly and efficiently reap the benefits of competing with knowledge.

Analytics outsourcing and the knowledge center of competency model, a model which aggregates and leverages knowledge processes across the corporation, provide companies a number of advantages, in addition to those benefits traditionally attributed to outsourcing (cost savings, quality improvements, better efficiency and productivity gains). Those advantages include:

- Ability to tap into specialized skill sets and affordable resources
- Better resource utilization
- Scale across geographies and business units
- Standardization of enterprise-wide best practices for knowledge discovery and consumption, resulting in elimination of corporate silos
- Ability to quickly establish a well-defined delivery model
- A 'build it and they will buy in' solution to cultural resistance.

The importance of knowledge is not particularly novel; the legendary figure and author of Art of War, Sun Tzu, wrote about it as early as the 5th century B.C. "If you know the enemy and know yourself, you need not fear the result of a hundred battles. If you know yourself but not the enemy, for every victory gained you will also suffer a defeat. If you know neither the enemy nor yourself, you will succumb in every battle."

Today, companies can achieve that confidence — and that edge — by knowing their competitors, themselves, and their customers, and then acting on those insights. And these insights are easier than ever to generate, assimilate and act on through analytics outsourcing.

Notes

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