

# Product and Supply Chain Analytics

## Benchmarking the Analysis of Data To Gain Business Insight



### Benchmark Research White Paper



**V E N T A N A**  
R E S E A R C H

*Aligning Business and IT To Improve Performance*

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Pleasanton, California

November 2010

Ventana Research performed this research for a fee to determine attitudes toward and utilization of product and supply chain analytics and metrics. This document is based on our research and analysis of information provided by organizations that we deemed qualified to participate in this benchmark research.

This research was designed to investigate the analytics and metrics practices and needs of individuals and organizations involved in product and supply chain management and the potential benefits from improving their existing processes, information and systems. This research is not intended for use outside of this context and does not imply that organizations are guaranteed success by relying on these results to improve planning. Moreover, gaining the most benefit from improving the use of product and supply chain analytics and metrics requires an assessment of your organization's unique needs to identify gaps and priorities for improvement.

We certify that Ventana Research wrote and edited this report independently, that the analysis contained herein is a faithful representation of our evaluation based on our experience with and knowledge of analytics and product and supply chain management, and that the analysis and conclusions are entirely our own.

A stylized, handwritten signature of 'Ventana Research' in a dark brown or black ink.

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## Executive Summary

In today's intensely competitive economy, companies need to understand what's going on at each stage in the life cycles of all their products or services. In recent years this job has gotten substantially harder. The proliferation of product types, brands and stock-keeping units (SKUs) makes it difficult to gain insight into what's happening and why, and to make the best decisions in response. To act wisely, executives and managers need to understand the underlying causes of a situation or the likely outcome of a course of action under consideration.

Accompanying the increasing complexity in products and conditions affecting them is an explosion in the volume of data, often coming from an array of systems and software. Insight is particularly valuable now because it can be difficult to discern meaning among all the information and predict the implications of decisions in our complex business environment. To manage the complexity effectively, organizations need to have their data available and be able to analyze and make sense of it all.

There is substantially more information available today about products and supply chains – both from internal sources and third-party vendors. Technologies and techniques for collecting analysis-ready data have advanced, as have the analytics themselves. While specialists have an array of powerful tools, nontechnical people also have analytical applications with which they can explore data sets, perform recurring analyses and set up dashboards and alerts to continuously monitor conditions. Companies should take advantage of these capabilities to help them make optimal decisions about how to bring their products to market, present them to potential customers and sell them in the most profitable ways.

**To manage complexity effectively, organizations need to have data available and be able to analyze and make sense of it all.**

Business managers and executives use analytics in a range of business processes to examine organizational and operational performance, including core supply chain processes such as inventory, procurement, manufacturing, distribution and planning as well as to create a variety of internal and external business, operational and regulatory reports. Ventana Research undertook this benchmark research to acquire real-world information about levels of maturity, trends and best practices in how companies use product and supply chain analytics. It explores how they do this now, how people at various levels feel about the current processes and tools, plans they have to change or improve them, and benefits they hope to gain by doing so.

The research found organizations using a variety of these analytics, most of which focus on operational issues although some bottom-line business issues are gaining interest. About two-thirds of participants said cost is the category of metrics most important to their role in the business, followed by business process metrics (52%). The most important supply chain financial metric is company profitability (67%), and for product organizations it is return on investment (56%). However, revenue growth (47%) tied for the second-most important product financial metric, and the customer experience was the second-most important process metric (58%).

This emphasis on internal efficiency rather than business effectiveness was a main reason our Maturity Index analysis found only 13 percent of organizations able to reach the highest Innovative level of maturity. Another key factor was the ineffectiveness of the analytics process in many organizations: three-fourths of them spend most of their time in the analytics process in unproductive activities such as waiting for data, reviewing it for quality and consistency, and preparing data and scenarios for analysis. And more than one-third of business units formally review the metrics they use to assess performance only quarterly, annually or not at all; however, one-fourth review them weekly, which we believe is optimal.

Most product and supply chain organizations see room for improvement across the range of analytics. Nearly two-thirds said it is very important to make it simpler to provide analytics and metrics; 49 percent said they can significantly improve their use of them. Half are not satisfied with the process currently used to create analytics, and only one-third are satisfied with the technology used for that purpose. The projected improvements will be targeted at both operations and business results. Two-thirds of organizations that plan to change the way they generate and apply analytics will do so to improve business processes, but the same portion (67%)

will change to improve decision-making, and 59 percent will do so for competitive advantage.

**The research found several indications that product and supply chain organizations do not have a unified or comprehensive approach to analytics.**

The research found several indications that product and supply chain organizations do not have a unified or comprehensive approach to analytics. For example, if analytics are to deliver value, they must be available to those who need them, but achieving this is an issue for many organizations. Fewer than one-third of executives always have them available, only about one-fourth of managers always have them, and fewer still of those lower in the organization have them whenever they're needed.

Complicating this situation are what appear to be conflicting perceptions at different organizational levels. For example, three-fourths of research

participants who have executive and management titles said that those lower in the organization either completely or generally have the information they need, but only 59 percent of those people agreed. Regarding the most important metrics for executives and managers, 62 percent of all participants said customer satisfaction matters most at those levels, but executives themselves said inventory levels are most important, and managers ranked customer profitability at the top of the list. These and similar findings indicate that groups within a single organization have their own views of the focus and accessibility of analytics and so may end up working at cross-purposes where analytics are concerned. This sort of disconnect can impede organizational performance and achievement of business goals.

The research also found a split in opinions regarding whether all the right people are involved in establishing metrics and performance indicators, with 60 percent saying yes, they are, and 40 percent saying no. Among those who answered negatively, more than two-thirds said a broader cross-section of employees should be involved; fewer than 40 percent said more involvement is needed from executives and upper management. Similar numbers said that the head of their business unit (40%) or

senior management (36%) is very involved in establishing requirements for defining analytics.

The research also discovered issues with the raw material from which analytics and metrics are made: data. In organizations dissatisfied with the process of analytics creation, the most (54%) said the reason is that data is not accurate. In addition, only one-fourth said the data used in preparing their metrics or key performance indicators is accurate. Furthermore, almost half (46%) said that stale or outdated data is present in the metrics and KPIs they use. However, 65 percent of product and supply chain organizations do not find it hard to collect the data needed to assemble metrics and KPIs, suggesting that problems reside more in the data itself and the frequency with which it is collected.

We see evidence for the former in the finding that desktop spreadsheets are the technology used most often (by 57% of all organizations) to generate analytics and are the most important information source for building them in 49 percent of product organizations and 47 percent of supply chain organizations. A mere 8 percent of all organizations use spreadsheets only occasionally, rarely or never. But spreadsheets require manual effort to populate the data and are prone to error.

**As well as freshness of data, promptness in delivering revised metrics and KPIs is critical for those who use them.**

Timeliness is another key factor in the usefulness of analytics and metrics. As well as freshness of data, promptness in delivering revised metrics and KPIs is critical for those who use them to understand the strengths and weaknesses in their performance. While about one-third of product and supply chain organizations provide them within one business week (which we consider an acceptable time), 22 percent take up to two weeks, and 14 percent take even longer. One source of delay in the process of supplying metrics is that organizations spend too much time in preliminary tasks. For example, 30 percent said they spend the most time preparing data for analysis, and 24 percent are occupied by reviewing data for quality and consistency.

This research shows that product and supply chain organizations both need to improve their use of analytics and know that they need to. Yet a majority are not ready to invest in improvement. While 39 percent plan to change the way they generate and apply them in the next 12 to 18 months, 36 percent said changes are needed but are not currently a priority. The primary barriers to such an initiative are both fiscal (lack of resources and budget) and perceptual (a sense that the business case is not strong enough). We advise companies to resist such inertia actively. The entire process, from developing products to delivering them to customers, must be as effective and timely as possible for companies to prosper in today's fiercely contested markets. Metrics and KPIs are essential tools for expediting all steps in the product and supply chain. They can be created and kept current through analytics that use complete and reliable information to help decision-makers understand trends, seize opportunities, correct mistakes and make the best choices.

## About This Benchmark Research

### **Methodology**

Ventana Research conducted this benchmark research over the Web from March through September 2010. We solicited survey participation via e-mail blasts, our Web site and social media invitations. E-mail invitations were also sent by our media partners and by vendor sponsors.

We presented this explanation of the topic to participants prior to their entry into the survey:

There isn't an aspect of business today in which people don't claim they use analytics to generate information, typically in the form of metrics and key indicators. But there is much confusion about their usefulness and value to the business and about how best to select and implement historical, root-cause, real-time and predictive analytics. The uncertainty this causes poses a challenge for organizations.

Management and managers need advice on how to select the measures most useful for them and guidance about best practices and common mistakes in choosing business and operational measures, metrics and key indicators. They also need more reliable information than is currently available about integrating historical and predictive analytics into systems and processes so they can make better use of existing investments and plan new ones that provide deeper insight from multiple systems using more sophisticated analytical methods. This benchmark research is designed to generate that advice and guidance by examining the use of metrics across the entire business. It also will determine the maturity distribution of organizations in their use of analytics.

We included the following definitions:

Analytics – Programs or algorithms that derive meaning from data

Metric – A measure of business performance

Performance indicator – A specific metric chosen to measure the performance of an organization or some component of it.

The following promotion incited participants to complete the survey:

All qualified participants will receive a report on our research findings that you can apply to your organization's efforts and a quarterly membership to the Ventana Research Community valued at US\$125 or €92. In addition, all qualified participants will be entered into a drawing to win a benchmark research report of your choice valued at US\$995 or €732. Thank you for your participation!

### **Qualification**

We designed the research to assess the use of and plans for deployment of information applications across organizations and industries. Qualification to participate was presented to participants as follows:

The survey for this benchmark research is designed for business and IT managers who develop, deploy or use analytics or are involved with

the purchasing of analytics technology. Others such as consultants and systems integrators may participate in the survey but are not eligible for incentives and will be used in the analysis only if they meet the qualifications. Incentives are provided to qualified participants in the research and also are conditional on provision of accurate contact information including company name and company email address that can be used for fulfillment of incentives.

Further qualification evaluation of respondents was conducted as part of the research methodology and quality assurance processes. It entailed screening out responses from companies that are too small, questionnaires that were not materially complete, or those where the submission is from an inappropriate submitter or appears to be spurious.

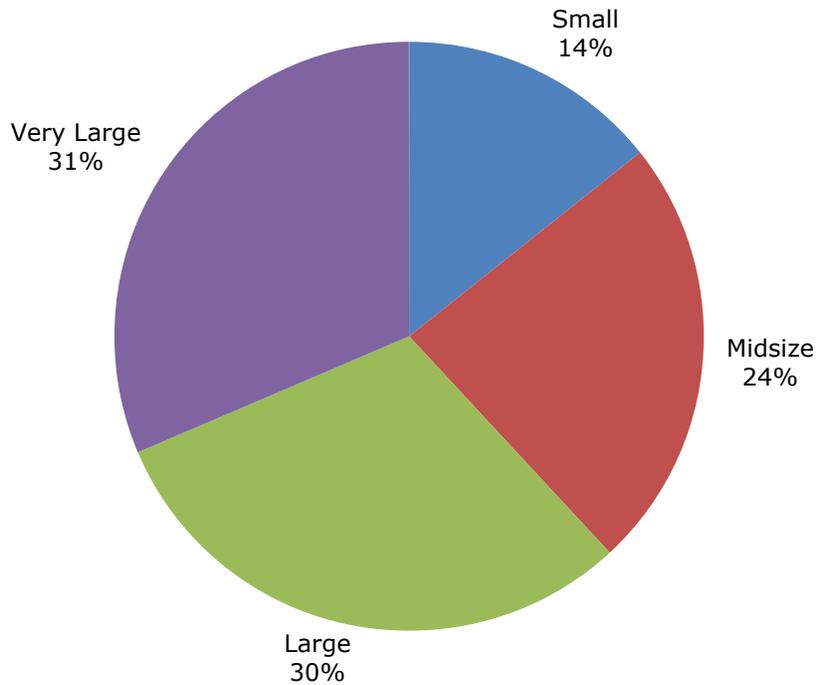
### ***Demographics***

We designed the survey used for this research to be answered by executives and managers across a broad range of roles and titles working in organizations. We deemed 105 of those who clicked through to this survey to be qualified to have their answers analyzed in this research. In this report, the term “participants” refers to that group, and the charts in this section characterize various aspects of their demographics and qualifications.

### Company Size by Number of Employees

We require participants to indicate the size of their entire company. Our research repeatedly shows that size of organization, measured by number of employees, is a useful means of segmenting companies because it correlates with the complexity of processes, communications and organizational structure as well as the complexity of the IT infrastructure. In this research, more than 60 percent of participants come from larger organizations, with almost the same number working in very large companies (having 10,000 or more employees) or in large companies (with 1,000 to 9,999 employees). About one-fourth work in midsize companies (with 100 to 999 employees), and one-seventh work in small companies (with fewer than 100 employees). Although this distribution skews a bit more to larger companies than much of our benchmark research, it remains consistent with our research objectives and provides a suitably large sample from each size category.

**Figure 1**  
**Participants by Company Size (Number of Employees)**

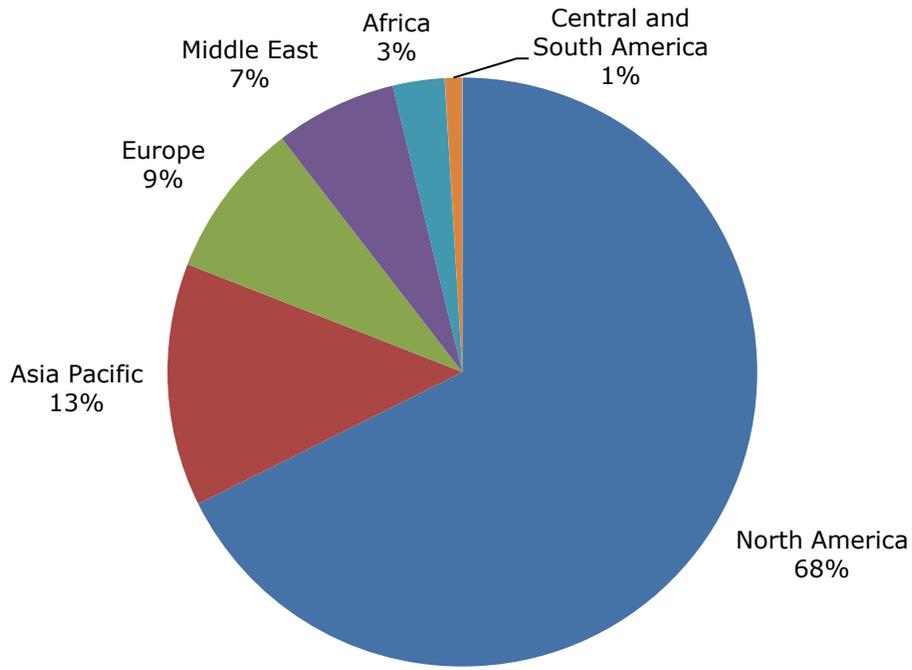


Source: Ventana Research

**Geographic Distribution**

Two-thirds of the participants were from companies located or headquartered in North America. Those based in Asia Pacific made up the second-largest group at 13 percent; those in Europe accounted for 9 percent, in the Middle East for 7 percent, in Africa for 3 percent and in Central and South America for 1 percent. This result was in keeping with our expectations at the start of this investigation, since organizations participating in our research most often are headquartered in North America. However, many of these are global organizations operating worldwide.

**Figure 2  
Participants by Region**

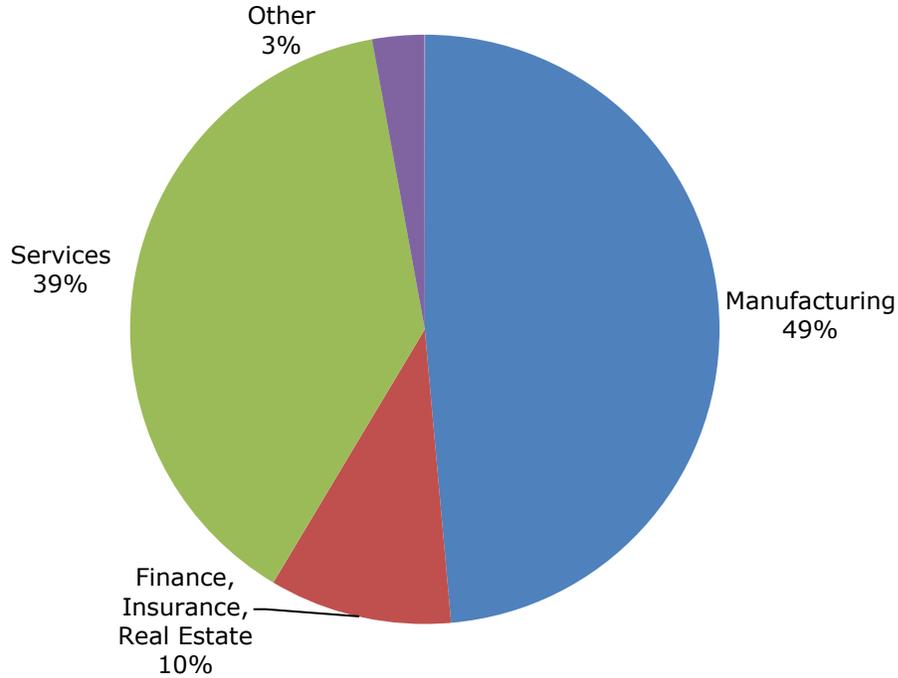


Source: Ventana Research

**Industry**

The companies of the participants in this benchmark research represented a broad range of industries, which we have grouped into three general categories plus Other, as shown below. Classified in this way, companies in manufacturing (49%) and those that provide services (39%) accounted for the vast majority of participants; finance, insurance and real estate and others accounted for the balance.

**Figure 3  
Participants by Type of Industry**

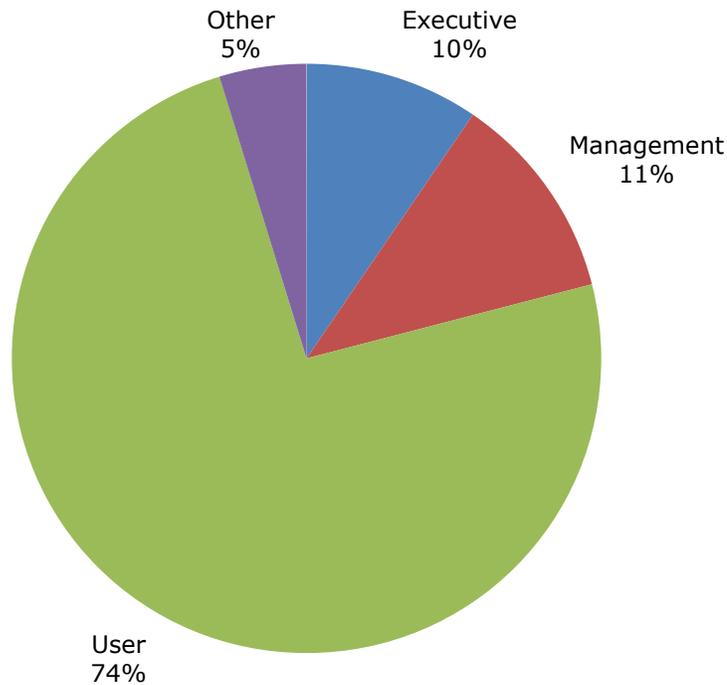


Source: Ventana Research

**Job Title**

We asked participants to choose from among 14 titles the one that best describes theirs. We sorted these responses into three categories: executives, management and users. Almost three-fourths identified themselves as having titles that we categorize as users, a grouping that includes senior manager or manager (30%), director (16%), analyst (19%) and staff (8%). One in 10 are executives, about the same number are in management, by which we mean vice presidents of some level, and the balance have other titles.

**Figure 4  
Participants by Job Category**



Source: Ventana Research

This is how we aggregated the 14 title response options:

**Executive**

- CEO, President
- COO or Head of Operations
- CIO or Head of Information Technology
- CFO or Head of Finance
- Other CxO

**Management**

- EVP or SVP
- VP

**User**

- Cost Accountant
- Director

Senior Manager or Manager  
Analyst (Business, Financial, etc.)  
Staff

**Other**

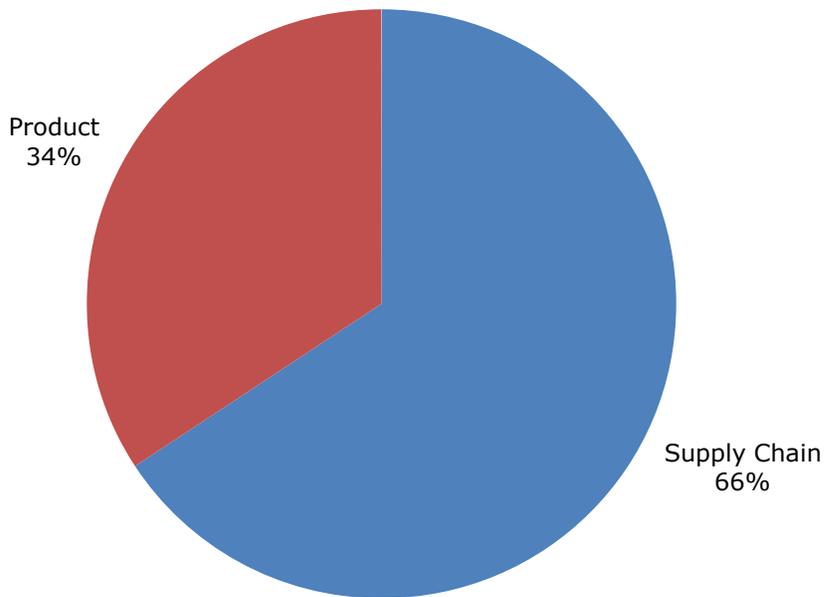
Consultant  
Other Title

We concluded after analysis that this response set provided a meaningfully broad distribution of job titles.

***Role by Functional Area***

We asked participants to identify their functional area of responsibility as well. In this research, that meant one of two general categories. Two-thirds said they work in the supply chain, and the other one-third have product-related jobs.

**Figure 5**  
**Participants by Functional Area**



Source: Ventana Research

## Key Insights

Our benchmark research yielded the following important general findings and key insights regarding the use of analytics in the product and supply chain functions. (We discuss maturity levels in the Maturity Index portion of the full research report; the actual questions asked in our survey are in the Appendix to the research report.)

### ***Most product and supply chain organizations need to mature in using analytics.***

This benchmark research found that most organizations are not very mature in their ability to adopt and deploy analytics. A majority have room for improvement, some of them substantial room. Applying the Ventana Research Maturity Index methodology, we found that 29 percent of organizations rank at the lowest Tactical maturity level in both their financial and process metrics (adherence to budget and order fill rates, respectively). In the analytics they use extensively, 39 percent are Tactical, confining their activities to capacity and transportation planning and cost analysis. The research also showed that organizations are aware of their shortcomings. Half said that they can significantly improve their use of analytics and key performance indicators, and 64 percent said it is important to their business goals to simplify their availability. On a positive note, 89 percent of heads of business units and 79 percent of senior management are involved or very involved in establishing requirements for analytics, which bodes well for support of improvement efforts. However, the analysis also shows that only 39 percent of organizations intend to make changes in the next 12 to 18 months.

### ***The product and supply chain functions use a range of analytics and metrics.***

The research shows that many product and supply chain organizations are able to employ the increasing range of data sources they have to broaden the scope of their performance management efforts. Eight in 10 said that using analytics to create operational plan metrics is important or very important. Organizations regularly perform a variety of analyses: For the supply chain the most common are cost analysis (69%) and inventory management (60%); for product organizations they are creating forecasts, segmenting customers and products and assessing marketing category effectiveness (47% each).

### ***In applying metrics, product and supply chain organizations focus on operational effectiveness and profitability.***

The most important process metrics used by product and supply chain organizations are task-oriented – order fill rates and stock-outs are the most popular – rather than more general measures such as those related to Six Sigma. More people with a manufacturing role cited Six Sigma, which is a more common measure of operational effectiveness in that area of a company, but it was still in the minority. The most important supply chain financial metric is company profitability (67%), followed by plan-related measures such as adherence to budget and forecast accuracy. For product organizations the top financial metric is return on investment (56%).

### ***Most companies can improve their use of analytics and performance indicators.***

While there is a sound foundation in place for the use of analytics and metrics, the findings indicate that companies can do more to enhance their use. One step is to

make them more accessible: Almost two-thirds said it is very important to make it simpler to provide analytics and metrics to all who need them. Nearly half (49%) said they can improve significantly in their use of analytics and key performance indicators (KPIs), while only 6 percent think they can't improve much. We believe that companies should regard broadening and deepening their use of analytics, metrics and KPIs as an ongoing process, not a one-time event. Those advocating an analytics project therefore should show how it will support such improvements.

***Organizations also need to improve the way they create analytics.***

Organizations must address barriers that may be preventing them from using analytics effectively and expanding their range. Half of them are dissatisfied with the process for creating analytics. Among those that are dissatisfied, the most have issues with the accuracy of data (54%) or accessibility of information (44%) and with the slowness of the process (50%) and difficulty of building and maintaining it (50%). In addition, 55 percent are only somewhat satisfied or not satisfied with their current technology for creating and applying analytics.

***Data used for analytics is not always accurate.***

Data accuracy was the top complaint of organizations dissatisfied with the process of analytics creation. In addition, only one-fourth characterized the data used in preparing their metrics or performance indicators as accurate, while more than half characterized it as somewhat accurate, meaning it is open to dispute and interpretation, which undermines the value of metrics and KPIs. Worse, "somewhat" is a condition that may not seem bad enough to demand action or justify investments to enhance the accuracy of the data companies use.

***Understanding of metrics is vital for progress.***

For metrics to be useful, organizations must have agreement on the importance to their performance of specific metrics; the research shows this is sometimes lacking. For example, we found differences in the responses of executives and managers on one hand and lower-ranking employees on the other as to the most important metrics for senior managers. Whereas 57 percent of those in senior positions identified customer satisfaction as an important metric for them, just 38 percent of the others said that executives and managers regard this as important. Misperceptions such as these can lead to less-than-optimal decisions. Unless objectives are defined in quantitative terms and are clearly communicated, there is potential for mistakes and disconnects.

***Data must be fresh and assessments timely.***

The timeliness of the data used in analytics and metrics is important, but almost half (46%) of organizations said that stale or outdated data is present in the metrics and performance indicators they use. These same companies review their data less frequently than do companies that have data available in real time or nearly real time. Similarly, the research uncovered weakness when it comes to the timeliness of the important metrics and KPIs that people receive: A little over half of organizations get this information within one business week or less (which is acceptable performance). The rest take more than a week, which we assert is too long and detrimental to an organization's performance because it delays people's ability to take advantage of opportunities, address issues or correct mistakes. Those receiving outdated information may question its accuracy or relevance. Organizations that do

not have timely data must therefore focus on addressing the root causes that delay its availability. For example, those that take more than one week to close their books must find ways to accelerate their accounting cycle.

***Analytics are not always available to executives and managers.***

The research shows that analytics may not be at hand when needed. Fewer than one-third of company executives have them always available when they need them. Only about one-fourth of managers have them completely available, and supervisors and individuals can access them easily even less often. While it may sound impressive that three-fourths of executives have most of what they need, this is insufficient for optimal performance. Organizations pursuing that goal need programs and processes to continuously evaluate the availability of analytics and metrics to executives and managers and to quickly and efficiently address gaps that are uncovered. Moreover, those higher up in the organization have an overblown sense of information availability: Although three-fourths with executive and management titles said that those lower in the organization either completely or generally have the information they need, just 59 percent of those folks agreed. This disconnect can obstruct initiatives to extend analytics, metrics and performance indicators if those who approve projects think they already have met the needs of the whole organization.

***Data availability and information quality are not issues.***

The research found some inconsistency in views regarding availability: 65 percent of product and supply chain organizations said they do not find it hard to collect the data they need to assemble metrics and performance indicators; yet as noted above, the analytics are not always available to everyone. This suggests some impediment in the process of producing or delivering metrics. Similarly, although more than half doubt the accuracy of data used in preparing metrics, more than 60 percent said they are confident or very confident in the quality of the information generated by their analytics. We conclude that a significant segment of research participants feel better about the data after it has undergone processing and been placed in context.

***Data should be more accessible and easier to work with.***

Regardless of how intensely they work with analytics, the research shows that people in two-thirds of organizations spend much of their time getting data ready for analysis rather than analyzing it. More than half spend the biggest chunk of their time either preparing data for analysis (cited by 30%) or reviewing data for quality and consistency (24%). There is no meaningful difference in how people spend their time by role, but those in small and midsize companies spend the most time on data preparation. Companies must make data more accessible and easier to work with, which means paying more attention to data delivery as well as training.

***Spreadsheets remain a dominant technology in product and supply chain analytics.***

The main technologies that product and supply chain organizations use to support analytics, metrics and KPIs conform to our expectations. Spreadsheets are the instruments most commonly used to generate analytics (in 57% of organizations), along with business intelligence technologies (for querying, reporting and performing analyses, 54%) and analytic warehouses and databases (53%). Typically, the latter two provide basic data that people then copy into a spreadsheet for further analysis

and the creation of final reports. Spreadsheets also are important information sources for building analytics in nearly half of product and supply chain organizations. However, although spreadsheets are convenient and easy to use, they are not appropriate as data stores or for repetitive analyses, particularly in cases where the results are reported to and used by more than a few people. Using relational or multidimensional databases as the data store and enterprise systems to perform analyses and provide reports ultimately saves time, reduces errors and therefore costs less and performs better in the long run than do spreadsheets.

***Most organizations are hesitant to improve analytics.***

As noted, the research finds that many companies recognize the need to improve various aspects of their use of analytics. Yet while fewer than one in five are satisfied with their current efforts, just 39 percent are planning to make changes in the next 12 to 18 months. Another one-third acknowledge the need to make changes but don't currently view that as a priority. Two-thirds of those planning to change will do so to improve their business or decision-making processes; 59 percent will seek a competitive advantage.

The most significant barriers to making changes in analytics are a lack of resources or budget, a business case that is not strong enough and low priority. In our experience these are interrelated, since failure to provide a compelling business case results in a proposed project low on the priority list and therefore not likely to be allocated the resources or budget to implement the changes. The barriers are heightened for the one-third of organizations in which funding for analytics-related technology improvements will come from the general business budget, in which competition for resources is likely to be intense. We think that the other one-third that will be funded by the business IT budget for manufacturing, products or the supply chain stand a much better chance of approval.

***Practical considerations drive potential purchases of analytics software.***

In assessing software, the ability of an analytics application to meet business needs is important or very important to all but 3 percent of organizations, followed closely by functionality and adaptability. When it comes to the capabilities of analytics systems, searching for specific answers to standard business questions is important or very important to more than four-fifths (82%) of organizations. Publishing analytics and metrics (80%) was a close second, and drilling down and around to find the reasons behind the numbers (72%) was third. In deciding whether to invest in analytics, reducing cost is most important to two-thirds of supply chain organizations, and increasing revenue is most important for product organizations. These and other preferences show practical purposes behind analytics initiatives; we advise organizations to develop a broad-based set of reasons that address efficiency and effectiveness improvements and demonstrate their positive impact in their efforts to get approval.

## What To Do Next

This research shows that product and supply chain organizations value having analytics but that they want to access, distribute and apply them better than they do currently. Nearly two-thirds (64%) of organizations said that it is very important to make it simpler to provide analytics and metrics to all in the business who need them; 49 percent said their company can improve its use of analytics and key performance indicators (KPIs) significantly. Plans for improvement are being driven by both operational and business reasons: two-thirds each said they will do so to improve business processes or decision-making, and nearly as many (59%) said the change will be to increase competitive advantage.

As well as using product and supply chain analytics better, organizations need better ways to produce metrics. Half said they are not satisfied with the process currently used to create analytics. The most common reasons for dissatisfaction are issues with the accuracy of data (54%), the slowness of the process and difficulty in building and maintaining it (50% each) and the accessibility of information (44%). For companies wishing to improve their current analytics to help improve their product and supply chain functions, we offer the following recommendations.

### ***Assess the maturity of your product and supply chain analytics.***

This benchmark research found that most organizations can substantially improve their ability to apply analytics to product and supply chain information. Our Maturity Index analysis places only 13 percent of organizations at the highest Innovative level of maturity and nearly 60 percent at the two lowest levels. Many tend to focus most on internal efficiency in their financial and process metrics, and in the analytics they use extensively. These are important, but we advise paying as much attention to more outward-looking analytics such as customer and product profitability and competitive assessments, which have greater impacts on business effectiveness. Our Maturity Index framework can help you evaluate your own level of maturity in the individual aspects of product and supply chain analytics. Then determine what you must do in order for analytics to contribute fully in your efforts to improve your business performance and results.

### ***Expand the range of your analytics and metrics.***

The research shows that many product and supply chain organizations have an increasing variety of data sources and are applying analytics to them to expand their performance management efforts. For example, eight in 10 said that using analytics to create operational plan metrics is important or very important. Organizations regularly perform a variety of analyses: For the supply chain the most common are cost analysis (69%) and inventory management (60%); for product organizations they are creating forecasts, segmenting customers and products and assessing marketing category effectiveness (47% each). We recommend that you identify areas in which your organization needs to improve performance and evaluate how applying metrics to them could help.

### ***Address operational processes and profitability but also business measures.***

The most important process metrics used by supply chain organizations are task-oriented – order fill rates and stock-outs each were cited by more than 40 percent. Product profitability and growth (61%) was most important to product organizations, but a close second was the customer experience (58%). The most important supply

chain financial metric is company profitability (67%), and for product organizations the top financial metric is return on investment (56%), but along with various profitability measures, revenue growth receive more than 45 percent. It is important to track the efficiency of processes and strengthen margins, but we advise that applying analytics to external effectiveness, as in dealing with customers, could benefit the business as much or more.

***Make sure that all organizational levels understand metrics in the same way.***

For metrics to be useful, organizations must have agreement on the importance to their performance of specific metrics; the research shows this is sometimes lacking in product and supply chain organizations. For example, 57 percent of senior managers identified customer satisfaction as an important metric for them, but just 38 percent of lower-ranking employees said that executives and managers regard this as important. Conversely, although three-fourths of executives and management said that those lower in the organization either completely or generally have the information they need, just 59 percent at those levels agreed. Disconnects such as these can lead to less-than-optimal decisions and misdirection of resources. We recommend defining objectives in quantitative terms, communicating them clearly and eliciting agreement on what people need.

***Explore how to ensure that data used for analytics is accurate.***

Data accuracy was the top complaint of organizations dissatisfied with their process for creating analytics. In addition, only one-fourth characterized the data used in preparing their metrics or performance indicators as accurate, while more than half characterized it as somewhat accurate, a condition that does not inspire confidence in the value of the resulting metrics. We advise you to examine the sources of your analytics data and if need be consider adopting systems that can gather, cleanse and integrate so you can have confidence that your metrics and KPIs rest on a solid foundation.

***Fresh data for analytics and timely delivery of metrics should be priorities.***

The timeliness of the data used in analytics and metrics is important: People receiving outdated information may question its accuracy or relevance. But almost half (46%) of organizations said that stale or outdated data is present in the metrics and performance indicators they use. Similarly, metrics and KPIs that people receive must timely if they are to use them to take advantage of opportunities, address issues or correct mistakes. The research also uncovered issues here: Almost half of organizations take more than one business week to deliver metrics and KPIs, which we regard as too long and likely detrimental to performance. If your organization has these time-lags, take steps to find the root causes that delay access to new data and prompt delivery of metrics, and evaluate methods and tools that can speed up the process.

***Make analytics always available to executives and managers.***

The research shows that fewer than one-third of product and supply chain executives always have analytics available when they need them. Further, only about one-fourth of managers have them completely available, and supervisors and individuals even less often. We assert that even if three-fourths of executives have most of what they need, this is insufficient for optimal performance. To maximize your use of analytics,

institute programs and processes to regularly evaluate the availability of analytics and metrics to executives and managers and quickly close gaps that are uncovered.

***Determine whether data availability and information quality are issues.***

The research found some inconsistency in views regarding availability: 65 percent of product and supply chain organizations said they do not find it hard to collect the data they need to assemble metrics and performance indicators; yet as noted above, the analytics are not always available to everyone. If you have such a contradiction, look for an impediment in the process of producing or delivering metrics. Similarly, although more than half of organizations doubt the accuracy of data used in preparing metrics, more than 60 percent said they are confident or very confident in the quality of the information generated by their analytics. If data accuracy is a concern, we advise you to examine the reliability of what you have after the data has undergone processing and been placed in context. Faulty information for metrics can lead to measuring the wrong things or evaluating performance incorrectly.

***Take steps to make the analytics process more productive.***

The research shows that people in two-thirds of organizations spend much of their time getting data ready for analysis rather than analyzing it. More than half spend the biggest chunk of their time either preparing data for analysis (cited by 30%) or reviewing data for quality and consistency (24%). These problems are more acute in midsize and small companies, respectively. Analyze why these or other preliminary activities take more time than they deserve, particularly accessibility and reliability of data and training in using analytics tools.

***Consider alternatives to spreadsheets for product and supply chain analytics.***

The research shows that spreadsheets (57%) are the product and supply chain organizations use most commonly to generate analytics, metrics and KPIs, along with business intelligence technologies for querying, reporting and performing analyses (54%) and analytic warehouses and databases (53%), which typically provide basic data that people then copy into a spreadsheet for analysis and reporting. However, we insist that spreadsheets, however comfortable to use, are not appropriate as data stores or for repetitive analyses, particularly in cases where the results are reported to and used by more than a few people. Instead we recommend using relational or multidimensional databases as the data store and dedicated systems to perform analyses and provide reports; that ultimately will save time and reduce errors and therefore cost less and perform better in the long run than spreadsheets.

***Seriously consider an initiative to improve analytics in the near future.***

As noted, the research finds that many companies recognize the need to improve various aspects of their use of analytics. Yet just 39 percent are planning to make changes in the next 12 to 18 months. Another one-third acknowledge the need to make changes but don't currently view that as a priority. Two-thirds of those planning to change will do so to improve their business or decision-making processes; 59 percent will seek a competitive advantage. These are good reasons that impact business results, and we advise use to examine the benefits such an initiative could bring to aspects of your organization's performance. The most significant barriers to making changes in analytics are interrelated: a lack of

resources or budget, a business case that is not strong enough and low priority. To build a compelling business case, emphasize benefits such as those above and show how an investment can help various levels of the organization.

***Practical considerations can justify purchases of analytics software.***

In assessing software, the ability of an analytics application to meet business needs is important or very important to all but 3 percent of organizations, followed closely by functionality and adaptability. When it comes to the capabilities of analytics systems, searching for specific answers to standard business questions is important or very important to more than four-fifths (82%) of organizations, and publishing analytics and metrics (80%) was a close second. In deciding whether to invest in analytics, reducing cost is most important to two-thirds of supply chain organizations, and increasing revenue is most important for product organizations. These and other preferences show practical purposes for analytics initiatives; to win approval, we advise you to develop a broad-based set of reasons that address such improvements in efficiency and effectiveness.

## How Ventana Research Can Help

Ventana Research helps organizations develop, execute and sustain business and technology programs that align people, processes, information and technologies essential for success. As an objective and trusted advisor, we are your insurance that your business and IT initiatives deliver both immediate and long-term improvements to your business.

We offer a variety of customizable services to meet your specific needs including workshops, assessments and advisory services. Our [education](#) service, led by analysts with more than 20 years of experience, provides a great starting point to learn about important business and technology topics from compliance to business intelligence to building a strategy and driving adoption of best practices. We also offer tailored [assessment services](#) to help you connect the business and technology phases of your project by leveraging our research foundation and methodologies. And we can provide Ventana On-Demand access to our analysts on an as-needed basis to help you keep up with market trends, technologies and best practices.

Everything at Ventana Research begins with our focused [research](#), of which this report is a part. We work with thousands of organizations worldwide, conducting research and analyzing market trends, best practices and technologies to help our clients improve the efficiency and effectiveness of their organizations.

Through the Ventana Research [community](#) we also provide opportunities for professionals to share challenges, best practices and methodologies. Sign up for Individual membership at [www.ventanaresearch.com](http://www.ventanaresearch.com) to gain access to our weekly insights and learn about upcoming educational and collaboration events – webinars, conferences and opportunities for social collaboration on the Internet. We offer the following membership levels:

**Individual membership:** For business and IT professionals\* interested in full access to our Web site and analyst team for themselves. The membership includes access to our library of hundreds of white papers and research notes, briefings and telephone/e-mail consulting sessions to provide input and feedback.

**Team membership:** For business and IT professionals\* interested in full access to our Web site and analysts for a five-member team. The membership includes access to our library of hundreds of white papers and research notes, briefings, telephone/e-mail consulting sessions to provide input and feedback and the use of Ventana Research materials for business purposes.

**Business membership:** For business and IT professionals\* interested in full access to our Web site and analyst team for their larger team or small business unit. The membership includes access to our library of hundreds of white papers and research notes, briefings, telephone/e-mail consulting sessions to provide input and feedback, use of Ventana Research materials for business purposes and additional analyst availability.

**Business Plus membership:** For business and IT professionals\* interested in full access to our Web site and analyst team for larger numbers of company employees. The membership includes access to our library of hundreds of white papers and research notes, briefings, telephone/e-mail consulting sessions to provide input and

feedback, quotes and validation for media, use of Ventana Research materials for business purposes, additional analyst availability and access to our team for scheduled strategy consulting sessions.

To learn more about Ventana Research services – including workshops, assessments and advice – please contact [clientservices@ventanaresearch.com](mailto:clientservices@ventanaresearch.com).

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## About Ventana Research

Ventana Research is the leading benchmark research and business technology advisory services firm. We provide insight and expert guidance on trends and mainstream and disruptive technologies. Our unparalleled insights and best practices guidance are based on our rigorous research-based benchmarking of people, processes, information and technology across business and IT functions worldwide. The combination we offer of benchmark research, market coverage and in-depth knowledge of hundreds of technology providers means we can deliver business and technology education and expertise to our clients where and when needed to reduce the time requirements, cost and risk of technology investments. Ventana Research provides the most comprehensive analyst and research coverage in the industry; the many business and IT professionals worldwide who are members of our community benefit from Ventana Research's insights, as do highly regarded media and association partners around the globe. Our views and analyses are distributed daily through blogs and social media channels including Twitter, Facebook, LinkedIn and *Business Week's* Business Exchange. Ventana Research was ranked the number-one analyst firm you can trust in enterprise software for 2009 for its relevance to the industry. To learn how Ventana Research advances the maturity of organizations in using information and technology through our benchmark research, education and advisory services, visit [www.ventanaresearch.com](http://www.ventanaresearch.com).